



The Engineer's Immediate RF Source



2022
Waveguides



Broad Selection of Ready-to-Ship Waveguides

Pasternack offers the industry's largest selection of both passive and active waveguide building block components that cover microwave and millimeter wave bands up to 220 GHz. This vast selection consists of 27 different categories with over thousands of models that include low noise and power amplifiers, detectors, bandpass filters, pin diode and electromechanical relay switches, converter mixers, antennas, attenuators, phase shifters, oscillators, couplers, gain horns, magic tees, terminations, transitions, adapters, twists, bends, sections, flexible waveguides, and assembly accessories. All models are available in-stock for immediate shipment. System designs that utilize integrated waveguide components and interconnects result in a completely shielded signal path with excellent isolation that results in optimum signal processing performance. Another benefit is that extremely high peak power levels can be transmitted with very low losses. Applications include point to point radio links, test and measurement, industrial and front end radars, sensors, and wireless communication.

All models can be viewed online at www.pasternack.com with comprehensive datasheets that include typical performance graphs, detailed CAD drawings and real-time pricing and inventory.

Waveguide Low Noise Amplifiers	2	___ Specialty Waveguide Antennas.....	32
Waveguide Power Amplifiers	2	Waveguide Antenna Accessories	32
Waveguide Converters/Mixers	2	Waveguide to Coax Adapters.....	32
Waveguide Frequency Multipliers.....	3	Corner Reflectors.....	44
Waveguide Detectors	4	Flexible Waveguide	45
Waveguide Electromechanical Relay Switches.....	4	Waveguide Bandpass Filters.....	50
Waveguide PIN Diode Switches	9	Waveguide Bends.....	51
Waveguide Gunn Oscillators.....	9	Waveguide Bulkhead Adapters	54
Waveguide Direct Read Attenuators.....	10	Waveguide Circulators.....	55
Waveguide Fixed Attenuators	10	Waveguide Couplers	55
Waveguide Variable Attenuators.....	12	Waveguide Isolators.....	70
Waveguide Antennas	13	Waveguide Magic Tee.....	70
Waveguide Antennas with Coax Adapters.....	13	Waveguide Orthomode Transducers	71
Standard Gain Horns	18	Waveguide Phase Shifters.....	71
Conical Gain Horns.....	25	Waveguide Polarizers.....	72
Wide Angle Scalar Feed Horns	28	Waveguide Rotary Joints.....	72
Lens	29	Waveguide Sections.....	73
Omni Directional	30	Waveguide Terminations	80
Probe	30	Waveguide Transitions.....	84
Sector	31	Waveguide Twists.....	85
Dual Polarized	31	Waveguide Accessories.....	88



Waveguide Low Noise Amplifiers

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Typical Gain (dB)	Typical Gain Flatness (dB)	Noise Figure (dB)	P1dB (Watts)	Max DC Voltage (Volts)	Typ DC Current (mA)	Flange Type	ECCN
PEWGA3206 	WR-10	75 - 110	25		5.5		8	180	UG-387/U-Mod	3A001.b.4.e.3
PEWGA3205 	WR-12	60 - 90	30		4.5	8	8	225	UG-387/U	EAR99
PEWGA3204 	WR-15	50 - 75	30		5		8	175	UG-385/U	EAR99
PEWGA3203 	WR-19	40 - 60	30		4.5	15	8	350	UG-383/U-Mod	EAR99
PEWGA3202 	WR-22	33 - 50	30		5.5	10	8	300	UG-383/U	EAR99
PEWGA3208 	WR-28	26.5 - 40	22	0.75	3	13.5	15	125	UG-599/U	EAR99
PEWGA3201 	WR-28	26.5 - 40	30		3		8	375	UG-599/U	EAR99

Waveguide Power Amplifiers

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Minimum Gain (dB)	Saturated Output Power (dBm)	Flange Type	ECCN
PE15A4023 	WR-12	70.5 - 76.5	25	20	Round Cover UG-387/U	EAR99
PE15A4024 	WR-12	80.5 - 86.5	20	19	Round Cover UG-387/U	EAR99

Waveguide Converters/Mixers

PE P/N	RF/LO Frequency Range (GHz)	IF Frequency Range (GHz)	Conversion Loss (dB)	Waveguide Type	Connector	ECCN
PE13U1005 	26.5 - 40	DC - 18 GHz	6	WR-28 UG-599/U	SMA Female	EAR99
PE13U1004 	33 - 50	DC - 18 GHz	7	WR-22 UG-383/U	SMA Female	EAR99
PE13U1003 	40 - 60	DC - 18 GHz	7	WR-19 UG-383/U	SMA Female	EAR99

Waveguide Converters/Mixers Continued

PE P/N	RF/LO Frequency Range (GHz)	IF Frequency Range (GHz)	Conversion Loss (dB)	Waveguide Type	Connector	ECCN
PE13U1002 	50 - 75	DC - 18 GHz	8	WR-15 UG-385/U	SMA Female	EAR99
PE13U1001 	60 - 90	DC - 18 GHz	9	WR-12 UG-387/U	SMA Female	EAR99
PE13U1000 	75 - 110	DC - 18 GHz	9	WR-10 UG-387/U	SMA Female	EAR99
PE12D1005 	26.5 - 40	DC - 18 GHz	6	WR-28 UG-599/U	SMA Female	EAR99
PE12D1004 	33 - 50	DC - 18 GHz	7	WR-22 UG-383/U	SMA Female	EAR99
PE12D1002 	50 - 75	DC - 18 GHz	8	WR-15 UG-385/U	SMA Female	EAR99
PE12D1001 	60 - 90	DC - 18 GHz	9	WR-12 UG-387/U	SMA Female	EAR99
PE12D1000 	75 - 110	DC - 18 GHz	9	WR-10 UG-387/U-Mod	SMA Female	EAR99

Waveguide Frequency Multipliers

PE P/N	Waveguide Type	Input Frequency Range (GHz)	Output Frequency Range (GHz)	Typ Output Power (dBm)	Typ Harmonics	Max DC Voltage (V)	Typ DC Current (mA)	Flange Type	ECCN
PE88X2026 	WR-10	12.5 - 18.33	75 - 11	10	-15	8	375	UG-387/U-Mod	3A001.B.4.E.3
PE88X2024 	WR-12	10 - 15	60 - 90	4	-15	8	350	UG-387/U	EAR99
PE88X2025 	WR-12	10 - 15	60 - 90	5	-15	8	575	UG-387/U	3A001.B.4.E.2
PE88X2023 	WR-15	12.5 - 18.75	50 - 75	5	-15	8	275	UG-385/U	EAR99
PE88X2022 	WR-19	10 - 15	40 - 60	0	-15	8	150	UG-383/U	EAR99
PE88X2021 	WR-28	13.25 - 20	26.5 - 40	5	-15	8	350	UG-599/U	EAR99

Waveguide Detectors

PE P/N	Connector 1	RF Frequency Range (GHz)	Voltage Sensitivity (V/nW)	Input Power (dBm)	Connector 2	ECCN
PE80T3005 	WR-28 UG-599/U	26.5 - 40	-1,000	20	SMA Female	EAR99
PE80T3004 	WR-22 UG-383/U	33 - 50	-800	20	SMA Female	EAR99
PE80T3003 	WR-19 UG-383/U	40 - 60	-800	20	SMA Female	EAR99
PE80T3002 	WR-15 UG-385/U	50 - 75	-700	20	SMA Female	EAR99
PE80T3001 	WR-12 UG-387/U	60 - 90	-900	20	SMA Female	EAR99
PE80T3000 	WR-10 UG-387/U	75 - 100	-900	20	SMA Female	EAR99

Waveguide Electromechanical Relay Switches

PE P/N	Waveguide Type	Switch Type	RF Freq. Range (GHz)	Actuator/Features	Insertion Loss (dB)	Isolation (dB)	DC Power (Volts)	Power Rating (Watts)	ROHS Compliant	ECCN
PEWGS6058 	WR-28	SPDT/DPDT	26.5 - 40	FailsafeTTL Logic, Window Indicator, Manual Override	0.15	55	12	550	Yes	EAR99
PEWGS6059 	WR-28	SPDT/DPDT	26.5 - 40	FailsafeTTL Logic, Window Indicator, Manual Override	0.15	55	28	550	Yes	EAR99
PEWGS6056 	WR-28	SPDT/DPDT	26.5 - 40	FailsafeWindow Indicator, Manual Override	0.15	55	12	550	Yes	EAR99
PEWGS6057 	WR-28	SPDT/DPDT	26.5 - 40	FailsafeWindow Indicator, Manual Override	0.15	55	28	550	Yes	EAR99
PEWGS6002 	WR-28	SPDT	26.5 - 40	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.15	55	12	550	Yes	EAR99
PEWGS6000 	WR-28	SPDT	26.5 - 40	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.15	55	28	550	Yes	EAR99
PEWGS6003 	WR-28	SPDT	26.5 - 40	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.15	55	12	550	Yes	EAR99
PEWGS6001 	WR-28	SPDT	26.5 - 40	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.15	55	28	550	Yes	EAR99

Waveguide Electromechanical Relay Switches Continued

PE P/N	Waveguide Type	Switch Type	RF Freq. Range (GHz)	Actuator/Features	Insertion Loss (dB)	Isolation (dB)	DC Power (Volts)	Power Rating (Watts)	ROHS Compliant	ECCN
PEWGS6042 	WR-34	SPDT/DPDT	22 - 33	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.15	60	12	620	Yes	EAR99
PEWGS6040 	WR-34	SPDT/DPDT	22 - 33	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.15	60	28	620	Yes	EAR99
PEWGS6043 	WR-34	SPDT/DPDT	22 - 33	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.15	60	12	620	Yes	EAR99
PEWGS6041 	WR-34	SPDT/DPDT	22 - 33	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.15	60	28	620	Yes	EAR99
PEWGS6006 	WR-42	SPDT	18 - 26.5	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.15	60	12	800	Yes	EAR99
PEWGS6004 	WR-42	SPDT	18 - 26.5	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.15	60	28	800	Yes	EAR99
PEWGS6007 	WR-42	SPDT	18 - 26.5	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.15	60	12	800	Yes	EAR99
PEWGS6005 	WR-42	SPDT	18 - 26.5	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.15	60	28	800	Yes	EAR99
PEWGS6010 	WR-62	SPDT	12.4 - 18	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.1	60	12	2,000	Yes	EAR99
PEWGS6008 	WR-62	SPDT	12.4 - 18	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.1	60	28	2,000	Yes	EAR99
PEWGS6011 	WR-62	SPDT	12.4 - 18	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.1	60	12	2,000	Yes	EAR99
PEWGS6009 	WR-62	SPDT	12.4 - 18	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.1	60	28	2,000	Yes	EAR99
PEWGS6014 	WR-75	SPDT	10 - 15	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.05	75	12	3,500	Yes	EAR99
PEWGS6012 	WR-75	SPDT	10 - 15	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.05	75	28	3,500	Yes	EAR99
PEWGS6015 	WR-75	SPDT	10 - 15	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.05	75	12	3,500	Yes	EAR99

Waveguide Electromechanical Relay Switches Continued

PE P/N	Waveguide Type	Switch Type	RF Freq. Range (GHz)	Actuator/Features	Insertion Loss (dB)	Isolation (dB)	DC Power (Volts)	Power Rating (Watts)	ROHS Compliant	ECCN
PEWGS6013 	WR-75	SPDT	10 - 15	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.05	75	28	3,500	Yes	EAR99
PEWGS6062 	WR-90	SPDT/DPDT	8.2 - 12.4	FailsafeTTL Logic, Window Indicator, Manual Override	0.07	80	12	5,000	Yes	EAR99
PEWGS6066 	WR-90	SPDT/DPDT	8.2 - 12.4	FailsafeTTL Logic, Window Indicator, Manual Override	0.07	80	12	5,000	Yes	EAR99
PEWGS6063 	WR-90	SPDT/DPDT	8.2 - 12.4	FailsafeTTL Logic, Window Indicator, Manual Override	0.07	80	28	5,000	Yes	EAR99
PEWGS6067 	WR-90	SPDT/DPDT	8.2 - 12.4	FailsafeTTL Logic, Window Indicator, Manual Override	0.07	80	28	5,000	Yes	EAR99
PEWGS6060 	WR-90	SPDT/DPDT	8.2 - 12.4	FailsafeWindow Indicator, Manual Override	0.07	80	12	5,000	Yes	EAR99
PEWGS6064 	WR-90	SPDT/DPDT	8.2 - 12.4	FailsafeWindow Indicator, Manual Override	0.07	80	12	5,000	Yes	EAR99
PEWGS6061 	WR-90	SPDT/DPDT	8.2 - 12.4	FailsafeWindow Indicator, Manual Override	0.07	80	28	5,000	Yes	EAR99
PEWGS6065 	WR-90	SPDT/DPDT	8.2 - 12.4	FailsafeWindow Indicator, Manual Override	0.07	80	28	5,000	Yes	EAR99
PEWGS6018 	WR-90	SPDT	8.2 - 12.4	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.07	80	12	5,000	Yes	EAR99
PEWGS6016 	WR-90	SPDT	8.2 - 12.4	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.07	80	28	5,000	Yes	EAR99
PEWGS6019 	WR-90	SPDT	8.2 - 12.4	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.07	80	12	5,000	Yes	EAR99
PEWGS6017 	WR-90	SPDT	8.2 - 12.4	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.07	80	28	5,000	Yes	EAR99
PEWGS6038 	WR-102	SPDT/DPDT	7 - 11	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.06	80	12	6,000	Yes	EAR99
PEWGS6036 	WR-102	SPDT/DPDT	7 - 11	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.06	80	28	6,000	Yes	EAR99

Waveguide Electromechanical Relay Switches Continued

PE P/N	Waveguide Type	Switch Type	RF Freq. Range (GHz)	Actuator/Features	Insertion Loss (dB)	Isolation (dB)	DC Power (Volts)	Power Rating (Watts)	ROHS Compliant	ECCN
PEWGS6039 	WR-102	SPDT/DPDT	7 - 11	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.06	80	12	6,000	Yes	EAR99
PEWGS6037 	WR-102	SPDT/DPDT	7 - 11	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.06	80	28	6,000	Yes	EAR99
PEWGS6070 	WR-112	SPDT/DPDT	7.05 - 10	FailsafeTTL Logic, Window Indicator, Manual Override	0.05	80	12	7,000	Yes	EAR99
PEWGS6071 	WR-112	SPDT/DPDT	7.05 - 10	FailsafeTTL Logic, Window Indicator, Manual Override	0.05	80	28	7,000	Yes	EAR99
PEWGS6068 	WR-112	SPDT/DPDT	7.05 - 10	FailsafeWindow Indicator, Manual Override	0.05	80	12	7,000	Yes	EAR99
PEWGS6069 	WR-112	SPDT/DPDT	7.05 - 10	FailsafeWindow Indicator, Manual Override	0.05	80	28	7,000	Yes	EAR99
PEWGS6022 	WR-112	SPDT	7.05 - 10	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.05	80	12	7,000	Yes	EAR99
PEWGS6020 	WR-112	SPDT	7.05 - 10	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.05	80	28	7,000	Yes	EAR99
PEWGS6023 	WR-112	SPDT	7.05 - 10	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.05	80	12	7,000	Yes	EAR99
PEWGS6021 	WR-112	SPDT	7.05 - 10	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.05	80	28	7,000	Yes	EAR99
PEWGS6026 	WR-137	SPDT	5.85 - 8.2	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.02	70	12	12,000	Yes	EAR99
PEWGS6024 	WR-137	SPDT	5.85 - 8.2	Break Before Make, Latching, Self Cut Off, Window Indicator, Manual Override	0.02	70	28	12,000	Yes	EAR99
PEWGS6027 	WR-137	SPDT	5.85 - 8.2	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.02	70	12	12,000	Yes	EAR99
PEWGS6025 	WR-137	SPDT	5.85 - 8.2	Break Before Make, Latching, TTL Logic, Self Cut Off, Window Indicator, Manual Override	0.02	70	28	12,000	Yes	EAR99
PEWGS6034 	WR-159	SPDT/DPDT	4.9 - 7.05	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.06	70	12	12,000	Yes	EAR99

Waveguide Electromechanical Relay Switches Continued

PE P/N	Waveguide Type	Switch Type	RF Freq. Range (GHz)	Actuator/Features	Insertion Loss (dB)	Isolation (dB)	DC Power (Volts)	Power Rating (Watts)	ROHS Compliant	ECCN
PEWGS6032 	WR-159	SPDT/DPDT	4.9 - 7.05	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.06	70	28	12,000	Yes	EAR99
PEWGS6035 	WR-159	SPDT/DPDT	4.9 - 7.05	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.06	70	12	12,000	Yes	EAR99
PEWGS6033 	WR-159	SPDT/DPDT	4.9 - 7.05	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.06	70	28	12,000	Yes	EAR99
PEWGS6030 	WR-187	SPDT/DPDT	3.95 - 5.85	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.02	80	12	22,000	Yes	EAR99
PEWGS6028 	WR-187	SPDT/DPDT	3.95 - 5.85	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.02	80	28	22,000	Yes	EAR99
PEWGS6031 	WR-187	SPDT/DPDT	3.95 - 5.85	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.002	80	12	22,000	Yes	EAR99
PEWGS6029 	WR-187	SPDT/DPDT	3.95 - 5.85	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.02	80	28	22,000	Yes	EAR99
PEWGS6054 	WRD-180	SPDT/DPDT	18 - 40	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.4	50	12	2,000	Yes	EAR99
PEWGS6052 	WRD-180	SPDT/DPDT	18 - 40	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.4	50	28	2,000	Yes	EAR99
PEWGS6055 	WRD-180	SPDT/DPDT	18 - 40	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.4	50	12	2,000	Yes	EAR99
PEWGS6053 	WRD-180	SPDT/DPDT	18 - 40	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.4	50	28	2,000	Yes	EAR99
PEWGS6046 	WRD-650	SPDT/DPDT	6.5 - 18	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.35	60	12	8,500	Yes	EAR99
PEWGS6044 	WRD-650	SPDT/DPDT	6.5 - 18	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.35	60	28	8,500	Yes	EAR99
PEWGS6047 	WRD-650	SPDT/DPDT	6.5 - 18	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.35	60	12	8,500	Yes	EAR99
PEWGS6045 	WRD-650	SPDT/DPDT	6.5 - 18	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.35	60	28	8,500	Yes	EAR99

Waveguide Electromechanical Relay Switches Continued

PE P/N	Waveguide Type	Switch Type	RF Freq. Range (GHz)	Actuator/Features	Insertion Loss (dB)	Isolation (dB)	DC Power (Volts)	Power Rating (Watts)	ROHS Compliant	ECCN
PEWGS6050 	WRD-750	SPDT/DPDT	7.5 - 18	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.3	60	12	8,500	Yes	EAR99
PEWGS6048 	WRD-750	SPDT/DPDT	7.5 - 18	Latching, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.3	60	28	8,500	Yes	EAR99
PEWGS6051 	WRD-750	SPDT/DPDT	7.5 - 18	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.3	60	12	8,500	Yes	EAR99
PEWGS6049 	WRD-750	SPDT/DPDT	7.5 - 18	Latching, TTL Logic, Self Cut Off, Set Indicators, Manual Override, Viewing Window	0.3	60	28	8,500	Yes	EAR99

Waveguide PIN Diode Switches

PE P/N	Waveguide Type	Switch Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum Isolation (dB)	Maximum Switching Time (ns)	Flange Type	Control Connector	ECCN
PE71S9003 	WR-10	Reflective/SPST	75 - 110	5.5	20	300	Round Cover UG-387/U	SMA Female	EAR99
PE71S9004 	WR-10	Reflective/SPDT	75 - 110	7	20	300	Round Cover UG-387/U	SMA Female	EAR99
PE71S9001 	WR-12	Reflective/SPST	60 - 90	4.5	20	300	Round Cover UG-387/U	SMA Female	EAR99
PE71S9002 	WR-12	Reflective/SPDT	60 - 90	6	20	300	Round Cover UG-387/U	SMA Female	EAR99

Waveguide Gunn Oscillators

PE P/N	Waveguide Type	Center Frequency (GHz)	Tuning Range (GHz)	Frequency Stability (MHz/deg C)	Phase Noise (dBc/Hz)	Output Power (dBm)	Flange Type	ECCN
PEWGN1010 	WR-28	35	+/- 3		-95	13	Square Cover UG-599/U	EAR99
PEWGN1011 	WR-28	35	+/- 3		-95	13	Square Cover UG-599/U	EAR99
PEWGN1012 	WR-42	24.125	+/- 1	-0.8	-98	10	Square Cover UG-595/U	EAR99
PEWGN1013 	WR-90	9.375	+/- 0.25		-105	10	Square Cover UG-39/U	EAR99

Waveguide Direct Read Attenuators

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum Attenuation (dB)	Insertion Loss (dB)	Maximum VSWR	Input Power (Watts)	Flange Type	ECCN
PE-W10AT5001 	WR-10	75 - 110	50	1	1.2:1	0.2	Round Cover UG-387/U-Mod	EAR99
PE-W12AT5001 	WR-12	60 - 90	50	0.9	1.2:1	0.2	Round Cover UG-387/U	EAR99
PE-W15AT5001 	WR-15	50 - 75	50	0.8	1.2:1	0.3	Round Cover UG-385/U	EAR99
PE-W19AT5001 	WR-19	40 - 60	50	0.7	1.15:1	0.2	Round Cover UG-383/U-Mod	EAR99
PE-W22AT5001 	WR-22	33 - 50	50	0.6	1.15:1	0.4	Round Cover UG-383/U	EAR99
PE-W22AT5002 	WR-22	33 - 50	60		1.15:1	0.5	Round Cover UG-383/U	EAR99
PE-W28AT5001 	WR-28	26.5 - 40	50	0.5	1.15:1	0.5	Square Cover UG-599/U	EAR99
PE-W42AT5001 	WR-42	18 - 26.5	50	0.5	1.15:1	1	Square Cover UG-595/U	EAR99

Waveguide Fixed Attenuators

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Flange Type 1 - Flange Type 2	VSWR	Maximum Attenuators (dB)	ECCN
PEWAT1012-3 	WR-10	75 - 110	Round Cover UG-387/U-Mod - Round Cover UG-387/U-Mod	1.15:1	3	EAR99
PEWAT1012-6 	WR-10	75 - 110	Round Cover UG-387/U-Mod - Round Cover UG-387/U-Mod	1.15:1	6	EAR99
PEWAT1012-10 	WR-10	75 - 110	Round Cover UG-387/U-Mod - Round Cover UG-387/U-Mod	1.15:1	10	EAR99
PEWAT1012-20 	WR-10	75 - 110	Round Cover UG-387/U-Mod - Round Cover UG-387/U-Mod	1.15:1	20	EAR99
PEWAT1012-30 	WR-10	75 - 110	Round Cover UG-387/U-Mod - Round Cover UG-387/U-Mod	1.15:1	30	EAR99
PEWAT1011-3 	WR-12	60 - 90	Round Cover UG-387/U - Round Cover UG-387/U	1.15:1	3	EAR99

Waveguide Fixed Attenuators Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Flange Type 1 - Flange Type 2	VSWR	Maximum Attenuators (dB)	ECCN
PEWAT1011-6 	WR-12	60 - 90	Round Cover UG-387/U - Round Cover UG-387/U	1.15:1	6	EAR99
PEWAT1011-10 	WR-12	60 - 90	Round Cover UG-387/U - Round Cover UG-387/U	1.15:1	10	EAR99
PEWAT1011-20 	WR-12	60 - 90	Round Cover UG-387/U - Round Cover UG-387/U	1.15:1	20	EAR99
PEWAT1011-30 	WR-12	60 - 90	Round Cover UG-387/U - Round Cover UG-387/U	1.15:1	30	EAR99
PEWAT1010-3 	WR-15	50 - 75	Round Cover UG-385/U - Round Cover UG-385/U	1.15:1	3	EAR99
PEWAT1010-6 	WR-15	50 - 75	Round Cover UG-385/U - Round Cover UG-385/U	1.15:1	6	EAR99
PEWAT1010-10 	WR-15	50 - 75	Round Cover UG-385/U - Round Cover UG-385/U	1.15:1	10	EAR99
PEWAT1010-20 	WR-15	50 - 75	Round Cover UG-385/U - Round Cover UG-385/U	1.15:1	20	EAR99
PEWAT1010-30 	WR-15	50 - 75	Round Cover UG-385/U - Round Cover UG-385/U	1.15:1	30	EAR99
PEWAT1009-3 	WR-19	40 - 60	Round Cover UG-383/U-Mod - Round Cover UG-383/U-Mod	1.15:1	3	EAR99
PEWAT1009-6 	WR-19	40 - 60	Round Cover UG-383/U-Mod - Round Cover UG-383/U-Mod	1.15:1	6	EAR99
PEWAT1009-10 	WR-19	40 - 60	Round Cover UG-383/U-Mod - Round Cover UG-383/U-Mod	1.15:1	10	EAR99
PEWAT1009-20 	WR-19	40 - 60	Round Cover UG-383/U-Mod - Round Cover UG-383/U-Mod	1.15:1	20	EAR99
PEWAT1009-30 	WR-19	40 - 60	Round Cover UG-383/U-Mod - Round Cover UG-383/U-Mod	1.15:1	30	EAR99
PEWAT1008-3 	WR-22	33 - 50	Round Cover UG-383/U - Round Cover UG-383/U	1.15:1	3	EAR99
PEWAT1008-6 	WR-22	33 - 50	Round Cover UG-383/U - Round Cover UG-383/U	1.15:1	6	EAR99

Waveguide Fixed Attenuators Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Flange Type 1 - Flange Type 2	VSWR	Maximum Attenuators (dB)	ECCN
PEWAT1008-10 	WR-22	33 - 50	Round Cover UG-383/U - Round Cover UG-383/U	1.15:1	10	EAR99
PEWAT1008-20 	WR-22	33 - 50	Round Cover UG-383/U - Round Cover UG-383/U	1.15:1	20	EAR99
PEWAT1008-30 	WR-22	33 - 50	Round Cover UG-383/U - Round Cover UG-383/U	1.15:1	30	EAR99
PEWAT1007-3 	WR-28	26.5 - 40	Round Cover UG-599/U - Round Cover UG-599/U	1.15:1	3	EAR99
PEWAT1007-6 	WR-28	26.5 - 40	Round Cover UG-599/U - Round Cover UG-599/U	1.15:1	6	EAR99
PEWAT1007-10 	WR-28	26.5 - 40	Round Cover UG-599/U - Round Cover UG-599/U	1.2:1	10	EAR99
PEWAT1007-20 	WR-28	26.5 - 40	Round Cover UG-599/U - Round Cover UG-599/U	1.2:1	20	EAR99
PEWAT1007-30 	WR-28	26.5 - 40	Round Cover UG-599/U - Round Cover UG-599/U	1.15:1	30	EAR99

Waveguide Variable Attenuators

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Flange Type	Insertion Loss (dB)	Maximum Attenuators (dB)	ECCN
PE-W10AT002-30 	WR-10	75 - 110	Round Cover UG-387/U-Mod	1	30	EAR99
PE-W12AT002-30 	WR-12	60 - 90	Round Cover UG-387/U	0.4	30	EAR99
PE-W15AT001-30 	WR-15	50 - 75	Round Cover UG-385/U	0.8	30	EAR99
PE-W19AT001-30 	WR-19	40 - 60	Round Cover UG-383/U-Mod	0.6	30	EAR99
PE-W22AT001-30 	WR-22	33 - 50	Round Cover UG-383/U	0.5	30	EAR99

Waveguide Antennas with Coax Adapters

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	Connector	ECCN
PE9850B/2F-10 	WR-28	26.5 - 40	10	WR-28	2.92mm Female	EAR99
PE9850B/2F-15 	WR-28	26.5 - 40	15	WR-28	2.92mm Female	EAR99
PE9850B/2F-20 	WR-28	26.5 - 40	20	WR-28	2.92mm Female	EAR99
PE9851B/2F-10 	WR-34	22 - 33	10	WR-34	2.92mm Female	EAR99
PE9851B/2F-15 	WR-34	22 - 33	15	WR-34	2.92mm Female	EAR99
PE9851B/2F-20 	WR-34	22 - 33	20	WR-34	2.92mm Female	EAR99
PE9852B/2F-10 	WR-42	18 - 26.5	10	WR-42	2.92mm Female	EAR99
PE9852B/2F-15 	WR-42	18 - 26.5	15	WR-42	2.92mm Female	EAR99
PE9852B/2F-20 	WR-42	18 - 26.5	20	WR-42	2.92mm Female	EAR99
PE9853B/SF-10 	WR-51	15 - 22	10	WR-51	SMA Female	EAR99
PE9853B/SF-15 	WR-51	15 - 22	15	WR-51	SMA Female	EAR99
PE9853B/SF-20 	WR-51	15 - 22	20	WR-51	SMA Female	EAR99
PE9854B/NF-10 	WR-62	12.4 - 18	10	WR-62	N Female	EAR99
PE9854B/SF-10 	WR-62	12.4 - 18	10	WR-62	SMA Female	EAR99
PE9854B/NF-15 	WR-62	12.4 - 18	15	WR-62	N Female	EAR99
PE9854B/SF-15 	WR-62	12.4 - 18	15	WR-62	SMA Female	EAR99

Waveguide Antennas with Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	Connector	ECCN
PE9854B/NF-20 	WR-62	12.4 - 18	20	WR-62	N Female	EAR99
PE9854B/SF-20 	WR-62	12.4 - 18	20	WR-62	SMA Female	EAR99
PE9855B/NF-10 	WR-75	10 - 15	10	WR-75	N Female	EAR99
PE9855B/SF-10 	WR-75	10 - 15	10	WR-75	SMA Female	EAR99
PE9855B/NF-15 	WR-75	10 - 15	15	WR-75	N Female	EAR99
PE9855B/SF-15 	WR-75	10 - 15	15	WR-75	SMA Female	EAR99
PE9855B/NF-20 	WR-75	10 - 15	20	WR-75	N Female	EAR99
PE9855B/SF-20 	WR-75	10 - 15	20	WR-75	SMA Female	EAR99
PE9856B/NF-10 	WR-90	8.2 - 12.4	10	WR-90	N Female	EAR99
PE9856B/SF-10 	WR-90	8.2 - 12.4	10	WR-90	SMA Female	EAR99
PE9856B/NF-15 	WR-90	8.2 - 12.4	15	WR-90	N Female	EAR99
PE9856B/SF-15 	WR-90	8.2 - 12.4	15	WR-90	SMA Female	EAR99
PE9856B/NF-20 	WR-90	8.2 - 12.4	20	WR-90	N Female	EAR99
PE9856B/SF-20 	WR-90	8.2 - 12.4	20	WR-90	SMA Female	EAR99
PE9857B/NF-10 	WR-102	7 - 11	10	WR-102	N Female	EAR99
PE9857B/SF-10 	WR-102	7 - 11	10	WR-102	SMA Female	EAR99

Waveguide Antennas with Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	Connector	ECCN
PE9857B/NF-15 	WR-102	7 - 11	15	WR-102	N Female	EAR99
PE9857B/SF-15 	WR-102	7 - 11	15	WR-102	SMA Female	EAR99
PE9857B/NF-20 	WR-102	7 - 11	20	WR-102	N Female	EAR99
PE9857B/SF-20 	WR-102	7 - 11	20	WR-102	SMA Female	EAR99
PE9858B/NF-10 	WR-112	7.05 - 10	10	WR-112	N Female	EAR99
PE9858B/SF-10 	WR-112	7.05 - 10	10	WR-112	SMA Female	EAR99
PE9858B/NF-15 	WR-112	7.05 - 10	15	WR-112	N Female	EAR99
PE9858B/SF-15 	WR-112	7.05 - 10	15	WR-112	SMA Female	EAR99
PE9858B/NF-20 	WR-112	7.05 - 10	20	WR-112	N Female	EAR99
PE9858B/SF-20 	WR-112	7.05 - 10	20	WR-112	SMA Female	EAR99
PE9859B/NF-10 	WR-137	5.85 - 8.2	10	WR-137	N Female	EAR99
PE9859B/SF-10 	WR-137	5.85 - 8.2	10	WR-137	SMA Female	EAR99
PE9859B/NF-15 	WR-137	5.85 - 8.2	15	WR-137	N Female	EAR99
PE9859B/SF-15 	WR-137	5.85 - 8.2	15	WR-137	SMA Female	EAR99
PE9859B/NF-20 	WR-137	5.85 - 8.2	20	WR-137	N Female	EAR99
PE9859B/SF-20 	WR-137	5.85 - 8.2	20	WR-137	SMA Female	EAR99

Waveguide Antennas with Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	Connector	ECCN
PE9860B/NF-10 	WR-159	4.9 - 7.05	10	WR-159	N Female	EAR99
PE9860B/SF-10 	WR-159	4.9 - 7.05	10	WR-159	SMA Female	EAR99
PE9860B/NF-15 	WR-159	4.9 - 7.05	15	WR-159	N Female	EAR99
PE9860B/SF-15 	WR-159	4.9 - 7.05	15	WR-159	SMA Female	EAR99
PE9860B/NF-20 	WR-159	4.9 - 7.05	20	WR-159	N Female	EAR99
PE9860B/SF-20 	WR-159	4.9 - 7.05	20	WR-159	SMA Female	EAR99
PE9861B/NF-10 	WR-187	3.95 - 5.85	10	WR-187	N Female	EAR99
PE9861B/SF-10 	WR-187	3.95 - 5.85	10	WR-187	SMA Female	EAR99
PE9861B/NF-15 	WR-187	3.95 - 5.85	15	WR-187	N Female	EAR99
PE9861B/SF-15 	WR-187	3.95 - 5.85	15	WR-187	SMA Female	EAR99
PE9861B/NF-20 	WR-187	3.95 - 5.85	20	WR-187	N Female	EAR99
PE9861B/SF-20 	WR-187	3.95 - 5.85	20	WR-187	SMA Female	EAR99
PE9862B/NF-10 	WR-229	3.3 - 4.9	10	WR-229	N Female	EAR99
PE9862B/SF-10 	WR-229	3.3 - 4.9	10	WR-229	SMA Female	EAR99
PE9862B/NF-15 	WR-229	3.3 - 4.9	15	WR-229	N Female	EAR99
PE9862B/SF-15 	WR-229	3.3 - 4.9	15	WR-229	SMA Female	EAR99

Waveguide Antennas with Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	Connector	ECCN
PE9862B/NF-20 	WR-229	3.3 - 4.9	20	WR-229	N Female	EAR99
PE9862B/SF-20 	WR-229	3.3 - 4.9	20	WR-229	SMA Female	EAR99
PE9863B/NF-10 	WR-284	2.6 - 3.95	10	WR-284	N Female	EAR99
PE9863B/SF-10 	WR-284	2.6 - 3.95	10	WR-284	SMA Female	EAR99
PE9863B/NF-15 	WR-284	2.6 - 3.95	15	WR-284	N Female	EAR99
PE9863B/SF-15 	WR-284	2.6 - 3.95	15	WR-284	SMA Female	EAR99
PE9863B/NF-20 	WR-284	2.6 - 3.95	20	WR-284	N Female	EAR99
PE9863B/SF-20 	WR-284	2.6 - 3.95	20	WR-284	SMA Female	EAR99
PE9864B/NF-15 	WR-430	1.7 - 2.6	15	WR-430	N Female	EAR99
PE9864B/SF-15 	WR-430	1.7 - 2.6	15	WR-430	SMA Female	EAR99
PE9864B/NF-20 	WR-430	1.7 - 2.6	20	WR-430	N Female	EAR99
PE9864B/SF-20 	WR-430	1.7 - 2.6	20	WR-430	SMA Female	EAR99
PE9864B/NF-10 	WR-430	1.7 - 2.6	10	WR-430	N Female	EAR99
PE9864B/SF-10 	WR-430	1.7 - 2.6	10	WR-430	SMA Female	EAR99

Standard Gain Horns

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1029 	WR-5	140 - 220	10	Round Cover UG-387/U-Mod	EAR99
PEWAN1030 	WR-5	140 - 220	15	Round Cover UG-387/U-Mod	EAR99
PEWAN1031 	WR-5	140 - 220	20	Round Cover UG-387/U-Mod	EAR99
PEWAN1032 	WR-5	140 - 220	25	Round Cover UG-387/U-Mod	EAR99
PEWAN1025 	WR-6	110 - 170	10	Round Cover UG-387/U-Mod	EAR99
PEWAN1026 	WR-6	110 - 170	15	Round Cover UG-387/U-Mod	EAR99
PEWAN1027 	WR-6	110 - 170	20	Round Cover UG-387/U-Mod	EAR99
PEWAN1028 	WR-6	110 - 170	25	Round Cover UG-387/U-Mod	EAR99
PEWAN1021 	WR-8	90 - 140	10	Round Cover UG-387/U-Mod	EAR99
PEWAN1022 	WR-8	90 - 140	15	Round Cover UG-387/U-Mod	EAR99
PEWAN1023 	WR-8	90 - 140	20	Round Cover UG-387/U-Mod	EAR99
PEWAN1024 	WR-8	90 - 140	25	Round Cover UG-387/U-Mod	EAR99
PEWAN1017 	WR-10	75 - 110	10	Round Cover UG-387/U-Mod	EAR99
PEWAN1018 	WR-10	75 - 110	15	Round Cover UG-387/U-Mod	EAR99
PEWAN1019 	WR-10	75 - 110	20	Round Cover UG-387/U-Mod	EAR99
PEWAN1020 	WR-10	75 - 110	25	Round Cover UG-387/U-Mod	EAR99

Standard Gain Horns Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1013 	WR-12	60 - 90	10	Round Cover UG-387/U-Mod	EAR99
PEWAN1014 	WR-12	60 - 90	15	Round Cover UG-387/U-Mod	EAR99
PEWAN1015 	WR-12	60 - 90	20	Round Cover UG-387/U-Mod	EAR99
PEWAN1016 	WR-12	60 - 90	25	Round Cover UG-387/U	EAR99
PEWAN1009 	WR-15	50 - 75	10	Round Cover UG-385/U-Mod	EAR99
PEWAN1010 	WR-15	50 - 75	15	Round Cover UG-385/U-Mod	EAR99
PEWAN1011 	WR-15	50 - 75	20	Round Cover UG-385/U-Mod	EAR99
PE9881-24 	WR-15	50 - 75	24	Round Cover UG-385/U	EAR99
PEWAN1012 	WR-15	50 - 75	25	Round Cover UG-385/U-Mod	EAR99
PEWAN1005 	WR-19	40 - 60	10	Round Cover UG-383/U-Mod	EAR99
PEWAN1006 	WR-19	40 - 60	15	Round Cover UG-383/U-Mod	EAR99
PEWAN1007 	WR-19	40 - 60	20	Round Cover UG-383/U-Mod	EAR99
PEWAN1008 	WR-19	40 - 60	25	Round Cover UG-383/U-Mod	EAR99
PE9850B-10 	WR-28	26.5 - 40	10	Square Cover UG-599/U	EAR99
PEWAN028-10 	WR-28	26.5 - 40	10	Square Cover UG-599/U	EAR99
PE9850B-15 	WR-28	26.5 - 40	15	Square Cover UG-599/U	EAR99

Standard Gain Horns Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN028-15 	WR-28	26.5 - 40	15	Square Cover UG-599/U	EAR99
PE9850B-20 	WR-28	26.5 - 40	20	Square Cover UG-599/U	EAR99
PEWAN028-20 	WR-28	26.5 - 40	20	Square Cover UG-599/U	EAR99
PE9851B-10 	WR-34	22 - 33	10	Square Cover UG-1530/U	EAR99
PEWAN034-10 	WR-34	22 - 33	10	Square Cover UG-1530/U	EAR99
PE9851B-15 	WR-34	22 - 33	15	Square Cover UG-1530/U	EAR99
PEWAN034-15 	WR-34	22 - 33	15	Square Cover UG-1530/U	EAR99
PE9851B-20 	WR-34	22 - 33	20	Square Cover UG-1530/U	EAR99
PEWAN034-20 	WR-34	22 - 33	20	Square Cover UG-1530/U	EAR99
PE9852B-10 	WR-42	18 - 26.5	10	Square Cover UG-597/U	EAR99
PEWAN042-10 	WR-42	18 - 26.5	10	Square Cover UG-597/U	EAR99
PE9852B-15 	WR-42	18 - 26.5	15	Square Cover UG-597/U	EAR99
PEWAN042-15 	WR-42	18 - 26.5	15	Square Cover UG-597/U	EAR99
PE9852B-20 	WR-42	18 - 26.5	20	Square Cover UG-597/U	EAR99
PEWAN042-20 	WR-42	18 - 26.5	20	Square Cover UG-597/U	EAR99
PE9853B-10 	WR-51	15 - 22	10	Square Cover	EAR99

Standard Gain Horns Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN051-10 	WR-51	15 - 22	10	Square Cover	EAR99
PE9853B-15 	WR-51	15 - 22	15	Square Cover	EAR99
PEWAN051-15 	WR-51	15 - 22	15	Square Cover	EAR99
PE9853B-20 	WR-51	15 - 22	20	Square Cover	EAR99
PEWAN051-20 	WR-51	15 - 22	20	Square Cover	EAR99
PE9854B-10 	WR-62	12.4 - 18	10	Square Cover UG-1665/U	EAR99
PEWAN062-10 	WR-62	12.4 - 18	10	Square Cover	EAR99
PE9854B-15 	WR-62	12.4 - 18	15	Square Cover	EAR99
PEWAN062-15 	WR-62	12.4 - 18	15	Square Cover	EAR99
PE9854B-20 	WR-62	12.4 - 18	20	Square Cover	EAR99
PEWAN062-20 	WR-62	12.4 - 18	20	Square Cover	EAR99
PE9855B-10 	WR-75	10 - 15	10	Square Cover	EAR99
PEWAN075-10 	WR-75	10 - 15	10	Square Cover	EAR99
PE9855B-15 	WR-75	10 - 15	15	Square Cover	EAR99
PEWAN075-15 	WR-75	10 - 15	15	Square Cover	EAR99
PE9855B-20 	WR-75	10 - 15	20	Square Cover	EAR99

Standard Gain Horns Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN075-20 	WR-75	10 - 15	20	Square Cover	EAR99
PE9856B-10 	WR-90	8.2 - 12.4	10	Square Cover UG-135/U	EAR99
PEWAN090-10 	WR-90	8.2 - 12.4	10	Square Cover UG-135/U	EAR99
PE9856B-15 	WR-90	8.2 - 12.4	15	Square Cover UG-135/U	EAR99
PEWAN090-15 	WR-90	8.2 - 12.4	15	Square Cover UG-135/U	EAR99
PE9856B-20 	WR-90	8.2 - 12.4	20	Square Cover UG-135/U	EAR99
PEWAN090-20 	WR-90	8.2 - 12.4	20	Square Cover UG-135/U	EAR99
PE9858B-10 	WR-112	7.05 - 10	10	Square Cover	EAR99
PEWAN112-10 	WR-112	7.05 - 10	10	Square Cover	EAR99
PE9858B-15 	WR-112	7.05 - 10	15	Square Cover UG-138/U	EAR99
PEWAN112-15 	WR-112	7.05 - 10	15	Square Cover	EAR99
PE9858B-20 	WR-112	7.05 - 10	20	Square Cover	EAR99
PEWAN112-20 	WR-112	7.05 - 10	20	Square Cover	EAR99
PE9857B-10 	WR-102	7 - 11	10	Square Cover UG-1493/U	EAR99
PEWAN102-10 	WR-102	7 - 11	10	Square Cover	EAR99
PE9857B-15 	WR-102	7 - 11	15	Square Cover	EAR99

Standard Gain Horns Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN102-15 	WR-102	7 - 11	15	Square Cover	EAR99
PE9857B-20 	WR-102	7 - 11	20	Square Cover UG-1493/U	EAR99
PEWAN102-20 	WR-102	7 - 11	20	Square Cover	EAR99
PE9859B-20 	WR-137	5.85 - 8.2	20	CMR-137F	EAR99
PE9859B-10 	WR-137	5.85 - 8.2	10	CMR-137	EAR99
PEWAN137-10 	WR-137	5.85 - 8.2	10	CMR-137	EAR99
PE9859B-15 	WR-137	5.85 - 8.2	15	CMR-137	EAR99
PEWAN137-15 	WR-137	5.85 - 8.2	15	CMR-137	EAR99
PEWAN137-20 	WR-137	5.85 - 8.2	20	CMR-137	EAR99
PE9860B-10 	WR-159	4.9 - 7.05	10	CMR-159	EAR99
PEWAN159-10 	WR-159	4.9 - 7.05	10	CMR-159	EAR99
PE9860B-15 	WR-159	4.9 - 7.05	15	CMR-159	EAR99
PEWAN159-15 	WR-159	4.9 - 7.05	15	Square Cover UG-1731/U	EAR99
PE9860B-20 	WR-159	4.9 - 7.05	20	CMR-159	EAR99
PEWAN159-20 	WR-159	4.9 - 7.05	20	CMR-159	EAR99
PE9861B-10 	WR-187	3.95 - 5.85	10	CMR-187	EAR99

Standard Gain Horns Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN187-10 	WR-187	3.95 - 5.85	10	CMR-187	EAR99
PE9861B-15 	WR-187	3.95 - 5.85	15	CMR-187	EAR99
PEWAN187-15 	WR-187	3.95 - 5.85	15	CMR-187	EAR99
PE9861B-20 	WR-187	3.95 - 5.85	20	CMR-187	EAR99
PEWAN187-20 	WR-187	3.95 - 5.85	20	CMR-187	EAR99
PE9862B-10 	WR-229	3.3 - 4.9	10	CMR-229	EAR99
PEWAN229-10 	WR-229	3.3 - 4.9	10	CMR-229	EAR99
PE9862B-15 	WR-229	3.3 - 4.9	15	CMR-229	EAR99
PEWAN229-15 	WR-229	3.3 - 4.9	15	CMR-229	EAR99
PE9862B-20 	WR-229	3.3 - 4.9	20	CMR-229	EAR99
PEWAN229-20 	WR-229	3.3 - 4.9	20	CMR-229	EAR99
PE9863B-10 	WR-284	2.6 - 3.95	10	CMR-284	EAR99
PE9863B-10-U 	WR-284	2.6 - 3.95	10	Round Cover UG-584/U	
PEWAN284-10 	WR-284	2.6 - 3.95	10	CMR-284	EAR99
PE9863B-15 	WR-284	2.6 - 3.95	15	CMR-284	EAR99
PE9863B-15-U 	WR-284	2.6 - 3.95	15	Round Cover UG-584/U	EAR99

Standard Gain Horns Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN284-15 	WR-284	2.6 - 3.95	15	CMR-284	EAR99
PE9863B-20 	WR-284	2.6 - 3.95	20	CMR-284	EAR99
PE9863B-20-U 	WR-284	2.6 - 3.95	20	Round Cover UG-584/U	EAR99
PEWAN284-20 	WR-284	2.6 - 3.95	20	CMR-284	EAR99
PE9864B-10 	WR-430	1.7 - 2.6	10	CPR-430F	EAR99
PEWAN430-10 	WR-430	1.7 - 2.6	10	CPR-430F	EAR99
PE9864B-15 	WR-430	1.7 - 2.6	15	CPR-430F	EAR99
PEWAN430-15 	WR-430	1.7 - 2.6	15	CPR-430F	EAR99
PE9864B-20 	WR-430	1.7 - 2.6	20	CPR-430F	EAR99

Conical Gain Horns

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1065 	WR-5	140 - 220	10	Round Cover UG-387/U	EAR99
PEWAN1066 	WR-5	140 - 220	15	Round Cover UG-387/U	EAR99
PEWAN1067 	WR-5	140 - 220	20	Round Cover UG-387/U	EAR99
PEWAN1068 	WR-5	140 - 220	25	Round Cover UG-387/U	EAR99
PEWAN1061 	WR-6	100 - 112	10	Round Cover UG-387/U-Mod	EAR99

Conical Gain Horns Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1062 	WR-6	100 - 112	15	Round Cover UG-387/U-Mod	EAR99
PEWAN1063 	WR-6	100 - 112	20	Round Cover UG-387/U-Mod	EAR99
PEWAN1064 	WR-6	100 - 112	25	Round Cover UG-387/U-Mod	EAR99
PEWAN1057 	WR-8	100 - 112	10	Round Cover UG-387/U-Mod	EAR99
PEWAN1058 	WR-8	100 - 112	15	Round Cover UG-387/U-Mod	EAR99
PEWAN1059 	WR-8	100 - 112	20	Round Cover UG-387/U-Mod	EAR99
PEWAN1060 	WR-8	100 - 112	25	Round Cover UG-387/U-Mod	EAR99
PEWAN1049 	WR-10	87 - 100	10	Round Cover UG-387/U	EAR99
PEWAN1050 	WR-10	87 - 100	15	Round Cover UG-387/U	EAR99
PEWAN1051 	WR-10	87 - 100	20	Round Cover UG-387/U	EAR99
PEWAN1052 	WR-10	87 - 100	25	Round Cover UG-387/U	EAR99
PEWAN1053 	WR-10	77 - 87	10	Round Cover UG-387/U	EAR99
PEWAN1054 	WR-10	77 - 87	15	Round Cover UG-387/U	EAR99
PEWAN1055 	WR-10	77 - 87	20	Round Cover UG-387/U	EAR99
PEWAN1056 	WR-10	77 - 87	25	Round Cover UG-387/U	EAR99
PEWAN1045 	WR-12	77 - 87	10	Round Cover UG-387/U	EAR99

Conical Gain Horns Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1046 	WR-12	77 - 87	15	Round Cover UG-387/U	EAR99
PEWAN1047 	WR-12	77 - 87	20	Round Cover UG-387/U	EAR99
PEWAN1048 	WR-12	77 - 87	25	Round Cover UG-387/U	EAR99
PEWAN1041 	WR-12	68 - 77	10	Round Cover UG-387/U	EAR99
PEWAN1042 	WR-12	68 - 77	15	Round Cover UG-387/U	EAR99
PEWAN1043 	WR-12	68 - 77	20	Round Cover UG-387/U	EAR99
PEWAN1044 	WR-12	68 - 77	25	Round Cover UG-387/U	EAR99
PEWAN1037 	WR-15	58 - 68	10	Round Cover UG-385/U	EAR99
PEWAN1038 	WR-15	58 - 68	15	Round Cover UG-385/U	EAR99
PEWAN1039 	WR-15	58 - 68	20	Round Cover UG-385/U	EAR99
PEWAN1040 	WR-15	58 - 68	25	Round Cover UG-385/U	EAR99
PEWAN1033 	WR-19	50 - 58	10	Round Cover UG-383/U-Mod	EAR99
PEWAN1034 	WR-19	50 - 58	15	Round Cover UG-383/U-Mod	EAR99
PEWAN1035 	WR-19	50 - 58	20	Round Cover UG-383/U-Mod	EAR99
PEWAN1036 	WR-19	50 - 58	25	Round Cover UG-383/U-Mod	EAR99

Wide Angle Scalar Feed Horns

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1109 		100 - 112	17	Round Cover UG-387/U-Mod	EAR99
PEWAN1073 	WR-10	89 - 99	10	Round Cover UG-385/U-Mod	EAR99
PEWAN1074 	WR-10	89 - 99	10	Round Cover UG-385/U-Mod	EAR99
PEWAN1123 		87 - 100	17	UG-387/U-Mod	EAR99
PEWAN1122 		77 - 87	17	UG-387/U-Mod	EAR99
PEWAN1071 	WR-12	72 - 82	10	Round Cover UG-385/U	EAR99
PEWAN1072 	WR-12	72 - 82	10	Round Cover UG-385/U	EAR99
PEWAN1120 		68 - 77	17	UG-387/U-Mod	EAR99
PEWAN1118 		58 - 68	17	UG-385/U-Mod	EAR99
PEWAN1069 	WR-15	55 - 65	10	Round Cover UG-385/U	EAR99
PEWAN1070 	WR-15	55 - 65	10	Round Cover UG-385/U	EAR99
PEWAN1115 		33 - 38.5	17	UG-599/U	EAR99
PEWAN1114 		26 - 33	17	UG-599/U	EAR99
PEWAN1113 	WR-28	26 - 30	17	UG-599/U	EAR99
PEWAN1110 		24 - 33	16	Square Cover UG-1530/U	EAR99

Lens Gain Horns

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1083 	WR-10	89 - 99	34	Round Cover UG-387/U	EAR99
PEWAN1085 	WR-10	89 - 99	34	Round Cover UG-387/U	EAR99
PEWAN1084 	WR-10	89 - 99	40	Round Cover UG-387/U	EAR99
PEWAN1086 	WR-10	89 - 99	40	Round Cover UG-387/U	EAR99
PEWAN1101 	WR-10	88 - 100	40	Round Cover UG-387/U-Mod	EAR99
PEWAN1102 		88 - 100	48	Square Cover UG-387/U-Mod	EAR99
PEWAN1079 	WR-12	72 - 82	32	Round Cover UG-387/U	EAR99
PEWAN1081 	WR-12	72 - 82	32	Round Cover UG-387/U	EAR99
PEWAN1080 	WR-12	72 - 82	37	Round Cover UG-387/U	EAR99
PEWAN1082 	WR-12	72 - 82	37	Round Cover UG-387/U	EAR99
PEWAN1075 	WR-15	55 - 65	32	Round Cover UG-385/U	EAR99
PEWAN1077 	WR-15	55 - 65	32	Round Cover UG-385/U	EAR99
PEWAN1076 	WR-15	55 - 65	37	Round Cover UG-385/U	EAR99
PEWAN1078 	WR-15	55 - 65	37	Round Cover UG-385/U	EAR99

Omni Directional

Omni Directional

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1135 	WR-10	90 - 100	0	Round Cover UG-387/U-Mod	EAR99
PEWAN1136 	WR-10	90 - 100	6.5	Square Cover UG-387/U-Mod	EAR99
PEWAN1089 	WR-10	89 - 99	2	Round Cover UG-387/U	EAR99
PEWAN1088 	WR-12	75 - 79	2	Round Cover UG-387/U	EAR99
PEWAN1134 	WR-12	71 - 86	2	Round Cover UG-387/U	EAR99
PEWAN1087 	WR-15	58 - 62	3.5	Round Cover UG-385/U	EAR99
PEWAN1133 	WR-28	26.5 - 40	7.5	Square Cover UG-599/U	EAR99

Probe Waveguide Antennas

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1124 	WR-6	110 - 170	6.5	Round Cover UG-387/U-Mod	EAR99
PEWAN1125 	WR-8	90 - 140	6.5	Round Cover UG-387/U-Mod	EAR99
PEWAN1126 	WR-10	75 - 110	6.5	Round Cover UG-387/U-Mod	EAR99
PEWAN1127 	WR-12	60 - 90	6.5	Round Cover UG-387/U	EAR99
PEWAN1128 	WR-15	50 - 75	6.5	Round Cover UG-385/U	EAR99
PEWAN1129 	WR-19	40 - 60	6.5	Round Cover UG-383/U-Mod	EAR99
PEWAN1130 	WR-22	33 - 50	6.5	Round Cover UG-383/U	EAR99

Probe Waveguide Antennas Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1131 	WR-28	26.5 - 40	6.5	Square Cover UG-599/U	EAR99
PEWAN1132 	WR-34	22 - 33	6.5	Square Cover UG-1530/U	EAR99

Sector Waveguide Antennas

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1144 	WR-28	30 - 40	0	Square Cover UG-599/U-Mod	EAR99
PEWAN1143 	WR-28	27.5 - 29.5	6	Square Cover UG-599/U	EAR99

Dual Polarized Waveguide Antennas

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1121 	WR-10	75 - 110	13	UG-387/U-Mod	EAR99
PEWAN1137 	WR-10	75 - 110	15	Square Cover UG-387/U-Mod	EAR99
PEWAN1141 	WR-10	75 - 110	20	Square Cover UG-387/U-Mod	EAR99
PEWAN1119 	WR-12	60 - 90	13	UG-387/U	EAR99
PEWAN1138 	WR-12	60 - 90	15	Square Cover UG-387/U	EAR99
PEWAN1139 	WR-12	50 - 75	15	Square Cover UG-385/U	EAR99
PEWAN1117 	WR-15	50 - 75	13	UG-385/U-Mod	EAR99
PEWAN1116 	WR-19	40 - 60	13	UG-383/U-Mod	EAR99

Dual Polarized Waveguide Antennas Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PEWAN1140 	WR-22	33 - 50	15	Square Cover UG-383/U	EAR99
PEWAN1142 	WR-28	24 - 42	10	Square Choke UG-599/U	EAR99
PEWAN1112 	WR-28	24 - 42	15	UG-599/U	EAR99
PEWAN1111 	WR-28	24 - 40	15	UG-599/U	EAR99

Specialty Waveguide Antennas

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Gain (dB)	Flange Type	ECCN
PE9887-11 	Broadband	1 - 18	11 dBi	SMA Connectors	EAR99
PE9888-11 	Broadband	1 - 18	11 dBi	N Connectors	EAR99
PE9881-42 	WR-15	50 - 75	42	Round Cover	5A991
PE9881A-20 	WR-15	50 - 75	20	Round Cover	EAR99
PEW15A001 	WR-15	50 - 75	2 dBi	Round Cover	EAR99
PE9881-34 	WR-15	56.5 - 67	34 dBi	Round Cover	5A991

Waveguide to Coax Adapters

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PE-W10CA003 	WR-10	75 - 110	1.32:1	Round Cover UG-387/U-Mod	1.0mm Female	Right Angle	EAR99
PE-W10CA004 	WR-10	75 - 110	1.33:1	Round Cover UG-387/U-Mod	1.0mm Male	Right Angle	EAR99

Waveguide to Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PE-W10CA002 	WR-10	75 - 110	1.9:1	Round Cover UG-387/U-Mod	1.0mm Male	Right Angle	EAR99
PE-W12CA001 	WR-12	60 - 90	1.67:1	Round Cover UG-387/U	1.0mm Female	Right Angle	EAR99
PE-W15CA001 	WR-15	50 - 65	1.44:1	Round Cover UG-385/U	1.85mm Female	Right Angle	EAR99
PE-W15CA002 	WR-15	50 - 65	1.44:1	Round Cover UG-385/U	1.85mm Male	Right Angle	EAR99
PE-W19CA001 	WR-19	40 - 60	1.38:1	Round Cover UG-383/U-Mod	1.85mm Female	Right Angle	EAR99
PE-W19CA002 	WR-19	40 - 60	1.38:1	Round Cover UG-383/U-Mod	1.85mm Male	Right Angle	EAR99
PE-W22CA001 	WR-22	33 - 50	1.33:1	Round Cover UG-383/U	2.4mm Female	Right Angle	EAR99
PE-W22CA002 	WR-22	33 - 50	1.33:1	Round Cover UG-383/U	2.4mm Male	Right Angle	EAR99
PEW22CA100 	WR-22	33 - 50	1.4:1	Round Cover UG-383/U	2.4mm Female	Right Angle	EAR99
PEWCA1110 	WR-22	33 - 50	1.6:1	UG383/U	2.4mm Female	End Launch	EAR99
PEWCA1078 	WR-28	26.5 - 40	1.25:1	Square Cover UG-599/U	2.92mm Female	Right Angle	EAR99
PEWCA1103 	WR-28	26.5 - 40	1.25:1	UBR320	2.92mm Female	Right Angle	EAR99
PEWCA1104 	WR-28	26.5 - 40	1.25:1	UBR320	2.92mm Female	Right Angle	EAR99
PE-W28CA002 	WR-28	26.5 - 40	1.29:1	Square Cover UG-599/U	2.92mm Male	Right Angle	EAR99
PEWCA1020 	WR-28	26.5 - 40	1.3:1	Square Cover UG-599/U	2.92mm Female	Right Angle	EAR99
PEWCA1000 	WR-28	26.5 - 40	1.3:1	Square Cover UG-599/U	2.92mm Female	Right Angle	EAR99

Waveguide to Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PEWCA1109 	WR-28	26.5 - 40	1.3:1	UBR320	2.92mm Female	End Launch	EAR99
PE9826 	WR-28	26.5 - 40	1.4:1	Square Cover	2.92mm Female	Right Angle	EAR99
PEWCA1021 	WR-34	22 - 33	1.25:1	Square Cover UG-1530/U	2.92mm Female	Right Angle	EAR99
PEWCA1001 	WR-34	22 - 33	1.25:1	Square Cover UG-1530/U	2.92mm Female	Right Angle	EAR99
PEWCA1102 	WR-34	21.7 - 33	1.35:1	UBR260	2.92mm Female	Right Angle	EAR99
PE9827 	WR-34	22 - 33	1.4:1	Square Cover	2.92mm Female	Right Angle	EAR99
PEWCA1026 	WR-42	18 - 26.5	1.03:1	Square Cover UG-597/U	SMA Female	Right Angle	EAR99
PEWCA1019 	WR-42	18 - 26.5	1.25:1	Square Cover UG-597/U	2.92mm Female	Right Angle	EAR99
PEWCA1018 	WR-42	18 - 26.5	1.25:1	Square Cover UG-595/U	SMA Female	Right Angle	EAR99
PEWCA1101 	WR-42	17.6 - 26.7	1.25:1	UBR220	2.92mm Female	Right Angle	EAR99
PEWCA1100 	WR-42	17.6 - 26.7	1.25:1	UBR220	SMA Female	Right Angle	EAR99
PE-W42CA001 	WR-42	18 - 26.5	1.29:1	Square Cover UG-597/U	2.92mm Female	Right Angle	EAR99
PE-W42CA002 	WR-42	18 - 26.5	1.29:1	Square Cover UG-597/U	2.92mm Male	Right Angle	EAR99
PEWCA1070 	WR-42	18 - 26.5	1.3:1	Square Cover UG-597/U	2.92mm Female	End Launch	EAR99
PEWCA1022 	WR-42	18 - 26.5	1.3:1	Square Cover UG-597/U	SMA Female	Right Angle	EAR99
PE9878 	WR-42	18 - 26.5	1.4:1	Square Cover	2.92mm Female	End Launch	EAR99

Waveguide to Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PE9813A 	WR-42	18 - 26.5	1.4:1	Square Cover UG-597/U	2.92mm Male	Right Angle	EAR99
PE9812 	WR-42	18 - 26.5	1.4:1	Square Type	2.92mm Female	Right Angle	EAR99
PEWCA1002A 	WR-51	15 - 22	1.25:1	Square Cover	SMA Female	Right Angle	EAR99
PEWCA1027 	WR-51	15 - 22	1.25:1	Square Cover	SMA Female	Right Angle	EAR99
PEWCA1099 	WR-51	14.5 - 22	1.25:1	UBR180	SMA Female	Right Angle	EAR99
PE9828 	WR-51	15 - 22	1.3:1	Square Type	SMA Female	Right Angle	EAR99
PE9879 	WR-51	15 - 22	1.3:1	Square Type	SMA Female	End Launch	EAR99
PE9809 	WR-62	12.4 - 18	1.2:1	Square Cover UG-1665/U	SMA Male	Right Angle	EAR99
PEWCA1028 	WR-62	12.4 - 18	1.25:1	Square Cover UG-1665/U	N Female	Right Angle	EAR99
PEWCA1023 	WR-62	12.4 - 18	1.25:1	Square Cover UG-1665/U	SMA Female	Right Angle	EAR99
PEWCA1003 	WR-62	12.4 - 18	1.25:1	Square Cover UG-419/U	SMA Female	Right Angle	EAR99
PEWCA1097 	WR-62	11.9 - 18	1.25:1	UBR140	N Female	Right Angle	EAR99
PEWCA1098 	WR-62	11.9 - 18	1.25:1	UBR140	SMA Female	Right Angle	EAR99
PEWCA1108 	WR-62	11.9 - 18	1.25:1	UBR140	SMA Female	End Launch	EAR99
PEWCA1072 	WR-62	12.4 - 18	1.3:1	Square Cover UG-1665/U	N Female	End Launch	EAR99
PEWCA1071 	WR-62	12.4 - 18	1.3:1	Square Cover UG-1665/U	SMA Female	End Launch	EAR99

Waveguide to Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PE9803 	WR-62	12.4 - 18	1.3:1	Square Type	SMA Female	Right Angle	EAR99
PE9806 	WR-62	12.4 - 18	1.4:1	Square Cover	N Male	Right Angle	EAR99
PE9866 	WR-62	12.4 - 18	1.4:1	Square Type	N Female	End Launch	EAR99
PE9875 	WR-62	12.4 - 18	1.4:1	Square Type	N Female	Right Angle	EAR99
PE9846 	WR-62	12.4 - 18	1.4:1	Square Type	SMA Female	End Launch	EAR99
PEWCA1005 	WR-75	10 - 15	1.25:1	Square Cover	N Female	Right Angle	EAR99
PEWCA1029 	WR-75	10 - 15	1.25:1	Square Cover	N Female	Right Angle	EAR99
PEWCA1024 	WR-75	10 - 15	1.25:1	Square Cover	SMA Female	Right Angle	EAR99
PEWCA1004 	WR-75	10 - 15	1.25:1	Square Cover	SMA Female	Right Angle	EAR99
PEWCA1095 	WR-75	9.84 - 15	1.25:1	UBR120	N Female	Right Angle	EAR99
PEWCA1096 	WR-75	9.84 - 15	1.25:1	UBR120	SMA Female	Right Angle	EAR99
PEWCA1074 	WR-75	10 - 15	1.3:1	Square Cover	N Female	End Launch	EAR99
PEWCA1073 	WR-75	10 - 15	1.3:1	Square Cover	SMA Female	End Launch	EAR99
PE9874 	WR-75	10 - 15	1.3:1	Square Type	N Female	Right Angle	EAR99
PE9819 	WR-75	10 - 15	1.3:1	Square Type	SMA Female	Right Angle	EAR99
PE9867 	WR-75	10 - 15	1.4:1	Square Type	N Female	End Launch	EAR99

Waveguide to Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PE9847 	WR-75	10 - 15	1.4:1	Square Type	SMA Female	End Launch	EAR99
PEWCA1033 	WR-90	8.2 - 12.4	1.25:1	CMR-90	N Female	Right Angle	EAR99
PEWCA1032 	WR-90	8.2 - 12.4	1.25:1	CMR-90	SMA Female	Right Angle	EAR99
PEWCA1009 	WR-90	8.2 - 12.4	1.25:1	CPR-90G	N Female	Right Angle	EAR99
PEWCA1036 	WR-90	8.2 - 12.4	1.25:1	CPR-90G	N Female	Right Angle	EAR99
PEWCA1035 	WR-90	8.2 - 12.4	1.25:1	CPR-90G	N Male	Right Angle	EAR99
PEWCA1007 	WR-90	8.2 - 12.4	1.25:1	CPR-90G	SMA Female	Right Angle	EAR99
PEWCA1034 	WR-90	8.2 - 12.4	1.25:1	CPR-90G	SMA Female	Right Angle	EAR99
PE9868 	WR-90	8.2 - 12.4	1.25:1	Square Cover UG-135/U	N Female	End Launch	EAR99
PEWCA1031 	WR-90	8.2 - 12.4	1.25:1	Square Cover UG-135/U	N Female	Right Angle	EAR99
PEWCA1008 	WR-90	8.2 - 12.4	1.25:1	Square Cover UG-39/U	N Female	Right Angle	EAR99
PEWCA1025 	WR-90	8.2 - 12.4	1.25:1	Square Cover UG-135/U	SMA Female	Right Angle	EAR99
PEWCA1075 	WR-90	8.2 - 12.4	1.25:1	Square Cover UG-135/U	SMA Female	End Launch	EAR99
PEWCA1030 	WR-90	8.2 - 12.4	1.25:1	Square Cover UG-135/U	SMA Male	Right Angle	EAR99
PEWCA1006 	WR-90	8.2 - 12.4	1.25:1	Square Cover UG-39/U	SMA Female	Right Angle	EAR99
PEWCA1092 	WR-90	8.2 - 12.4	1.25:1	UBR100	N Female	Right Angle	EAR99

Waveguide to Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PEWCA1093 	WR-90	8.2 - 12.4	1.25:1	UBR100	SMA Female	Right Angle	EAR99
PEWCA1107 	WR-90	8.2 - 12.4	1.25:1	UBR100	SMA Female	End Launch	EAR99
PE9873 	WR-90	8.2 - 12.4	1.3:1	CPR-90G	N Female	Right Angle	EAR99
PE9801 	WR-90	8.2 - 12.4	1.3:1	Square Type	N Female	Right Angle	EAR99
PE9889 	WR-90	8.2 - 12.4	1.3:1	Square Type	N Male	Right Angle	EAR99
PE9804 	WR-90	8.2 - 12.4	1.3:1	Square Type	SMA Female	Right Angle	EAR99
PE9810 	WR-90	8.2 - 12.4	1.3:1	Square Type	SMA Male	Right Angle	EAR99
PE9848 	WR-90	8.2 - 12.4	1.4:1	Square Type	SMA Female	End Launch	EAR99
PE9869 	WR-102	7 - 11	1.25:1	Square Cover	N Female	End Launch	EAR99
PEWCA1038 	WR-102	7 - 11	1.25:1	Square Cover UG-1493/U	N Female	Right Angle	EAR99
PEWCA1039 	WR-102	7 - 11	1.25:1	Square Cover UG-1493/U	N Male	Right Angle	EAR99
PEWCA1037 	WR-102	7 - 10	1.25:1	Square Cover UG-1493/U	SMA Female	Right Angle	EAR99
PE9805 	WR-102	7 - 11	1.25:1	Square Cover UG-1493/U	SMA Female	Right Angle	EAR99
PE9811 	WR-102	7 - 11	1.3:1	Square Cover	SMA Male	Right Angle	EAR99
PE9802 	WR-102	7 - 11	1.3:1	Square Type	N Female	Right Angle	EAR99
PE9890 	WR-102	7 - 11	1.3:1	Square Type	N Male	Right Angle	EAR99

Waveguide to Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PE9871 	WR-102	7 - 11	1.4:1	Square Type	SMA Female	End Launch	EAR99
PEWCA1043 	WR-112	7.05 - 10	1.25:1	CMR-112	N Female	Right Angle	EAR99
PEWCA1042 	WR-112	7.05 - 10	1.25:1	CMR-112	SMA Female	Right Angle	EAR99
PEWCA1013 	WR-112	7.05 - 10	1.25:1	CPR-112G	N Female	Right Angle	EAR99
PEWCA1045 	WR-112	7.05 - 10	1.25:1	CPR-112G	N Female	Right Angle	EAR99
PEWCA1011 	WR-112	7.05 - 10	1.25:1	CPR-112G	SMA Female	Right Angle	EAR99
PEWCA1044 	WR-112	7.05 - 10	1.25:1	CPR-112G	SMA Female	Right Angle	EAR99
PEWCA1041 	WR-112	7.05 - 10	1.25:1	Square Cover UG-138/U	N Female	Right Angle	EAR99
PEWCA1012 	WR-112	7.05 - 10	1.25:1	Square Cover UG-51/U	N Female	Right Angle	EAR99
PEWCA1040 	WR-112	7.05 - 10	1.25:1	Square Cover UG-138/U	SMA Female	Right Angle	EAR99
PEWCA1010 	WR-112	7.05 - 10	1.25:1	Square Cover UG-51/U	SMA Female	Right Angle	EAR99
PEWCA1089 	WR-112	6.57 - 9.99	1.25:1	UBR84	N Female	Right Angle	EAR99
PEWCA1090 	WR-112	6.57 - 9.99	1.25:1	UBR84	SMA Female	Right Angle	EAR99
PEWCA1106 	WR-112	6.57 - 9.99	1.25:1	UBR84	SMA Female	End Launch	EAR99
PE9837 	WR-112	7.05 - 10	1.3:1	CPR-112G	N Female	Right Angle	EAR99
PE9820 	WR-112	7.05 - 10	1.3:1	Square Type	N Female	Right Angle	EAR99

Waveguide to Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PE9870 	WR-112	7.05 - 10	1.3:1	Square Type	N Female	End Launch	EAR99
PE9884 	WR-112	7.05 - 10	1.3:1	Square Type	SMA Female	Right Angle	EAR99
PE9865 	WR-112	7.05 - 10	1.4:1	Square Type	SMA Female	End Launch	EAR99
PEWCA1049 	WR-137	5.85 - 8.2	1.25:1	CMR-137	N Female	Right Angle	EAR99
PEWCA1048 	WR-137	5.85 - 8.2	1.25:1	CMR-137	SMA Female	Right Angle	EAR99
PEWCA1017 	WR-137	5.85 - 8.2	1.25:1	CPR-137G	N Female	Right Angle	EAR99
PEWCA1051 	WR-137	5.85 - 8.2	1.25:1	CPR-137G	N Female	Right Angle	EAR99
PEWCA1015 	WR-137	5.85 - 8.2	1.25:1	CPR-137G	SMA Female	Right Angle	EAR99
PEWCA1050 	WR-137	5.85 - 8.2	1.25:1	CPR-137G	SMA Female	Right Angle	EAR99
PEWCA1087 	WR-137	5.38 - 8.17	1.25:1	PDR70	N Female	Right Angle	EAR99
PEWCA1016 	WR-137	5.85 - 8.2	1.25:1	Round Cover UG-344/U	N Female	Right Angle	EAR99
PEWCA1047 	WR-137	5.85 - 8.2	1.25:1	Round Cover UG-441/U	N Female	Right Angle	EAR99
PEWCA1014 	WR-137	5.85 - 8.2	1.25:1	Round Cover UG-344/U	SMA Female	Right Angle	EAR99
PEWCA1046 	WR-137	5.85 - 8.2	1.25:1	Round Cover UG-441/U	SMA Female	Right Angle	EAR99
PEWCA1086 	WR-137	5.38 - 8.17	1.25:1	UDR70	N Female	Right Angle	EAR99
PEWCA1088 	WR-137	5.38 - 8.17	1.25:1	UDR70	SMA Female	Right Angle	EAR99

Waveguide to Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PE9876 	WR-137	5.85 - 8.2	1.3:1	CMR-137	N Female	Right Angle	EAR99
PE9830 	WR-137	5.85 - 8.2	1.3:1	CMR-137	SMA Female	Right Angle	EAR99
PE9838 	WR-137	5.85 - 8.2	1.3:1	CPR-137G	N Female	Right Angle	EAR99
PEWCA1053 	WR-159	4.9 - 7.05	1.25:1	CMR-159	N Female	Right Angle	EAR99
PEWCA1052 	WR-159	4.9 - 7.05	1.25:1	CMR-159	SMA Female	Right Angle	EAR99
PEWCA1055 	WR-159	4.9 - 7.05	1.25:1	CPR-159G	N Female	Right Angle	EAR99
PEWCA1054 	WR-159	4.9 - 7.05	1.25:1	CPR-159G	SMA Female	Right Angle	EAR99
PEWCA1085 	WR-159	5.38 - 8.17	1.25:1	UDR58	SMA Female	Right Angle	EAR99
PE9821 	WR-159	4.9 - 7.05	1.3:1	CMR-159	N Female	Right Angle	EAR99
PE9831 	WR-159	4.9 - 7.05	1.3:1	CMR-159	SMA Female	Right Angle	EAR99
PE9839 	WR-159	4.9 - 7.05	1.3:1	CPR-159G	N Female	Right Angle	EAR99
PEWCA1120 	WRD-180	18 - 40	1.6:1	Square Cover UG	2.92mm Female	End Launch	
PEWCA1115 	WRD-180	18 - 40	1.6:1	Square Cover	2.92mm Female	Right Angle	EAR99
PEWCA1058 	WR-187	3.95 - 5.85	1.25:1	CMR-187	N Female	Right Angle	EAR99
PEWCA1057 	WR-187	3.95 - 5.85	1.25:1	CMR-187	SMA Female	Right Angle	EAR99
PEWCA1059 	WR-187	3.95 - 5.85	1.25:1	CPR-187G	N Female	Right Angle	EAR99

Waveguide to Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PEWCA1084 	WR-187	3.94 - 5.99	1.25:1	PDR48	N Female	Right Angle	EAR99
PEWCA1056 	WR-187	3.95 - 5.85	1.25:1	Round Cover UG-407/U	N Female	Right Angle	EAR99
PEWCA1083 	WR-187	3.94 - 5.99	1.25:1	UDR48	N Female	Right Angle	EAR99
PEWCA1105 	WR-187	3.94 - 5.99	1.25:1	UDR48	N Female	End Launch	EAR99
PEWCA1076 	WR-187	3.94 - 5.99	1.25:1	UDR48	SMA Female	Right Angle	EAR99
PE9822 	WR-187	3.95 - 5.85	1.3:1	CMR-187	N Female	Right Angle	EAR99
PE9832 	WR-187	3.95 - 5.85	1.3:1	CMR-187	SMA Female	Right Angle	EAR99
PE9840 	WR-187	3.95 - 5.85	1.3:1	CPR-187G	N Female	Right Angle	EAR99
PEWCA1060 	WR-229	3.3 - 4.9	1.25:1	CMR-229	N Female	Right Angle	EAR99
PEWCA1062 	WR-229	3.3 - 4.9	1.25:1	CPR-229G	N Female	Right Angle	EAR99
PEWCA1061 	WR-229	3.3 - 4.9	1.25:1	CPR-229G	SMA Female	Right Angle	EAR99
PE9823 	WR-229	3.3 - 4.9	1.3:1	CMR-229	N Female	Right Angle	EAR99
PE9833 	WR-229	3.3 - 4.9	1.3:1	CMR-229	SMA Female	Right Angle	EAR99
PE9877 	WR-229	3.3 - 4.9	1.3:1	CPR-229G	N Female	Right Angle	EAR99
PEWCA1064 	WR-284	2.6 - 3.95	1.25:1	CMR-284	N Female	Right Angle	EAR99
PE9834 	WR-284	2.6 - 3.95	1.25:1	CMR-284	SMA Female	Right Angle	EAR99

Waveguide to Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PEWCA1065 	WR-284	2.6 - 3.95	1.25:1	CPR-284G	N Female	Right Angle	EAR99
PEWCA1063 	WR-284	2.6 - 3.95	1.25:1	Round Cover UG-584/U	N Female	Right Angle	EAR99
PEWCA1081 	WR-284	2.6 - 3.95	1.25:1	UDR32	N Female	Right Angle	EAR99
PEWCA1082 	WR-284	2.6 - 3.95	1.25:1	UDR32	SMA Female	Right Angle	EAR99
PE9824 	WR-284	2.6 - 3.95	1.3:1	CMR-284	N Female	Right Angle	EAR99
PE9842 	WR-284	2.6 - 3.95	1.3:1	CPR-284G	N Female	Right Angle	EAR99
PEWCA1066 	WR-340	2.2 - 3.3	1.25:1	CPR-340F	N Female	Right Angle	EAR99
PEWCA1067 	WR-340	2.2 - 3.3	1.25:1	CPR-340G	N Female	Right Angle	EAR99
PEWCA1077 	WR-340	2.17 - 3.3	1.25:1	UDR26	N Female	Right Angle	EAR99
PEWCA1068 	WR-430	1.7 - 2.6	1.25:1	CPR-430F	N Female	Right Angle	EAR99
PEWCA1069 	WR-430	1.7 - 2.6	1.25:1	CPR-430G	N Female	Right Angle	EAR99
PEWCA1079 	WR-430	1.72 - 2.61	1.25:1	UDR22	N Female	Right Angle	EAR99
PEWCA1080 	WR-430	1.72 - 2.61	1.25:1	UDR22	SMA Female	Right Angle	EAR99
PE9872 	WR-430	1.7 - 2.6	1.3:1	CPR-430F	N Female	Right Angle	EAR99
PE9835 	WR-430	1.7 - 2.6	1.3:1	CPR-430F	SMA Female	Right Angle	EAR99
PE9843 	WR-430	1.7 - 2.6	1.3:1	CPR-430G	N Female	Right Angle	EAR99

Waveguide to Coax Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	Connector	Body Style	ECCN
PEWCA1116 	WRD-650	6.5 - 18	1.5:1	Square Cover UG	N Female	End Launch	EAR99
PEWCA1111 	WRD-650	6.5 - 18	1.5:1	Square Cover UG	N Female	Right Angle	
PEWCA1112 	WRD-650	6.5 - 18	1.5:1	Square Cover UG	SMA Female	Right Angle	
PEWCA1117 	WRD-650	6.5 - 18	1.5:1	Square Cover UG	SMA Female	End Launch	
PEWCA1113 	WRD-750	7.5 - 18	1.5:1	Square Cover UG	N Female	Right Angle	
PEWCA1118 	WRD-750	7.5 - 18	1.5:1	Square Cover UG	N Female	End Launch	
PEWCA1114 	WRD-750	7.5 - 18	1.5:1	Square Cover UG	SMA Female	Right Angle	EAR99
PEWCA1119 	WRD-750	7.5 - 18	1.5:1	Square Cover UG	SMA Female	End Launch	

Corner Reflectors

PE P/N	Description
PEWRL0000 	1.4 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish
PEWRL0001 	1.8 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish
PEWRL0002 	2.4 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish
PEWRL0003 	3.2 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish
PEWRL0004 	4.3 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish
PEWRL0005 	6 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish

Corner Reflectors Continued

PE P/N	Description
PEWRL0006 	8 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish
PEWRL0007 	8.5 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish
PEWRL0008 	8.9 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish
PEWRL0009 	10 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish
PEWRL0010 	13 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish
PEWRL0011 	13.5 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish
PEWRL0012 	16 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish
PEWRL0013 	24 inch Edge Length, Trihedral Corner Reflector, 1/4-20 Threaded Hole Mount, Aluminum Body, Gold Chem Film Finish

Flexible Waveguides

PE P/N	Waveguide Type	Design	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Length (in)	Flange Type	ECCN
PE-W22SF005-6 	WR-22	Seamless	33 - 50	0.49	1.2:1	6	Round Cover UG-383/U	EAR99
PE-W22SF005-12 	WR-22	Seamless	33 - 50	0.49	1.2:1	12	Round Cover UG-383/U	EAR99
PE-W22SF005-24 	WR-22	Seamless	33 - 50	0.49	1.2:1	24	Round Cover UG-383/U	EAR99
PE-W28SF005-12 	WR-28	Seamless	26.5 - 40	0.49	1.2:1	12	Square Cover UG-599/U	EAR99
PE-W28SF005-24 	WR-28	Seamless	26.5 - 40	0.98	1.2:1	24	Square Cover UG-599/U	EAR99
PE-W28SF005-36 	WR-28	Seamless	26.5 - 40	1.47	1.2:1	36	Square Cover UG-599/U	EAR99

Flexible Waveguides Continued

PE P/N	Waveguide Type	Design	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Length (in)	Flange Type	ECCN
PE-W34SF005-12 	WR-34	Seamless	22 - 33	0.4	1.15:1	12	Square Cover UG-1530/U	EAR99
PE-W34SF005-24 	WR-34	Seamless	22 - 33	0.8	1.15:1	24	Square Cover UG-1530/U	EAR99
PE-W34SF005-36 	WR-34	Seamless	22 - 33	1.2	1.15:1	36	Square Cover UG-1530/U	EAR99
PE-W42SF005-12 	WR-42	Seamless	18 - 26.5	0.27	1.15:1	12	Square Cover UG-595/U	EAR99
PE-W42SF005-24 	WR-42	Seamless	18 - 26.5	0.54	1.15:1	24	Square Cover UG-595/U	EAR99
PE-W42SF005-36 	WR-42	Seamless	18 - 26.5	0.81	1.15:1	36	Square Cover UG-595/U	EAR99
PE-W51SF005-12 	WR-51	Seamless	15 - 22	0.18	1.1:1	12	Square Cover	EAR99
PE-W51SF005-24 	WR-51	Seamless	15 - 22	0.36	1.1:1	24	Square Cover	EAR99
PE-W51SF005-36 	WR-51	Seamless	15 - 22	0.54	1.1:1	36	Square Cover	EAR99
PE-W62SF005-12 	WR-62	Seamless	12.4 - 18	0.14	1.08:1	12	Square Cover UG-419/U	EAR99
PE-W62SF005-24 	WR-62	Seamless	12.4 - 18	0.28	1.08:1	24	Square Cover UG-419/U	EAR99
PE-W62SF005-36 	WR-62	Seamless	12.4 - 18	0.42	1.08:1	36	Square Cover UG-419/U	EAR99
PE-W75SF005-12 	WR-75	Seamless	10 - 15	0.12	1.07:1	12	Square Cover	EAR99
PE-W75SF005-24 	WR-75	Seamless	10 - 15	0.24	1.07:1	24	Square Cover	EAR99
PE-W75SF005-36 	WR-75	Seamless	10 - 15	0.36	1.07:1	36	Square Cover	EAR99
PE-W90SF005-12 	WR-90	Seamless	8.2 - 12.4	0.09	1.07:1	12	Square Cover UG-39/U	EAR99

Flexible Waveguides Continued

PE P/N	Waveguide Type	Design	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Length (in)	Flange Type	ECCN
PE-W90SF006-24 	WR-90	Seamless	8.2 - 12.4	0.18	1.07:1	24	CPR-90G	EAR99
PE-W90SF005-24 	WR-90	Seamless	8.2 - 12.4	0.18	1.07:1	24	Square Cover UG-39/U	EAR99
PE-W90SF006-36 	WR-90	Seamless	8.2 - 12.4	0.27	1.07:1	36	CPR-90G	EAR99
PE-W90SF005-36 	WR-90	Seamless	8.2 - 12.4	0.27	1.07:1	36	Square Cover UG-39/U	EAR99
PE-W90SF006-12 	WR-90	Seamless	8.2 - 12.4	0.9	1.07:1	12	CPR-90G	EAR99
PE-W112SF006-12 	WR-112	Seamless	7.05 - 10	0.08	1.07:1	12	CPR-112G	EAR99
PE-W112SF005-12 	WR-112	Seamless	7.05 - 10	0.08	1.07:1	12	Square Cover UG-51/U	EAR99
PE-W112SF006-24 	WR-112	Seamless	7.05 - 10	0.16	1.07:1	24	CPR-112G	EAR99
PE-W112SF005-24 	WR-112	Seamless	7.05 - 10	0.16	1.07:1	24	Square Cover UG-51/U	EAR99
PE-W112SF006-36 	WR-112	Seamless	7.05 - 10	0.24	1.07:1	36	CPR-112G	EAR99
PE-W112SF005-36 	WR-112	Seamless	7.05 - 10	0.24	1.07:1	36	Square Cover UG-51/U	EAR99
PE-W137SF006-12 	WR-137	Seamless	5.85 - 8.2	0.06	1.07:1	12	CPR-137G	EAR99
PE-W137SF005-12 	WR-137	Seamless	5.85 - 8.2	0.06	1.07:1	12	Round Cover UG-344/U	EAR99
PE-W137SF006-24 	WR-137	Seamless	5.85 - 8.2	0.12	1.07:1	24	CPR-137G	EAR99
PE-W137SF005-24 	WR-137	Seamless	5.85 - 8.2	0.12	1.07:1	24	Round Cover UG-344/U	EAR99
PE-W137SF006-36 	WR-137	Seamless	5.85 - 8.2	0.18	1.07:1	36	CPR-137G	EAR99

Flexible Waveguides Continued

PE P/N	Waveguide Type	Design	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Length (in)	Flange Type	ECCN
PE-W137SF005-36 	WR-137	Seamless	5.85 - 8.2	0.18	1.07:1	36	Round Cover UG-344/U	EAR99
PE-W22TF005-6 	WR-22	Twistable	33 - 50	0.6	1.3:1	6	Round Cover UG-383/U	EAR99
PE-W22TF005-12 	WR-22	Twistable	33 - 50	0.6	1.3:1	12	Round Cover UG-383/U	EAR99
PE-W22TF005-24 	WR-22	Twistable	33 - 50	0.6	1.3:1	24	Round Cover UG-383/U	EAR99
PE-W28TF005-12 	WR-28	Twistable	26.5 - 40	0.6	1.3:1	12	Square Cover UG-599/U	EAR99
PE-W28TF005-24 	WR-28	Twistable	26.5 - 40	1.2	1.3:1	24	Square Cover UG-599/U	EAR99
PE-W28TF005-36 	WR-28	Twistable	26.5 - 40	1.8	1.3:1	36	Square Cover UG-599/U	EAR99
PE-W34TF005-12 	WR-34	Twistable	22 - 33	0.5	1.22:1	12	Square Cover UG-1530/U	EAR99
PE-W34TF005-24 	WR-34	Twistable	22 - 33	1	1.22:1	24	Square Cover UG-1530/U	EAR99
PE-W34TF005-36 	WR-34	Twistable	22 - 33	1.5	1.22:1	36	Square Cover UG-1530/U	EAR99
PE-W42TF005-12 	WR-42	Twistable	18 - 26.5	0.35	1.3:1	12	Square Cover UG-595/U	EAR99
PE-W42TF005-24 	WR-42	Twistable	18 - 26.5	0.7	1.3:1	24	Square Cover UG-595/U	EAR99
PE-W42TF005-36 	WR-42	Twistable	18 - 26.5	1.05	1.35:1	36	Square Cover UG-595/U	EAR99
PE-W51TF005-12 	WR-51	Twistable	15 - 22	0.55	1.15:1	12	Square Cover	EAR99
PE-W51TF005-24 	WR-51	Twistable	15 - 22	1.1	1.15:1	24	Square Cover	EAR99
PE-W51TF005-36 	WR-51	Twistable	15 - 22	1.65	1.15:1	36	Square Cover	EAR99

Flexible Waveguides Continued

PE P/N	Waveguide Type	Design	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Length (in)	Flange Type	ECCN
PE-W62TF005-12 	WR-62	Twistable	12.4 - 18	0.28	1.1:1	12	Square Cover UG-419/U	EAR99
PE-W62TF005-24 	WR-62	Twistable	12.4 - 18	0.56	1.1:1	24	Square Cover UG-419/U	EAR99
PE-W62TF005-36 	WR-62	Twistable	12.4 - 18	0.84	1.1:1	36	Square Cover UG-419/U	EAR99
PE-W75TF005-12 	WR-75	Twistable	10 - 15	0.18	1.1:1	12	Square Cover	EAR99
PE-W75TF005-24 	WR-75	Twistable	10 - 15	0.36	1.1:1	24	Square Cover	EAR99
PE-W75TF005-36 	WR-75	Twistable	10 - 15	0.54	1.1:1	36	Square Cover	EAR99
PE-W90TF006-12 	WR-90	Twistable	8.2 - 12.4	0.15	1.07:1	12	CPR-90G	EAR99
PE-W90TF005-12 	WR-90	Twistable	8.2 - 12.4	0.15	1.1:1	12	Square Cover UG-39/U	EAR99
PE-W90TF006-24 	WR-90	Twistable	8.2 - 12.4	0.3	1.07:1	24	CPR-90G	EAR99
PE-W90TF005-24 	WR-90	Twistable	8.2 - 12.4	0.36	1.1:1	24	Square Cover UG-39/U	EAR99
PE-W90TF006-36 	WR-90	Twistable	8.2 - 12.4	0.45	1.07:1	36	CPR-90G	EAR99
PE-W90TF005-36 	WR-90	Twistable	8.2 - 12.4	0.45	1.1:1	36	Square Cover UG-39/U	EAR99
PE-W112TF006-12 	WR-112	Twistable	7.05 - 10	0.12	1.07:1	12	CPR-112G	EAR99
PE-W112TF005-12 	WR-112	Twistable	7.05 - 10	0.12	1.3:1	12	Square Cover UG-51/U	EAR99
PE-W112TF006-24 	WR-112	Twistable	7.05 - 10	0.24	1.07:1	24	CPR-112G	EAR99
PE-W112TF005-24 	WR-112	Twistable	7.05 - 10	0.24	1.07:1	24	Square Cover UG-51/U	EAR99

Flexible Waveguides Continued

PE P/N	Waveguide Type	Design	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Length (in)	Flange Type	ECCN
PE-W112TF006-36 	WR-112	Twistable	7.05 - 10	0.36	1.07:1	36	CPR-112G	EAR99
PE-W112TF005-36 	WR-112	Twistable	7.05 - 10	0.36	1.07:1	36	Square Cover UG-51/U	EAR99
PE-W137TF006-12 	WR-137	Twistable	5.85 - 8.2	0.07	1.05:1	12	CPR-137G	EAR99
PE-W137TF005-12 	WR-137	Twistable	5.85 - 8.2	0.07	1.05:1	12	Round Cover UG-344/U	EAR99
PE-W137TF006-24 	WR-137	Twistable	5.85 - 8.2	0.14	1.05:1	24	CPR-137G	EAR99
PE-W137TF005-24 	WR-137	Twistable	5.85 - 8.2	0.14	1.05:1	24	Round Cover UG-344/U	EAR99
PE-W137TF005-36 	WR-137	Twistable	5.85 - 8.2	0.18	1.05:1	36	Round Cover UG-344/U	EAR99
PE-W137TF006-36 	WR-137	Twistable	5.85 - 8.2	0.21	1.05:1	36	CPR-137G	EAR99

Waveguide Bandpass Filters

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Flange Type	ECCN
PE-W28F001 	WR-28	30 - 31	1.4:1	Square Cover	EAR99
PE-W28F002 	WR-28	38 - 40	1.5:1	Square Cover	EAR99
PE-W42F001 	WR-42	20.2 - 21.2	1.5:1	Square Cover	EAR99
PE-W42F004 	WR-42	24.25 - 24.45	1.5:1	Square Cover	EAR99
PE-W42F002 	WR-42	24.25 - 24.45	1.8:1	Square Cover	EAR99

Waveguide Bends

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Bend Plane	Flange Type	ECCN
PEW5B0000 	WR-5	140 - 220	0		E-Bend	Round Cover UG-383/U-Mod	EAR99
PEW5B0001 	WR-5	140 - 220	0		H-Bend	Round Cover UG-383/U-Mod	EAR99
PEW6B0000 	WR-6	110 - 170	0.35		E-Bend	Round Cover UG-383/U-Mod	EAR99
PEW6B0001 	WR-6	110 - 170	0.35		H-Bend	Round Cover UG-383/U-Mod	EAR99
PEW8B0000 	WR-8	90 - 140	0.3		E-Bend	Round Cover UG-383/U-Mod	EAR99
PEW8B0001 	WR-8	90 - 140	0.3		H-Bend	Round Cover UG-383/U-Mod	EAR99
PE-W10B001 	WR-10	75 - 110	0.21	1.1:1	E-Bend	Round Cover UG-387/U-Mod	EAR99
PE-W10B002 	WR-10	75 - 110	0.21	1.1:1	H-Bend	Round Cover UG-387/U-Mod	EAR99
PE-W12B001 	WR-12	60 - 90	0.21	1.1:1	E-Bend	Round Cover UG-387/U	EAR99
PE-W12B002 	WR-12	60 - 90	0.21	1.1:1	H-Bend	Round Cover UG-387/U	EAR99
PE-W15B002 	WR-15	50 - 75	0.17	1.1:1	H-Bend	Round Cover UG-385/U	EAR99
PE-W19B001 	WR-19	40 - 60	0.18	1.1:1	E-Bend	Round Cover UG-383/U-Mod	EAR99
PE-W19B002 	WR-19	40 - 60	0.18	1.1:1	H-Bend	Round Cover UG-383/U-Mod	EAR99
PEW22B101 	WR-22	33 - 50	0.25	1.15:1	E-Bend	Round Cover UG-383/U	EAR99
PE-W22B001 	WR-22	33 - 50	0.16	1.1:1	E-Bend	Round Cover UG-383/U	EAR99

Waveguide Bends Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Bend Plane	Flange Type	ECCN
PEW22B100 	WR-22	33 - 50	0.25	1.15:1	H-Bend	Round Cover UG-383/U	EAR99
PE-W28B001 	WR-28	26.5 - 40	0.28	1.1:1	E-Bend	Square Cover UG-599/U	EAR99
PE-W28B002 	WR-28	26.5 - 40	0.28	1.1:1	H-Bend	Square Cover UG-599/U	EAR99
PE-W28B003 	WR-28	26.5 - 40	0.3	1.08:1	E-Bend	Square Cover UG-599/U	EAR99
PEW42B100 	WR-42	18 - 26.5	0.15	1.1:1	H-Bend	Square Cover UG-595/U	EAR99
PEW42B101 	WR-42	18 - 26.5	0.2	1.1:1	E-Bend	Square Cover UG-595/U	EAR99
PE-W51B001 	WR-51	15 - 22	0.09	1.1:1	E-Bend	UBR180	EAR99
PE-W62B001 	WR-62	12.4 - 18	0.15	1.08:1	E-Bend	Square Cover UG-419/U	EAR99
PE-W62B002 	WR-62	12.4 - 18	0.15	1.08:1	H-Bend	Square Cover UG-419/U	EAR99
PE-W62B003 	WR-62	12.4 - 18	0.09	1.1:1	E-Bend	Square Cover UG-419/U	EAR99
PE-W62B004 	WR-62	12.4 - 18	0.09	1.1:1	H-Bend	Square Cover UG-419/U	EAR99
PE-W75B001 	WR-75	10 - 15	0.15	1.08:1	E-Bend	UBR120	EAR99
PE-W75B002 	WR-75	10 - 15	0.15	1.08:1	H-Bend	UBR120	EAR99
PE-W90B001 	WR-90	8.2 - 12.4	0.15	1.08:1	E-Bend	Square Cover UG-39/U	EAR99
PE-W90B002 	WR-90	8.2 - 12.4	0.15	1.08:1	H-Bend	Square Cover UG-39/U	EAR99

Waveguide Bends Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Bend Plane	Flange Type	ECCN
PE-W90B003A 	WR-90	8.2 - 12.4	0.15	1.08:1	E-Bend	CPR-90G	EAR99
PE-W90B004A 	WR-90	8.2 - 12.4	0.15	1.08:1	H-Bend	CPR-90G	EAR99
PE-W112B001 	WR-112	7.05 - 10	0.15	1.08:1	E-Bend	Square Cover UG-51/U	EAR99
PE-W112B002 	WR-112	7.05 - 10	0.15	1.08:1	H-Bend	Square Cover UG-51/U	EAR99
PE-W137B001 	WR-137	5.85 - 8.2	0.15	1.08:1	E-Bend	Round Cover UG-344/U	EAR99
PE-W137B002 	WR-137	5.85 - 8.2	0.15	1.08:1	H-Bend	Round Cover UG-344/U	EAR99
PE-W137B003A 	WR-137	5.85 - 8.2	0.15	1.08:1	E-Bend	CPR-137G	EAR99
PE-W137B004 	WR-137	5.85 - 8.2	0.15	1.08:1	H-Bend	CPR-137G	EAR99
PEWRD180B001 	WRD-180	18 - 40	0.4	1.3:1	E-Bend	Square Cover UG	EAR99
PEWRD180B002 	WRD-180	18 - 40	0.4	1.3:1	H-Bend	Square Cover UG	EAR99
PEWRD650B001 	WRD-650	6.5 - 18	0.4	1.25:1	E-Bend	Square Cover UG	EAR99
PEWRD650B002 	WRD-650	6.5 - 18	0.4	1.25:1	H-Bend	Square Cover UG	EAR99
PEWRD750B001 	WRD-750	7.5 - 18	0.4	1.25:1	E-Bend	Square Cover UG	EAR99
PEWRD750B002 	WRD-750	7.5 - 18	0.4	1.25:1	H-Bend	Square Cover UG	EAR99

Waveguide Bulkhead Adapters

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Flange 1	Flange 2	ECCN
PEWAD5000 	WR-10	75 - 110	Round Cover UG-387/U-Mod	Round Cover UG-387/U-Mod	EAR99
PEWAD5001 	WR-12	60 - 90	Round Cover UG-387/U	Round Cover UG-387/U	EAR99
PEWAD5002 	WR-15	50 - 75	Round Cover UG-385/U	Round Cover UG-385/U	EAR99
PEWAD5003 	WR-19	40 - 60	Round Cover UG-383/U-Mod	Round Cover UG-383/U-Mod	EAR99
PEWAD5007A 	WR-22	33 - 50	Round Cover UG-383/U	Round Cover UG-383/U	EAR99
PEWAD5004 	WR-22	33 - 50	Round Cover UG-383/U	Round Cover UG-383/U	EAR99
PEWAD5008 	WR-28	26.5 - 40	Square Cover UG-599/U	Square Cover UG-599/U	EAR99
PEWAD5005 	WR-28	26.5 - 40	Square Cover UG-599/U	Square Cover UG-599/U	EAR99
PEWAD5009 	WR-34	22 - 33	Square Cover UG-1530/U	Square Cover UG-1530/U	EAR99
PEWAD5010 	WR-42	18 - 26.5	Square Cover UG-595/U	Square Cover UG-595/U	EAR99
PEWAD5006 	WR-42	18 - 26.5	Square Cover UG-595/U	Square Cover UG-595/U	EAR99
PEWAD5011 	WR-51	15 - 22	Square Cover	Square Cover	EAR99
PEWAD5012 	WR-62	12.4 - 18	Square Cover UG-1665/U	Square Cover UG-1665/U	EAR99
PEWAD5013 	WR-75	10 - 15	Square Cover	Square Cover	EAR99
PEWAD5014 	WR-90	8.2 - 12.4	Square Cover UG-39/U	Square Cover UG-39/U	EAR99
PEWAD5015 	WR-90	8.2 - 12.4	CPR-90G	CPR-90G	EAR99

Waveguide Bulkhead Adapters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Flange 1	Flange 2	ECCN
PEWAD5016 	WR-112	7.05 - 10	Square Cover UG-51/U	Square Cover UG-51/U	EAR99
PEWAD5017 	WR-112	7.05 - 10	CPR-112G	CPR-112G	EAR99
PEWAD5018 	WR-137	5.85 - 8.2	Round Cover UG-344/U	Round Cover UG-344/U	EAR99
PEWAD5019 	WR-137	5.85 - 8.2	CPR-137G	CPR-137G	EAR99

Waveguide Circulators

PE P/N	Waveguide Type	Flange Type	RF Frequency Range (GHz)	Maximum Input Power (Watts)	Maximum VSWR	Minimum Isolation (dB)	ECCN
PEWCR1005 	WR-28	Cover	26.5 - 40	5	1.6:1	12	EAR99
PEWCR1004 	WR-42	Cover	18 - 26.5	5	1.3:1	18	EAR99
PEWCR1003 	WR-62	Cover	12.4 - 18	10	1.3:1	18	EAR99
PEWCR1002 	WR-75	Cover	10 - 15	10	1.3:1	18	EAR99
PEWCR1001 	WR-90	Cover	8.2 - 12.4	20	1.3:1	18	EAR99
PEWCR1000 	WR-112	Cover	7.05 - 10	20	1.3:1	18	EAR99

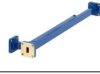
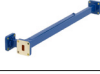
Waveguide Couplers-Broadwall

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PE-W10CP001-20 	WR-10	75 - 110	1.1	1.2:1	20	30	Round Cover UG-387/U-Mod	EAR99
PE-W10CP003-20 	WR-10	75 - 110	1.1	1.2:1	20	30	Round Cover UG-387/U-Mod	EAR99

Waveguide Couplers-Broadwall Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PE-W10CP001-10 	WR-10	75 - 110	1.4	1.2:1	10	30	Round Cover UG-387/U-Mod	EAR99
PE-W10CP003-10 	WR-10	75 - 110	1.4	1.2:1	10	30	Round Cover UG-387/U-Mod	EAR99
PEW10CP010-20 	WR-10	75 - 110		1.1:1	20	40	Round Cover UG-387/U	EAR99
PE-W12CP001-20 	WR-12	60 - 90	1	1.2:1	20	30	Round Cover UG-387/U	EAR99
PE-W12CP003-20 	WR-12	60 - 90	1	1.2:1	20	30	Round Cover UG-387/U	EAR99
PE-W12CP001-10 	WR-12	60 - 90	1.4	1.2:1	10	30	Round Cover UG-387/U	EAR99
PE-W12CP003-10 	WR-12	60 - 90	1.4	1.2:1	10	30	Round Cover UG-387/U	EAR99
PEWCP1080-20 	WR-15	50 - 75	1	1.1:1	20	40	Round Cover UG-385/U	EAR99
PE-W15CP001-20 	WR-15	50 - 75	1	1.2:1	20	30	Round Cover UG-385/U	EAR99
PE-W15CP001-10 	WR-15	50 - 75	1.4	1.2:1	10	30	Round Cover UG-385/U	EAR99
PE-W15CP003-10 	WR-15	50 - 75	1.4	1.2:1	10	30	Round Cover UG-385/U	EAR99
PE-W19CP003-10 	WR-19	40 - 60	0.8	1.2:1	10	30	Round Cover UG-383/U	EAR99
PE-W19CP003-20 	WR-19	40 - 60	0.8	1.2:1	20	30	Round Cover UG-383/U	EAR99
PE-W19CP001-20 	WR-19	40 - 60	1	1.2:1	20	30	Round Cover UG-383/U	EAR99
PE-W19CP001-10 	WR-19	40 - 60	1.4	1.2:1	10	30	Round Cover UG-383/U	EAR99
PEW22CP010-20 	WR-22	33 - 50	0.8	1.1:1	20	30	Round Cover UG-383/U	EAR99

Waveguide Couplers-Broadwall Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PE-W22CP003-20 	WR-22	33 - 50	0.8	1.2:1	20	30	Round Cover UG-383/U	EAR99
PEWCP1079-10 	WR-22	33 - 50	1	1.05:1	10		Round Cover UG-383/U	EAR99
PE-W22CP001-10 	WR-22	33 - 50	1.2	1.2:1	10	30	Round Cover UG-383/U	EAR99
PEW28CP010-20 	WR-28	26.5 - 40	0.6	1.1:1	20	30	Square Cover UG-599/U	EAR99
PE-W28CP002-20 	WR-28	26.5 - 40	0.7	1.05:1	20	40	Square Cover UG-599/U	EAR99
PE-W28CP003-10 	WR-28	26.5 - 40	0.7	1.2:1	10	30	Square Cover UG-599/U	EAR99
PE-W28CP002-10 	WR-28	26.5 - 40	1	1.2:1	10	30	Square Cover UG-599/U	EAR99
PEWCP1006 	WR-34	22 - 33	0.15	1.05:1	20	35	Square Cover UG-1530/U	EAR99
PEWCP1007 	WR-34	22 - 33	0.15	1.05:1	30	35	Square Cover UG-1530/U	EAR99
PEWCP1005 	WR-34	22 - 33	0.35	1.05:1	10	35	Square Cover UG-1530/U	EAR99
PE-W42CP002-20 	WR-42	18 - 26.5	0.6	1.2:1	20	30	Square Cover UG-595/U	EAR99
PE-W42CP004-20 	WR-42	18 - 26.5	0.6	1.2:1	20	30	Square Cover UG-595/U	EAR99
PE-W42CP004-10 	WR-42	18 - 26.5	1	1.2:1	10	30	Square Cover UG-595/U	EAR99
PEWCP1008 	WR-51	15 - 22	0.15	1.05:1	10	35	Square Cover	EAR99
PEWCP1009 	WR-51	15 - 22	0.15	1.05:1	20	35	Square Cover	EAR99
PEWCP1010 	WR-51	15 - 22	0.15	1.05:1	30	35	Square Cover	EAR99

Waveguide Couplers-Broadwall Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCP1011 	WR-62	12.4 - 18	0.15	1.05:1	10	40	Square Cover UG-419/U	EAR99
PEWCP1012 	WR-62	12.4 - 18	0.15	1.05:1	20	40	Square Cover UG-419/U	EAR99
PEWCP1013 	WR-62	12.4 - 18	0.15	1.05:1	30	40	Square Cover UG-419/U	EAR99
PEWCP1014 	WR-75	10 - 15	0.15	1.05:1	10	40	Square Cover	EAR99
PEWCP1015 	WR-75	10 - 15	0.15	1.05:1	20	40	Square Cover	EAR99
PEWCP1016 	WR-75	10 - 15	0.15	1.05:1	30	40	Square Cover	EAR99
PEWCP1020 	WR-90	8.2 - 12.4	0.15	1.05:1	10	40	CPR-90G	EAR99
PEWCP1017 	WR-90	8.2 - 12.4	0.15	1.05:1	10	40	Square Cover UG-39/U	EAR99
PEWCP1021 	WR-90	8.2 - 12.4	0.15	1.05:1	20	40	CPR-90G	EAR99
PEWCP1018 	WR-90	8.2 - 12.4	0.15	1.05:1	20	40	Square Cover UG-39/U	EAR99
PEWCP1022 	WR-90	8.2 - 12.4	0.15	1.05:1	30	40	CPR-90G	EAR99
PEWCP1019 	WR-90	8.2 - 12.4	0.15	1.05:1	30	40	Square Cover UG-39/U	EAR99
PEWCP1026 	WR-112	7.05 - 10	0.15	1.05:1	10	40	CPR-112G	EAR99
PEWCP1023A 	WR-112	7.05 - 10	0.15	1.05:1	10	40	Square Cover UG-51/U	EAR99
PEWCP1027 	WR-112	7.05 - 10	0.15	1.05:1	20	40	CPR-112G	EAR99
PEWCP1024 	WR-112	7.05 - 10	0.15	1.05:1	20	40	Square Cover UG-51/U	EAR99

Waveguide Couplers-Broadwall Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCP1028 	WR-112	7.05 - 10	0.15	1.05:1	30	40	CPR-112G	EAR99
PEWCP1025 	WR-112	7.05 - 10	0.15	1.05:1	30	40	Square Cover UG-51/U	EAR99
PEWCP1032 	WR-137	5.85 - 8.2	0.15	1.05:1	10	40	CPR-137G	EAR99
PEWCP1029 	WR-137	5.85 - 8.2	0.15	1.05:1	10	40	Round Cover UG-344/U	EAR99
PEWCP1033 	WR-137	5.85 - 8.2	0.15	1.05:1	20	40	CPR-137G	EAR99
PEWCP1030 	WR-137	5.85 - 8.2	0.15	1.05:1	20	40	Round Cover UG-344/U	EAR99
PEWCP1034 	WR-137	5.85 - 8.2	0.15	1.05:1	30	40	CPR-137G	EAR99
PEWCP1031 	WR-137	5.85 - 8.2	0.15	1.05:1	30	40	Round Cover UG-344/U	EAR99

Waveguide Couplers-Crossguide

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCP1035 	WR-34	22 - 33	0.1	1.05:1	20	20	Square Cover UG-1530/U	EAR99
PEWCP1036 	WR-34	22 - 33	0.1	1.05:1	30	20	Square Cover UG-1530/U	EAR99
PEWCP1037 	WR-34	22 - 33	0.1	1.05:1	40	25	Square Cover UG-1530/U	EAR99
PEWCP1038 	WR-34	22 - 33	0.1	1.05:1	50	10	Square Cover UG-1530/U	EAR99
PEWCP1039 	WR-42	18 - 26.5	0.1	1.05:1	20	30	Square Cover UG-595/U	EAR99
PEWCP1040 	WR-42	18 - 26.5	0.1	1.05:1	30	20	Square Cover UG-595/U	EAR99

Waveguide Couplers-Crossguide continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCP1041 	WR-42	18 - 26.5	0.1	1.05:1	40	20	Square Cover UG-595/U	EAR99
PEWCP1042 	WR-42	18 - 26.5	0.1	1.05:1	50	10	Square Cover UG-595/U	EAR99
PEWCP1043 	WR-51	15 - 22	0.1	1.05:1	20	20	Square Cover	EAR99
PEWCP1044 	WR-51	15 - 22	0.1	1.05:1	30	30	Square Cover	EAR99
PEWCP1045 	WR-51	15 - 22	0.1	1.05:1	40	30	Square Cover	EAR99
PEWCP1046 	WR-51	15 - 22	0.1	1.05:1	50	10	Square Cover	EAR99
PEWCP1047 	WR-62	12.4 - 18	0.1	1.05:1	20	20	Square Cover UG-419/U	EAR99
PEWCP1048 	WR-62	12.4 - 18	0.1	1.05:1	30	10	Square Cover UG-419/U	EAR99
PEWCP1049 	WR-62	12.4 - 18	0.1	1.05:1	40	30	Square Cover UG-419/U	EAR99
PEWCP1050 	WR-62	12.4 - 18	0.1	1.05:1	50	10	Square Cover UG-419/U	EAR99
PEWCP1051 	WR-75	10 - 15	0.1	1.05:1	20	25	Square Cover	EAR99
PEWCP1052A 	WR-75	10 - 15	0.1	1.05:1	30	25	Square Cover	EAR99
PEWCP1053 	WR-75	10 - 15	0.1	1.05:1	40	15	Square Cover	EAR99
PEWCP1054 	WR-75	10 - 15	0.1	1.05:1	50	10	Square Cover	EAR99
PEWCP1055 	WR-90	8.2 - 12.4	0.1	1.05:1	20	20	Square Cover UG-39/U	EAR99
PEWCP1059 	WR-90	8.2 - 12.4	0.1	1.05:1	20	25	CPR-90G	EAR99

Waveguide Couplers-Crossguide continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCP1060 	WR-90	8.2 - 12.4	0.1	1.05:1	30	20	CPR-90G	EAR99
PEWCP1056 	WR-90	8.2 - 12.4	0.1	1.05:1	30	20	Square Cover UG-39/U	EAR99
PEWCP1061 	WR-90	8.2 - 12.4	0.1	1.05:1	40	10	CPR-90G	EAR99
PEWCP1057 	WR-90	8.2 - 12.4	0.1	1.05:1	40	10	Square Cover UG-39/U	EAR99
PEWCP1062 	WR-90	8.2 - 12.4	0.1	1.05:1	50	10	CPR-90G	EAR99
PEWCP1058 	WR-90	8.2 - 12.4	0.1	1.05:1	50	10	Square Cover UG-39/U	EAR99
PEWCP1067 	WR-112	7.05 - 10	0.1	1.05:1	20	25	CPR-112G	EAR99
PEWCP1063 	WR-112	7.05 - 10	0.1	1.05:1	20	45	Square Cover UG-51/U	EAR99
PEWCP1068 	WR-112	7.05 - 10	0.1	1.05:1	30	25	CPR-112G	EAR99
PEWCP1064 	WR-112	7.05 - 10	0.1	1.05:1	30	25	Square Cover UG-51/U	EAR99
PEWCP1069 	WR-112	7.05 - 10	0.1	1.05:1	40	20	CPR-112G	EAR99
PEWCP1065 	WR-112	7.05 - 10	0.1	1.05:1	40	20	Square Cover UG-51/U	EAR99
PEWCP1070 	WR-112	7.05 - 10	0.1	1.05:1	50	10	CPR-112G	EAR99
PEWCP1066 	WR-112	7.05 - 10	0.1	1.05:1	50	10	Square Cover UG-51/U	EAR99
PEWCP1075 	WR-137	5.85 - 8.2	0.1	1.05:1	20	20	CPR-137G	EAR99
PEWCP1071 	WR-137	5.85 - 8.2	0.1	1.05:1	20	25	Round Cover UG-344/U	EAR99

Waveguide Couplers-Crossguide continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCP1076 	WR-137	5.85 - 8.2	0.1	1.05:1	30	20	CPR-137G	EAR99
PEWCP1072 	WR-137	5.85 - 8.2	0.1	1.05:1	30	20	Round Cover UG-344/U	EAR99
PEWCP1077 	WR-137	5.85 - 8.2	0.1	1.05:1	40	20	CPR-137G	EAR99
PEWCP1073 	WR-137	5.85 - 8.2	0.1	1.05:1	40	20	Round Cover UG-344/U	EAR99
PEWCP1078 	WR-137	5.85 - 8.2	0.1	1.05:1	50	10	CPR-137G	EAR99
PEWCP1074 	WR-137	5.85 - 8.2	0.1	1.05:1	50	10	Round Cover UG-344/U	EAR99

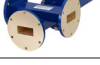
Waveguide Couplers-Crossguide with Termination

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCT1000 	WR-34	22 - 33	0.1	1.05:1	20	20	Square Cover UG-1530/U	EAR99
PEWCT1001 	WR-34	22 - 33	0.1	1.05:1	30	20	Square Cover UG-1530/U	EAR99
PEWCT1002 	WR-34	22 - 33	0.1	1.05:1	40	25	Square Cover UG-1530/U	EAR99
PEWCT1003 	WR-34	22 - 33	0.1	1.05:1	50	10	Square Cover UG-1530/U	EAR99
PEWCT1004 	WR-42	18 - 26.5	0.1	1.05:1	20	30	Square Cover UG-595/U	EAR99
PEWCT1005 	WR-42	18 - 26.5	0.1	1.05:1	30	20	Square Cover UG-595/U	EAR99
PEWCT1006 	WR-42	18 - 26.5	0.1	1.05:1	40	20	Square Cover UG-595/U	EAR99
PEWCT1007 	WR-42	18 - 26.5	0.1	1.05:1	50	10	Square Cover UG-595/U	EAR99

Waveguide Couplers-Crossguide with Termination Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCT1008 	WR-51	15 - 22	0.1	1.05:1	20	20	Square Cover	EAR99
PEWCT1009 	WR-51	15 - 22	0.1	1.05:1	30	30	Square Cover	EAR99
PEWCT1010 	WR-51	15 - 22	0.1	1.05:1	40	30	Square Cover	EAR99
PEWCT1011 	WR-51	15 - 22	0.1	1.05:1	50	10	Square Cover	EAR99
PEWCT1012 	WR-62	12.4 - 18	0.1	1.05:1	20	20	Square Cover UG-419/U	EAR99
PEWCT1013 	WR-62	12.4 - 18	0.1	1.05:1	30	10	Square Cover UG-419/U	EAR99
PEWCT1014 	WR-62	12.4 - 18	0.1	1.05:1	40	30	Square Cover UG-419/U	EAR99
PEWCT1015 	WR-62	12.4 - 18	0.1	1.05:1	50	10	Square Cover UG-419/U	EAR99
PEWCT1016 	WR-75	10 - 15	0.1	1.05:1	20	25	Square Cover	EAR99
PEWCT1017 	WR-75	10 - 15	0.1	1.05:1	30	25	Square Cover	EAR99
PEWCT1018 	WR-75	10 - 15	0.1	1.05:1	40	15	Square Cover	EAR99
PEWCT1019 	WR-75	10 - 15	0.1	1.05:1	50	10	Square Cover	EAR99
PEWCT1020 	WR-90	8.2 - 12.4	0.1	1.05:1	20	20	Square Cover UG-39/U	EAR99
PEWCT1024 	WR-90	8.2 - 12.4	0.1	1.05:1	20	25	CPR-90G	EAR99
PEWCT1025 	WR-90	8.2 - 12.4	0.1	1.05:1	30	20	CPR-90G	EAR99
PEWCT1021 	WR-90	8.2 - 12.4	0.1	1.05:1	30	20	Square Cover UG-39/U	EAR99

Waveguide Couplers-Crossguide with Termination Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCT1026 	WR-90	8.2 - 12.4	0.1	1.05:1	40	10	CPR-90G	EAR99
PEWCT1022 	WR-90	8.2 - 12.4	0.1	1.05:1	40	10	Square Cover UG-39/U	EAR99
PEWCT1027 	WR-90	8.2 - 12.4	0.1	1.05:1	50	10	CPR-90G	EAR99
PEWCT1023 	WR-90	8.2 - 12.4	0.1	1.05:1	50	10	Square Cover UG-39/U	EAR99
PEWCT1032 	WR-112	7.05 - 10	0.1	1.05:1	20	25	CPR-112G	EAR99
PEWCT1028 	WR-112	7.05 - 10	0.1	1.05:1	20	45	Square Cover UG-51/U	EAR99
PEWCT1033 	WR-112	7.05 - 10	0.1	1.05:1	30	25	CPR-112G	EAR99
PEWCT1029 	WR-112	7.05 - 10	0.1	1.05:1	30	25	Square Cover UG-51/U	EAR99
PEWCT1034 	WR-112	7.05 - 10	0.1	1.05:1	40	20	CPR-112G	EAR99
PEWCT1030 	WR-112	7.05 - 10	0.1	1.05:1	40	20	Square Cover UG-51/U	EAR99
PEWCT1035 	WR-112	7.05 - 10	0.1	1.05:1	50	10	CPR-112G	EAR99
PEWCT1031 	WR-112	7.05 - 10	0.1	1.05:1	50	10	Square Cover UG-51/U	EAR99
PEWCT1040 	WR-137	5.85 - 8.2	0.1	1.05:1	20	20	CPR-137G	EAR99
PEWCT1036 	WR-137	5.85 - 8.2	0.1	1.05:1	20	25	Round Cover UG-344/U	EAR99
PEWCT1041 	WR-137	5.85 - 8.2	0.1	1.05:1	30	20	CPR-137G	EAR99
PEWCT1037 	WR-137	5.85 - 8.2	0.1	1.05:1	30	20	Round Cover UG-344/U	EAR99

Waveguide Couplers-Crossguide with Termination Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCT1042 	WR-137	5.85 - 8.2	0.1	1.05:1	40	20	CPR-137G	EAR99
PEWCT1038 	WR-137	5.85 - 8.2	0.1	1.05:1	40	20	Round Cover UG-344/U	EAR99
PEWCT1043 	WR-137	5.85 - 8.2	0.1	1.05:1	50	10	CPR-137G	EAR99
PEWCT1039 	WR-137	5.85 - 8.2	0.1	1.05:1	50	10	Round Cover UG-344/U	EAR99

Waveguide Couplers-Crossguide with Termination and WG to Coax Adapter

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCT1044 	WR-34	22 - 33	0.1	1.05:1	20	20	Square Cover UG-1530/U	EAR99
PEWCT1045 	WR-34	22 - 33	0.1	1.05:1	30	20	Square Cover UG-1530/U	EAR99
PEWCT1046 	WR-34	22 - 33	0.1	1.05:1	40	25	Square Cover UG-1530/U	EAR99
PEWCT1047 	WR-34	22 - 33	0.1	1.05:1	50	10	Square Cover UG-1530/U	EAR99
PEWCT1048 	WR-42	18 - 26.5	0.1	1.05:1	20	30	Square Cover UG-595/U	EAR99
PEWCT1049 	WR-42	18 - 26.5	0.1	1.05:1	30	20	Square Cover UG-595/U	EAR99
PEWCT1050 	WR-42	18 - 26.5	0.1	1.05:1	40	20	Square Cover UG-595/U	EAR99
PEWCT1051 	WR-42	18 - 26.5	0.1	1.05:1	50	10	Square Cover UG-595/U	EAR99
PEWCT1052 	WR-51	15 - 22	0.1	1.05:1	20	20	Square Cover	EAR99
PEWCT1053 	WR-51	15 - 22	0.1	1.05:1	30	30	Square Cover	EAR99

Waveguide Couplers-Crossguide with Termination and WG to Coax Adapter Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCT1054 	WR-51	15 - 22	0.1	1.05:1	40	30	Square Cover	EAR99
PEWCT1055 	WR-51	15 - 22	0.1	1.05:1	50	10	Square Cover	EAR99
PEWCT1056 	WR-62	12.4 - 18	0.1	1.05:1	20	20	Square Cover UG-419/U	EAR99
PEWCT1057 	WR-62	12.4 - 18	0.1	1.05:1	30	10	Square Cover UG-419/U	EAR99
PEWCT1058 	WR-62	12.4 - 18	0.1	1.05:1	40	30	Square Cover UG-419/U	EAR99
PEWCT1059 	WR-62	12.4 - 18	0.1	1.05:1	50	10	Square Cover UG-419/U	EAR99
PEWCT1060 	WR-75	10 - 15	0.1	1.05:1	20	25	Square Cover	EAR99
PEWCT1064 	WR-75	10 - 15	0.1	1.05:1	20	25	Square Cover	EAR99
PEWCT1061 	WR-75	10 - 15	0.1	1.05:1	30	25	Square Cover	EAR99
PEWCT1065 	WR-75	10 - 15	0.1	1.05:1	30	25	Square Cover	EAR99
PEWCT1062 	WR-75	10 - 15	0.1	1.05:1	40	15	Square Cover	EAR99
PEWCT1066 	WR-75	10 - 15	0.1	1.05:1	40	15	Square Cover	EAR99
PEWCT1063 	WR-75	10 - 15	0.1	1.05:1	50	10	Square Cover	EAR99
PEWCT1067 	WR-75	10 - 15	0.1	1.05:1	50	10	Square Cover	EAR99
PEWCT1068 	WR-90	8.2 - 12.4	0.1	1.05:1	20	20	Square Cover UG-39/U	EAR99
PEWCT1076 	WR-90	8.2 - 12.4	0.1	1.05:1	20	20	Square Cover UG-39/U	EAR99

Waveguide Couplers-Crossguide with Termination and WG to Coax Adapter Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCT1072 	WR-90	8.2 - 12.4	0.1	1.05:1	20	25	CPR-90G	EAR99
PEWCT1080 	WR-90	8.2 - 12.4	0.1	1.05:1	20	25	CPR-90G	EAR99
PEWCT1073 	WR-90	8.2 - 12.4	0.1	1.05:1	30	20	CPR-90G	EAR99
PEWCT1081 	WR-90	8.2 - 12.4	0.1	1.05:1	30	20	CPR-90G	EAR99
PEWCT1069 	WR-90	8.2 - 12.4	0.1	1.05:1	30	20	Square Cover UG-39/U	EAR99
PEWCT1077 	WR-90	8.2 - 12.4	0.1	1.05:1	30	20	Square Cover UG-39/U	EAR99
PEWCT1074 	WR-90	8.2 - 12.4	0.1	1.05:1	40	10	CPR-90G	EAR99
PEWCT1082 	WR-90	8.2 - 12.4	0.1	1.05:1	40	10	CPR-90G	EAR99
PEWCT1070 	WR-90	8.2 - 12.4	0.1	1.05:1	40	10	Square Cover UG-39/U	EAR99
PEWCT1078 	WR-90	8.2 - 12.4	0.1	1.05:1	40	10	Square Cover UG-39/U	EAR99
PEWCT1075 	WR-90	8.2 - 12.4	0.1	1.05:1	50	10	CPR-90G	EAR99
PEWCT1083 	WR-90	8.2 - 12.4	0.1	1.05:1	50	10	CPR-90G	EAR99
PEWCT1071 	WR-90	8.2 - 12.4	0.1	1.05:1	50	10	Square Cover UG-39/U	EAR99
PEWCT1079 	WR-90	8.2 - 12.4	0.1	1.05:1	50	10	Square Cover UG-39/U	EAR99
PEWCT1088 	WR-112	7.05 - 10	0.1	1.05:1	20	25	CPR-112G	EAR99
PEWCT1096 	WR-112	7.05 - 10	0.1	1.05:1	20	25	CPR-112G	EAR99

Waveguide Couplers-Crossguide with Termination and WG to Coax Adapter Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCT1084 	WR-112	7.05 - 10	0.1	1.05:1	20	45	Square Cover UG-51/U	EAR99
PEWCT1092 	WR-112	7.05 - 10	0.1	1.05:1	20	45	Square Cover UG-51/U	EAR99
PEWCT1089 	WR-112	7.05 - 10	0.1	1.05:1	30	25	CPR-112G	EAR99
PEWCT1097 	WR-112	7.05 - 10	0.1	1.05:1	30	25	CPR-112G	EAR99
PEWCT1085 	WR-112	7.05 - 10	0.1	1.05:1	30	25	Square Cover UG-51/U	EAR99
PEWCT1093 	WR-112	7.05 - 10	0.1	1.05:1	30	25	Square Cover UG-51/U	EAR99
PEWCT1090 	WR-112	7.05 - 10	0.1	1.05:1	40	20	CPR-112G	EAR99
PEWCT1098 	WR-112	7.05 - 10	0.1	1.05:1	40	20	CPR-112G	EAR99
PEWCT1086 	WR-112	7.05 - 10	0.1	1.05:1	40	20	Square Cover UG-51/U	EAR99
PEWCT1094 	WR-112	7.05 - 10	0.1	1.05:1	40	20	Square Cover UG-51/U	EAR99
PEWCT1091 	WR-112	7.05 - 10	0.1	1.05:1	50	10	CPR-112G	EAR99
PEWCT1099 	WR-112	7.05 - 10	0.1	1.05:1	50	10	CPR-112G	EAR99
PEWCT1087 	WR-112	7.05 - 10	0.1	1.05:1	50	10	Square Cover UG-51/U	EAR99
PEWCT1095 	WR-112	7.05 - 10	0.1	1.05:1	50	10	Square Cover UG-51/U	EAR99
PEWCT1104 	WR-137	5.85 - 8.2	0.1	1.05:1	20	20	CPR-137G	EAR99
PEWCT1112 	WR-137	5.85 - 8.2	0.1	1.05:1	20	20	CPR-137G	EAR99

Waveguide Couplers-Crossguide with Termination and WG to Coax Adapter Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (dB)	Maximum VSWR	Coupling (dB)	Directivity (dB)	Flange Type	ECCN
PEWCT1100 	WR-137	5.85 - 8.2	0.1	1.05:1	20	25	Round Cover UG-344/U	EAR99
PEWCT1108 	WR-137	5.85 - 8.2	0.1	1.05:1	20	25	Round Cover UG-344/U	EAR99
PEWCT1105 	WR-137	5.85 - 8.2	0.1	1.05:1	30	20	CPR-137G	EAR99
PEWCT1113 	WR-137	5.85 - 8.2	0.1	1.05:1	30	20	CPR-137G	EAR99
PEWCT1101 	WR-137	5.85 - 8.2	0.1	1.05:1	30	20	Round Cover UG-344/U	EAR99
PEWCT1109 	WR-137	5.85 - 8.2	0.1	1.05:1	30	20	Round Cover UG-344/U	EAR99
PEWCT1106 	WR-137	5.85 - 8.2	0.1	1.05:1	40	20	CPR-137G	EAR99
PEWCT1114 	WR-137	5.85 - 8.2	0.1	1.05:1	40	20	CPR-137G	EAR99
PEWCT1102 	WR-137	5.85 - 8.2	0.1	1.05:1	40	20	Round Cover UG-344/U	EAR99
PEWCT1110 	WR-137	5.85 - 8.2	0.1	1.05:1	40	20	Round Cover UG-344/U	EAR99
PEWCT1107 	WR-137	5.85 - 8.2	0.1	1.05:1	50	10	CPR-137G	EAR99
PEWCT1115 	WR-137	5.85 - 8.2	0.1	1.05:1	50	10	CPR-137G	EAR99
PEWCT1103 	WR-137	5.85 - 8.2	0.1	1.05:1	50	10	Round Cover UG-344/U	EAR99
PEWCT1111 	WR-137	5.85 - 8.2	0.1	1.05:1	50	10	Round Cover UG-344/U	EAR99

Waveguide Isolators

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Typical Isolation (dB)	Typical Insertion Loss (dB)	Typical VSWR	Flange Type	ECCN
PEWIR1000 	WR-10	75 - 110	30	2.3	1.5:1	UG-387/U-Mod	EAR99
PEWIR1001 	WR-12	60 - 90	30	2	1.5:1	UG-387/U	EAR99
PEWIR1002 	WR-15	50 - 75	30	1.8	1.4:1	UG-385/U	EAR99
PEWIR1003 	WR-19	40 - 60	30	1.6	1.4:1	UG-383/U-Mod	EAR99
PEWIR1004 	WR-22	33 - 50	30	1.5	1.4:1	UG-383/U	EAR99
PEWIR1015 	WR-28	26.5 - 40	25	1	1.3:1	UG-599/U	EAR99
PEWIR1010 	WR-42	18 - 26.5	18	0.4	1.3:1	UG-597/U	EAR99
PEWIR1009 	WR-62	12.4 - 18	18	0.4	1.3:1	UG-1665/U	EAR99
PEWIR1008 	WR-75	10 - 15	18	0.5	1.3:1		EAR99
PEWIR1007 	WR-90	8.2 - 12.4	18	0.4	1.3:1	UG-135/U	EAR99
PEWIR1006 	WR-112	7.05 - 10	18	0.4	1.3:1	UG-138/U	EAR99

Waveguide Magic Tees

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Flange Type	Insertion Loss (dB)	Minimum Isolation (dB)	ECCN
PEWMT1000 	WR-10	75 - 110	Round Cover UG-387/U-Mod	1	25	EAR99
PEWMT1001 	WR-12	60 - 90	Round Cover UG-387/U	1	25	EAR99
PEWMT1002 	WR-15	50 - 75	Round Cover UG-385/U	1	25	EAR99

Waveguide Magic Tees Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Flange Type	Insertion Loss (dB)	Minimum Isolation (dB)	ECCN
PEWMT1003 	WR-19	40 - 60	Round Cover UG-383/U-Mod	0.8	25	EAR99
PEWMT1004 	WR-22	33 - 50	Round Cover UG-383/U	0.7	25	EAR99
PEWMT1005 	WR-28	26.5 - 40	Square Cover UG-599/U	0.5	25	EAR99
PEWMT1006 	WR-42	18 - 26.5	Square Cover UG-595/U	0.5	25	EAR99

Waveguide Orthomode Transducers

PE P/N	RF Frequency Range (GHz)	H to A Insertion Loss (dB)	V to A Insertion Loss (dB)	H to V Isolation (dB)	H to A Cross Polarization (dB)	V to A Cross Polarization (dB)	Waveguide Type	ECCN
PEWOT0009 	60 - 90	1.2	0.8	40	35	35	WR-12	EAR99
PEWOT0003 	30 - 42	0.5	0.5	40	35	35	WR-28	EAR99
PEWOT0007 	26.5 - 40	0.5	0.5	40	35	35	WR-28	EAR99
PEWOT0001 	24 - 33	0.6	0.5	45	35	35	WR-34	EAR99
PEWOT0014 	8.2 - 12.4	0.3	0.3	45	30	30	WR-90	EAR99

Waveguide Phase Shifters

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Phase Range (Degrees)	Input Power (Watts)	Insertion Loss (dB)	Length (in)	Flange Type	ECCN
PE-W10PS1001 	WR-10	75 - 110	0 - 180	0.6	1	3	Round Cover UG-387/U-Mod	EAR99
PE-W12PS1001 	WR-12	60 - 90	0 - 180	0.7	1	3	Round Cover UG-387/U	EAR99
PE-W15PS1001 	WR-15	50 - 75	0 - 180	0.8	1	3	Round Cover UG-385/U	EAR99

Waveguide Phase Shifters Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Phase Range (Degrees)	Input Power (Watts)	Insertion Loss (dB)	Length (in)	Flange Type	ECCN
PE-W19PS1001 	WR-19	40 - 60	0 - 180	1	1	3	Round Cover UG-383/U-Mod	EAR99
PE-W22PS1001 	WR-22	33 - 50	0 - 180	1	1	4	Round Cover UG-383/U	EAR99
PE-W28PS1002 	WR-28	26.5 - 40	0 - 180	1		4	Square Cover UG-599/U	EAR99
PE-W42PS1001 	WR-42	18 - 26.5	0 - 180	1.5	1	4	Square Cover UG-595/U	EAR99

Waveguide Polarizers

PE P/N	Band	RF Frequency Range (GHz)	Typical Bandwidth (MHz)	Typical Insertion Loss (dB)	Typical Axial Ratio (dB)	Length (in)	Flange Type	ECCN
PEWPL0000 	Ku	14 - 16	1000	0.5	1.1	3	Square Cover UG-419/U-Mod	EAR99
PEWPL0005 	Ka	26 - 33	3500	0.5	1.1	2	Square Cover UG-599/U-Mod	EAR99
PEWPL0008 	V	57.5 - 62.5	2500	0.5	1.1	1.31	Round Cover UG-385/U-Mod	EAR99

Waveguide Rotary Joints

PE P/N	WG Size	Design	Max Rotation Speed (RPM)	Max Input Power (Watts)	Max Input VSWR	Max Insertion Loss (dB)	Body Material and Plating	ECCN
PEW28RJ0001 	WR-28	L Style	30	100	1.2:1	0.3	Brass, Paint	EAR99
PEW34RJ0001 	WR-34	L Style	30	100	1.25:1	0.3	Brass, Paint	EAR99
PEW62RJ0002 	WR-62	Inline Style	30	100	1.2:1	0.3	Brass, Paint	EAR99
PEW62RJ0001 	WR-62	L Style	30	100	1.2:1	0.25	Aluminum, Paint	EAR99
PEW75RJ0003 	WR-75	Inline Style	30	100	1.2:1	0.3	Aluminum, Paint	EAR99

Waveguide Rotary Joints Continued

PE P/N	WG Size	Design	Max Rotation Speed (RPM)	Max Input Power (Watts)	Max Input VSWR	Max Insertion Loss (dB)	Body Material and Plating	ECCN
PEW75RJ0002 	WR-75	L Style	30	100	1.2:1	0.3	Brass, Paint	EAR99
PEW75RJ0001 	WR-75	U Style	30	100	1.2:1	0.3	Brass, Paint	EAR99
PEW90RJ0002 	WR-90	Inline Style	30	300	1.2:1	0.3	Aluminum, Paint	EAR99
PEW90RJ0003 	WR-90	L Style	30	300	1.2:1	0.3	Aluminum, Paint	EAR99
PEW90RJ0001 	WR-90	U Style	30	300	1.2:1	0.3	Aluminum, Paint	EAR99
PEW137RJ0001 	WR-137	L Style	30	1,000	1.25:1	0.3	Brass, Paint	EAR99
PEW187RJ0002 	WR-187	Inline Style	30	600	1.2:1	0.25	Aluminum, Paint	EAR99
PEW187RJ0001 	WR-187	L Style	30	1,000	1.15:1	0.3	Brass, Paint	EAR99

Waveguide Sections

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (GHz)	Typical VSWR	Maximum VSWR	Length (in)	Flange Type	ECCN
PEW05S000-1 	WR-5	140 - 220		1.15:1	1.15:1	1	Round Cover UG-387/U-Mod	EAR99
PEW05S000-3 	WR-5	140 - 220		1.15:1	1.15:1	3	Round Cover UG-387/U-Mod	EAR99
PEW05S000-6 	WR-5	140 - 220		1.15:1	1.15:1	6	Round Cover UG-387/U-Mod	EAR99
PEW05S000-9 	WR-5	140 - 220		1.15:1	1.15:1	9	Round Cover UG-387/U-Mod	EAR99
PEW05S000-12 	WR-5	140 - 220		1.15:1	1.15:1	12	Round Cover UG-387/U-Mod	EAR99
PEW06S000-1 	WR-6	110 - 170	0.35	1.15:1	1.15:1	1	Round Cover UG-387/U-Mod	EAR99

Waveguide Sections Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (GHz)	Typical VSWR	Maximum VSWR	Length (in)	Flange Type	ECCN
PEW06S000-3 	WR-6	110 - 170	0.35	1.15:1	1.15:1	3	Round Cover UG-387/U-Mod	EAR99
PEW06S000-6 	WR-6	110 - 170	0.55	1.15:1	1.15:1	6	Round Cover UG-387/U-Mod	EAR99
PEW06S000-9 	WR-6	110 - 170	0.75	1.15:1	1.15:1	9	Round Cover UG-387/U-Mod	EAR99
PEW06S000-12 	WR-6	110 - 170	1.50	1.15:1	1.15:1	12	Round Cover UG-387/U-Mod	EAR99
PEW08S000-1 	WR-8	90 - 140	0.30	1.15:1	1.15:1	1	Round Cover UG-387/U-Mod	EAR99
PEW08S000-3 	WR-8	90 - 140	0.30	1.15:1	1.15:1	3	Round Cover UG-387/U-Mod	EAR99
PEW08S000-6 	WR-8	90 - 140	0.50	1.15:1	1.15:1	6	Round Cover UG-387/U-Mod	EAR99
PEW08S000-9 	WR-8	90 - 140	0.70	1.15:1	1.15:1	9	Round Cover UG-387/U-Mod	EAR99
PEW08S000-12 	WR-8	90 - 140	1.20	1.15:1	1.15:1	12	Round Cover UG-387/U-Mod	EAR99
PEW10S010-3 	WR-10	75 - 110	0.25	1.06:1	1.06:1	3	Round Cover UG-387/U-Mod	EAR99
PEW10S010-6 	WR-10	75 - 110	0.50	1.06:1	1.06:1	6	Round Cover UG-387/U-Mod	EAR99
PEW12S010-3 	WR-12	60 - 90	0.30	1.06:1	1.15:1	3	Round Cover UG-387/U	EAR99
PEW12S010-9 	WR-12	60 - 90	0.80	1.06:1		9	Round Cover UG-387/U	EAR99
PE-W12S001-9 	WR-12	60 - 90	0.64	1.06:1	1.06:1	9	Round Cover UG-387/U	EAR99
PE-W12S001-12 	WR-12	60 - 90	0.82	1.06:1	1.06:1	12	Round Cover UG-387/U	EAR99

Waveguide Sections Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (GHz)	Typical VSWR	Maximum VSWR	Length (in)	Flange Type	ECCN
PEW15S010-12 	WR-15	50 - 75	0.95	1.06:1		12	Round Cover UG-385/U	EAR99
PE-W15S001-3 	WR-15	50 - 75	0.20	1.06:1	1.06:1	3	Round Cover UG-385/U	EAR99
PE-W15S001-6 	WR-15	50 - 75	0.34	1.06:1	1.06:1	6	Round Cover UG-385/U	EAR99
PE-W15S001-9 	WR-15	50 - 75	0.49	1.06:1	1.06:1	9	Round Cover UG-385/U	EAR99
PE-W15S001-12 	WR-15	50 - 75	0.64	1.06:1	1.06:1	12	Round Cover UG-385/U	EAR99
PEW19S010-3 	WR-19	40 - 60	0.20	1.06:1		3	Round Cover UG-383/U-Mod	EAR99
PEW19S010-12 	WR-19	40 - 60	0.80	1.06:1		12	Round Cover UG-383/U-Mod	EAR99
PE-W19S001-3 	WR-19	40 - 60	0.15	1.06:1	1.06:1	3	Round Cover UG-383/U-Mod	EAR99
PE-W19S001-6 	WR-19	40 - 60	0.25	1.06:1	1.06:1	6	Round Cover UG-383/U-Mod	EAR99
PE-W19S001-9 	WR-19	40 - 60	0.34	1.06:1	1.06:1	9	Round Cover UG-383/U-Mod	EAR99
PE-W19S001-12 	WR-19	40 - 60	0.44	1.06:1	1.06:1	12	Round Cover UG-383/U-Mod	EAR99
PEW22S010-3 	WR-22	33 - 50	0.25	1.1:1	1.1:1	3	Round Cover UG-383/U	EAR99
PE-W22S001-3 	WR-22	33 - 50	0.13	1.06:1	1.06:1	3	Round Cover UG-383/U	EAR99
PE-W22S001-6 	WR-22	33 - 50	0.21	1.06:1	1.06:1	6	Round Cover UG-383/U	EAR99
PE-W22S001-9 	WR-22	33 - 50	0.29	1.06:1	1.06:1	9	Round Cover UG-383/U	EAR99

Waveguide Sections Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (GHz)	Typical VSWR	Maximum VSWR	Length (in)	Flange Type	ECCN
PE-W22S001-12 	WR-22	33 - 50	0.36	1.06:1	1.06:1	12	Round Cover UG-383/U	EAR99
PEWSP1000 	WR-22	33 - 50		1.09:1		4	Round Cover UG-383/U	EAR99
PEW28S010-3 	WR-28	26.5 - 40	0.20	1.06:1	1.06:1	3	Square Cover UG-599/U	EAR99
PEW28S010-6 	WR-28	26.5 - 40	0.20	1.06:1	1.06:1	6	Square Cover UG-599/U	EAR99
PE-W28S001-9 	WR-28	26.5 - 40	0.22	1.06:1	1.06:1	9	Square Cover UG-599/U	EAR99
PEWSP1001 	WR-28	26.5 - 40		1.09:1		4	Square Cover UG-599/U	EAR99
PEWSP1002 	WR-34	20 - 33		1.07:1		4	Square Cover UG-1530/U	EAR99
PE-W42S001-12 	WR-42	18 - 26.5	0.18	1.06:1	1.06:1	12	Square Cover UG-595/U	EAR99
PE-W42S002-3 	WR-42	18 - 26.5	0.08	1.06:1	1.06:1	3	Square Cover UG-595/U	EAR99
PE-W42S001A-6 	WR-42	18 - 26.5	0.12	1.06:1	1.06:1	6	Square Cover UG-595/U	EAR99
PE-W42S001A-9 	WR-42	18 - 26.5	0.15	1.06:1	1.06:1	9	Square Cover UG-595/U	EAR99
PEWSP1003 	WR-42	18 - 26.5		1.07:1		4	Square Cover UG-595/U	EAR99
PE-W51S001-9 	WR-51	15 - 22	0.11	1.06:1	1.06:1	9	UBR180	EAR99
PE-W51S001-12 	WR-51	15 - 22	0.13	1.06:1	1.06:1	12	UBR180	EAR99
PEWSP1004 	WR-51	15 - 22		1.07:1		4	Square Cover	EAR99

Waveguide Sections Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (GHz)	Typical VSWR	Maximum VSWR	Length (in)	Flange Type	ECCN
PE-W62S001-3 	WR-62	12.4 - 18		1.03:1		3	Square Cover UG-419/U	EAR99
PE-W62S001-6 	WR-62	12.4 - 18		1.03:1		6	Square Cover UG-419/U	EAR99
PE-W62S001-9 	WR-62	12.4 - 18		1.03:1		9	Square Cover UG-419/U	EAR99
PE-W62S001-12 	WR-62	12.4 - 18		1.03:1		12	Square Cover UG-419/U	EAR99
PE-W62S002-6 	WR-62	12.4 - 18	0.08	1.06:1	1.06:1	6	Square Cover UG-419/U	EAR99
PE-W62S002-9 	WR-62	12.4 - 18	0.10	1.06:1	1.06:1	9	Square Cover UG-419/U	EAR99
PE-W62S002-12 	WR-62	12.4 - 18	0.11	1.06:1	1.06:1	12	Square Cover UG-419/U	EAR99
PEWSP1005 	WR-62	12.4 - 18		1.07:1		4	Square Cover UG-419/U	EAR99
PE-W75S001A-6 	WR-75	10 - 15	0.10	1.03:1	1.03:1		UBR120	EAR99
PE-W75S001-6 	WR-75	10 - 15		1.03:1			UBR120	EAR99
PE-W75S001-3 	WR-75	10 - 15		1.03:1		3	UBR120	EAR99
PE-W75S001-9 	WR-75	10 - 15		1.03:1		9	UBR120	EAR99
PEWSP1006 	WR-75	10 - 15		1.07:1		4	Square Cover	EAR99
PE-W90S001-12 	WR-90	8.2 - 12.4		1.03:1			Square Cover UG-39/U	EAR99
PE-W90S001-3 	WR-90	8.2 - 12.4		1.03:1		3	Square Cover UG-39/U	EAR99

Waveguide Sections Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (GHz)	Typical VSWR	Maximum VSWR	Length (in)	Flange Type	ECCN
PE-W90S002-3 	WR-90	8.2 - 12.4		1.03:1		3	CPR-90G	EAR99
PE-W90S001-6 	WR-90	8.2 - 12.4		1.03:1		6	Square Cover UG-39/U	EAR99
PE-W90S002-6 	WR-90	8.2 - 12.4		1.03:1		6	CPR-90G	EAR99
PE-W90S001A-9 	WR-90	8.2 - 12.4	0.10	1.03:1	1.03:1	9	Square Cover UG-39/U	EAR99
PE-W90S002-9 	WR-90	8.2 - 12.4		1.03:1		9	CPR-90G	EAR99
PE-W90S002-12 	WR-90	8.2 - 12.4		1.03:1		12	CPR-90G	EAR99
PEWSP1007 	WR-90	8.2 - 12.4		1.07:1		4	Square Cover UG-39/U	EAR99
PEWSP1008 	WR-90	8.2 - 12.4		1.07:1		4	CPR-90G	EAR99
PE-W112S001-3 	WR-112	7.05 - 10		1.03:1		3	Square Cover UG-51/U	EAR99
PE-W112S001-6 	WR-112	7.05 - 10		1.03:1		6	Square Cover UG-51/U	EAR99
PE-W112S001-9 	WR-112	7.05 - 10		1.03:1		9	Square Cover UG-51/U	EAR99
PE-W112S001-12 	WR-112	7.05 - 10		1.03:1		12	Square Cover UG-51/U	EAR99
PEWSP1009 	WR-112	7.05 - 10		1.07:1		4	Square Cover UG-51/U	EAR99
PEWSP1010 	WR-112	7.05 - 10		1.07:1		4	CPR-112G	EAR99
PE-W137S002A-6 	WR-137	5.85 - 8.2	0.10	1.03:1	1.03:1		CPR-137G	EAR99

Waveguide Sections Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Insertion Loss (GHz)	Typical VSWR	Maximum VSWR	Length (in)	Flange Type	ECCN
PE-W137S002-3 	WR-137	5.85 - 8.2		1.03:1			CPR-137G	EAR99
PE-W137S001-3 	WR-137	5.85 - 8.2		1.03:1		3	Round Cover UG-344/U	EAR99
PE-W137S001-6 	WR-137	5.85 - 8.2		1.03:1		6	Round Cover UG-344/U	EAR99
PE-W137S001-9 	WR-137	5.85 - 8.2		1.03:1		9	Round Cover UG-344/U	EAR99
PE-W137S002-9 	WR-137	5.85 - 8.2		1.03:1		9	CPR-137G	EAR99
PE-W137S001-12 	WR-137	5.85 - 8.2		1.03:1		12	Round Cover UG-344/U	EAR99
PE-W137S002-12 	WR-137	5.85 - 8.2		1.03:1		12	CPR-137G	EAR99
PEWSP1011 	WR-137	5.85 - 8.2		1.07:1		4	Round Cover UG-344/U	EAR99
PEWSP1012 	WR-137	5.85 - 8.2		1.07:1		4	CPR-137G	EAR99
PEWRD180S001-3 	WRD-180	18 - 40	0.40	1.25:1			Square Cover UG	EAR99
PEWRD180S001-6 	WRD-180	18 - 40	0.50	1.25:1			Square Cover UG	EAR99
PEWRD650S001-3 	WRD-650	6.5 - 18	0.30	1.15:1			Square Cover UG	EAR99
PEWRD650S001-6 	WRD-650	6.5 - 18	0.40	1.15:1			Square Cover UG	EAR99
PEWRD750S001-3 	WRD-750	7.5 - 18	0.30	1.15:1			Square Cover UG	EAR99
PEWRD750S001-6 	WRD-750	7.5 - 18	0.40	1.15:1			Square Cover UG	EAR99

Waveguide Terminations

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Input Power (Watts)	Maximum VSWR	Length (in)	Flange Type	ECCN
PEW10TR0001 	WR-10	75 - 110	0.4	1.06:1	2	Round Cover UG-387/U	EAR99
PE-W10TR1001 	WR-10	75 - 110	0.4	1.25:1	2	Round Cover UG-387/U-Mod	EAR99
PE-W12TR1001 	WR-12	60 - 90	0.6	1.2:1	2	Round Cover UG-387/U	EAR99
PEW15TR0001 	WR-15	50 - 75	1	1.2:1	2	Round Cover UG-385/U	EAR99
PEW19TR0001 	WR-19	40 - 60	2	1.06:1	2	Round Cover UG-383/U	EAR99
PE-W19TR1001 	WR-19	40 - 60	2	1.09:1	2	Round Cover UG-383/U-Mod	EAR99
PE-W22TR1002 	WR-22	33 - 50	4	1.05:1	2	Round Cover UG-383/U	EAR99
PEWTR1000 	WR-28	26.5 - 40	0.5	1.02:1		Square Cover UG-599/U	EAR99
PE6809 	WR-28	26.5 - 40	0.5	1.05:1	2	Square Cover	EAR99
PE6800 	WR-28	26.5 - 40	0.5	1.3:1	1	Square Cover UG-599/U	EAR99
PE-W28TR1003 	WR-28	26.5 - 40	1	1.03:1	2	Square Cover UG-599/U	EAR99
PE6818 	WR-28	26.5 - 40	40	1.07:1	3	Square Cover	EAR99
PE-W28TR1004 	WR-28	26.5 - 40	50	1.25:1	4	Square Cover UG-599/U	EAR99
PE-W28TR1005 	WR-28	26.5 - 40	100	1.25:1	5	Square Cover UG-599/U	EAR99
PE-W28TR1002 	WR-28	29.4 - 31	2	1.15:1	1	Square Cover UG-599/U	EAR99
PE-W34TR1001 	WR-34	19.6 - 21.2	1	1.15:1	1	Square Cover UG-597/U	EAR99

Waveguide Terminations Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Input Power (Watts)	Maximum VSWR	Length (in)	Flange Type	ECCN
PE6810 	WR-34	22 - 33	0.5	1.05:1	3	Square Cover	EAR99
PE6801 	WR-34	22 - 33	0.5	1.25:1	1	Square Cover	EAR99
PEWTR1001 	WR-34	22 - 33	1	1.25:1		Square Cover UG-1530/U	EAR99
PE6819 	WR-34	22 - 33	45	1.1:1		Square Cover	EAR99
PE6828 	WR-34	22 - 33	75	1.1:1	4	Square Cover	EAR99
PE6811 	WR-42	18 - 26.5	0.5	1.05:1	3	Square Cover	EAR99
PE6802 	WR-42	18 - 26.5	0.5	1.25:1	1	Square Cover UG-597/U	EAR99
PEWTR1002 	WR-42	18 - 26.5	1	1.02:1		Square Cover UG-595/U	EAR99
PE-W42TR1001 	WR-42	18 - 26.5	6	1.08:1	3	Square Cover UG-595/U	EAR99
PE6820 	WR-42	18 - 26.5	50	1.07:1	4	Square Cover	EAR99
PE-W42TR1002 	WR-42	19.6 - 21.2	1	1.15:1	1	Square Cover UG-597/U	EAR99
PE6803 	WR-51	15 - 18	1	1.2:1	1	Square Cover	EAR99
PEWTR1003 	WR-51	15 - 22	1	1.02:1		Square Cover	EAR99
PE6812 	WR-51	15 - 22	1	1.05:1	3	Square Cover	EAR99
PE6201A 	WR-62	11.9 - 18	2	1.03:1	4	Square Cover	EAR99
PEWTR1004 	WR-62	12.4 - 18	1.5	1.02:1		Square Cover UG-419/U	EAR99

Waveguide Terminations Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Input Power (Watts)	Maximum VSWR	Length (in)	Flange Type	ECCN
PE6804 	WR-62	12.4 - 18	2	1.2:1	1	Square Cover	EAR99
PE6836 	WR-62	12.4 - 18	60	1.07:1	4	Square Cover	EAR99
PE-W62TR1003 	WR-62	14.5 - 17.8	1	1.05:1	1	Square Cover UG-1665/U	EAR99
PE6814 	WR-75	10 - 15	2	1.05:1	4	Square Cover	EAR99
PE6805 	WR-75	10 - 15	2	1.2:1	1	Square Cover	EAR99
PEWTR1005 	WR-75	10 - 15	2.5	1.02:1		Square Cover	EAR99
PE6823 	WR-75	10 - 15	75	1.07:1	5	Square Cover	EAR99
PE6832 	WR-75	10 - 15	175	1.1:1	6	Square Cover	EAR99
PE6815 	WR-90	8.2 - 12.4	2	1.05:1	4	Square Cover	EAR99
PE6806 	WR-90	8.2 - 12.4	2	1.2:1	1	Square Cover UG-135/U	EAR99
PEWTR1006 	WR-90	8.2 - 12.4	4	1.02:1		Square Cover UG-39/U	EAR99
PEWTR1007 	WR-90	8.2 - 12.4	4	1.02:1		CPR-90G	EAR99
PE6824 	WR-90	8.2 - 12.4	90	1.07:1	6	Square Cover	EAR99
PE6833 	WR-90	8.2 - 12.4	200	1.1:1	6	Square Cover	EAR99
PE-W90TR1002 	WR-90	8.2 - 12.5	50	1.25:1	4	Square Cover UG-135/U	EAR99
PE-W90TR1001 	WR-90	9 - 10	2	1.05:1	1	Square Cover UG-135/U	EAR99

Waveguide Terminations Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Input Power (Watts)	Maximum VSWR	Length (in)	Flange Type	ECCN
PE6834 	WR-102	7 - 11	300	1.1:1	7	Square Cover	EAR99
PEWTR1008 	WR-112	7.05 - 10	5	1.02:1		Square Cover UG-51/U	EAR99
PEWTR1009 	WR-112	7.05 - 10	5	1.02:1		CPR-112G	EAR99
PE6835 	WR-112	7.05 - 10	300	1.1:1	7	Square Cover UG-51/U	EAR99
PE-W137TR1001 	WR-137	5.38 - 8.17	500	1.25:1	14	CPR-137F	EAR99
PEWTR1010 	WR-137	5.85 - 8.2	6	1.02:1		Round Cover UG-344/U	EAR99
PEWTR1011A 	WR-137	5.85 - 8.2	6	1.02:1		CPR-137G	EAR99
PE-W159TR1002 	WR-159	4.64 - 7.05	5	1.03:1	8	CPR-159F	EAR99
PE-W159TR1001 	WR-159	4.8 - 5.2	50	1.2:1	4	CPR-159F	EAR99
PE-W187TR1002 	WR-187	3.94 - 5.99	5	1.03:1	9	CPR-187F	EAR99
PE-W187TR1001 	WR-187	4.4 - 5	70	1.1:1	3	CPR-187F	EAR99
PE-W229TR1001 	WR-229	3.22 - 4.9	5	1.03:1	10	CPR-229F	EAR99
PE-W229TR1002 	WR-229	3.22 - 4.9	5	1.2:1	3	CPR-229F	EAR99
PE-W284TR1001 	WR-284	2.6 - 3.95	5	1.03:1	12	CPR-284F	EAR99
PEWRD180TR1000 	WRD-180	18 - 40	0.5	1.15:1		Square Cover UG	EAR99
PEWRD650TR1000 	WRD-650	6.5 - 18	1	1.15:1		Square Cover UG	EAR99

Waveguide Terminations Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Input Power (Watts)	Maximum VSWR	Length (in)	Flange Type	ECCN
PEWRD750TR1000 	WRD-750	7.5 - 18	1	1.15:1		Square Cover UG	EAR99

Waveguide Transitions

PE P/N	Waveguide 1 Type	Flange 1 Type	Waveguide 2 Type	Flange 2 Type	VSWR	ECCN
PE-W10TS12001A 	WR-10	Round Cover UG-387/U-Mod	WR-12	Round Cover UG-387/U	1.6:1	EAR99
PE-W10TS15001 	WR-10	Round Cover UG-387/U-Mod	WR-15	Round Cover UG-385/U	1.45:1	EAR99
PE-W10TS19001 	WR-10	Round Cover UG-387/U-Mod	WR-19	Round Cover UG-383/U-Mod	1.4:1	EAR99
PE-W12TS15001 	WR-12	Round Cover UG-387/U	WR-15	Round Cover UG-385/U	1.2:1	EAR99
PE-W15TS19001 	WR-15	Round Cover UG-385/U	WR-19	Round Cover UG-383/U-Mod	1.1:1	EAR99
PE-W15TS22001 	WR-15	Round Cover UG-385/U	WR-22	Round Cover UG-383/U	1.15:1	EAR99
PE-W19TS22001 	WR-19	Round Cover UG-383/U-Mod	WR-22	Round Cover UG-383/U	1.5:1	EAR99
PE-W19TS28001 	WR-19	Round Cover UG-383/U-Mod	WR-28	Square Cover UG-599/U	1.35:1	EAR99
PE-W22TS28001 	WR-22	Round Cover UG-383/U	WR-28	Square Cover UG-599/U	1.35:1	EAR99
PE-W22TS42001 	WR-22	Round Cover UG-383/U	WR-42	Square Cover UG-595/U	1.35:1	EAR99
PE-W28TS42001 	WR-28	Square Cover UG-599/U	WR-42	Square Cover UG-595/U	1.2:1	EAR99
PE-W28TS51001 	WR-28	Square Cover UG-599/U	WR-51	UBR-180/U-Mod	1.38:1	EAR99
PEWTS1010 	WR-34	Square Cover UG-1530/U	WR-28	Square Cover UG-599/U	1.08:1	EAR99

Waveguide Transitions Continued

PE P/N	Waveguide 1 Type	Flange 1 Type	Waveguide 2 Type	Flange 2 Type	VSWR	ECCN
PEWTS1009 	WR-42	Square Cover UG-595/U	WR-34	Square Cover UG-1530/U	1.08:1	EAR99
PEWTS1007A 	WR-62	Square Cover UG-1665/U	WR-51	Square Cover	1.08:1	EAR99
PEWTS1006 	WR-75	Square Cover	WR-62	Square Cover UG-1665/U	1.08:1	EAR99
PEWTS1004 	WR-90	Square Cover UG-39/U	WR-75	Square Cover	1.08:1	EAR99
PEWTS1005A 	WR-90	CPR-90G	WR-75	Square Cover	1.08:1	EAR99
PEWTS1002 	WR-112	Square Cover UG-51/U	WR-90	Square Cover UG-39/U	1.08:1	EAR99
PEWTS1003 	WR-112	CPR-112G	WR-90	CPR-90G	1.08:1	EAR99
PEWTS1000 	WR-137	Round Cover UG-344/U	WR-112	Square Cover UG-51/U	1.08:1	EAR99
PEWTS1001 	WR-137	CPR-137G	WR-112	CPR-112G	1.08:1	EAR99

Waveguide Twists

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Waveguide Offset Angle (Degrees)	Length (in)	Flange Type	ECCN
PE-W10TW1002 	WR-10	75 - 110	1.1:1	45 Left-hand	1	Round Cover UG-387/U-Mod	EAR99
PE-W10TW1003 	WR-10	75 - 110	1.1:1	45 Right-hand	1	Round Cover UG-387/U-Mod	EAR99
PE-W10TW1001 	WR-10	75 - 110	1.43:1	90	1	Round Cover UG-387/U-Mod	EAR99
PE-W12TW1002 	WR-12	60 - 90	1.16:1	45 Left-hand	1	Round Cover UG-387/U	EAR99
PE-W12TW1003 	WR-12	60 - 90	1.16:1	45 Right-hand	1	Round Cover UG-387/U	EAR99

Waveguide Twists Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Waveguide Offset Angle (Degrees)	Length (in)	Flange Type	ECCN
PEW12TW001 	WR-12	60 - 90		90 Right-hand	1	Round Cover UG-387/U-Mod	EAR99
PE-W12TW1001 	WR-12	60 - 90	1.12:1	90	1	Round Cover UG-387/U	EAR99
PE-W15TW1002 	WR-15	50 - 75	1.11:1	45 Left-hand	2	Round Cover UG-385/U	EAR99
PE-W15TW1003 	WR-15	50 - 75	1.11:1	45 Right-hand	2	Round Cover UG-385/U	EAR99
PE-W15TW1001A 	WR-15	50 - 75	1.11:1	90		Round Cover UG-385/U	EAR99
PE-W19TW1002 	WR-19	40 - 60	1.25:1	45 Left-hand	2	Round Cover UG-383/U-Mod	EAR99
PE-W19TW1003 	WR-19	40 - 60	1.25:1	45 Right-hand	2	Round Cover UG-383/U-Mod	EAR99
PE-W19TW1001 	WR-19	40 - 60	1.22:1	90	2	Round Cover UG-383/U-Mod	EAR99
PE-W22TW1002 	WR-22	33 - 50	1.02:1	45 Left-hand	2	Round Cover UG-383/U	EAR99
PE-W22TW1003 	WR-22	33 - 50	1.02:1	45 Right-hand	2	Round Cover UG-383/U	EAR99
PEW22TW001 	WR-22	33 - 50	1.15:1	90	2	Round Cover UG-383/U	EAR99
PE-W22TW1001 	WR-22	33 - 50	1.02:1	90	2	Round Cover UG-383/U	EAR99
PEW28TW001 	WR-28	26.5 - 40	1.1:1	45 Right-hand	2	Square Cover UG-595/U	EAR99
PE-W28TW1002 	WR-28	26.5 - 40	1.09:1	45 Left-hand	2	Square Cover UG-599/U	EAR99
PE-W28TW1003 	WR-28	26.5 - 40	1.09:1	45 Right-hand	2	Square Cover UG-599/U	EAR99

Waveguide Twists Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Waveguide Offset Angle (Degrees)	Length (in)	Flange Type	ECCN
PE-W28TW1001A 	WR-28	26.5 - 40	1.07:1	90		Square Cover UG-599/U	EAR99
PE-W42TW1002 	WR-42	18 - 26.5	1.25:1	45 Left-hand	3	Square Cover UG-595/U	EAR99
PE-W42TW1003 	WR-42	18 - 26.5	1.25:1	45 Right-hand	3	Square Cover UG-595/U	EAR99
PE-W42TW1001A 	WR-42	18 - 26.5	1.07:1	90		Square Cover UG-595/U	EAR99
PEW8TW0000 	WR-8	90 - 140		45 Right-hand	1	Square Cover UG-387/U-Mod	EAR99
PEW8TW0001 	WR-8	90 - 140		45 Left-hand	1	Square Cover UG-387/U-Mod	EAR99
PEW8TW0002 	WR-8	90 - 140		90 Right-hand	1	Round Cover UG-387/U-Mod	EAR99
PEW6TW0000 	WR-6	110 - 170		45 Right-hand	1	Square Cover UG-387/U-Mod	EAR99
PEW6TW0001 	WR-6	110 - 170		45 Left-hand	1	Square Cover UG-387/U-Mod	EAR99
PEW6TW0002 	WR-6	110 - 170		90 Right-hand	1	Round Cover UG-387/U-Mod	EAR99
PEW5TW0000 	WR-5	140 - 220		45 Right-hand	1	Square Cover UG-387/U-Mod	EAR99
PEW5TW0001 	WR-5	140 - 220		45 Left-hand	1	Square Cover UG-387/U-Mod	EAR99
PEW5TW0002 	WR-5	140 - 220		90 Right-hand	1	Round Cover UG-387/U-Mod	EAR99
PEWRD180TW1001 	WRD-180	18 - 40	1.35:1	90		Square Cover UG	EAR99
PEWRD650TW1001 	WRD-650	6.5 - 18		90		Square Cover UG	EAR99

Waveguide Twists Continued

PE P/N	Waveguide Type	RF Frequency Range (GHz)	Maximum VSWR	Waveguide Offset Angle (Degrees)	Length (in)	Flange Type	ECCN
PEWRD750TW1001 	WRD-750	7.5 - 18	1.25:1	90		Square Cover UG	EAR99

Waveguide Accessories-Gasket Kits

PE P/N	Description
PEWKG1014 	WR-28 Waveguide Electrically Conductive Gasket kit Square Cover, Choke Flange
PEWKG1000 	WR-28 Waveguide Gasket kit Square Cover, Choke Flange, Non-Conductive
PEWKG1015 	WR-42, WR-34 Waveguide Electrically Conductive Gasket kit Square Cover, Choke Flange
PEWKG1001 	WR-42, WR-34 Waveguide Gasket kit Square Cover, Choke Flange, Non-Conductive
PEWKG1016 	WR-51 Waveguide Electrically Conductive Gasket kit Square Cover, Choke Flange
PEWKG1002 	WR-51 Waveguide Gasket kit Square Cover, Choke Flange, Non-Conductive
PEWKG1017 	WR-62 Waveguide Electrically Conductive Gasket kit Square Cover, Choke Flange
PEWKG1003 	WR-62 Waveguide Gasket kit Square Cover, Choke Flange, Non-Conductive
PEWKG1018 	WR-75 Waveguide Electrically Conductive Gasket kit Square Cover, Choke Flange
PEWKG1004 	WR-75 Waveguide Gasket kit Square Cover, Choke Flange, Non-Conductive
PEWKG1019 	WR-90 Waveguide Electrically Conductive Gasket kit Square Cover, Choke Flange
PEWKG1021 	WR-90 Waveguide Electrically Conductive Gasket kit, CPR Flat Flange
PEWKG1020 	WR-90 Waveguide Electrically Conductive Gasket kit, CPR Grooved Flange

Waveguide Accessories-Gasket Kits Continued

PE P/N	Description
PEWGK1005 	WR-90 Waveguide Gasket kit Square Cover, Choke Flange, Non-Conductive
PEWGK1007 	WR-90 Waveguide Gasket kit, CPR90 Flat Flange, Non-Conductive
PEWGK1006 	WR-90 Waveguide Gasket kit, CPR90 Grooved Flange, Non-Conductive
PEWGK1022 	WR-112 Waveguide Electrically Conductive Gasket kit Square Cover, Choke Flange
PEWGK1024 	WR-112 Waveguide Electrically Conductive Gasket kit, CPR Flat Flange
PEWGK1023 	WR-112 Waveguide Electrically Conductive Gasket kit, CPR Grooved Flange
PEWGK1008 	WR-112 Waveguide Gasket kit Square Cover, Choke Flange, Non-Conductive
PEWGK1010 	WR-112 Waveguide Gasket kit, CPR112 Flat Flange, Non-Conductive
PEWGK1009 	WR-112 Waveguide Gasket kit, CPR112 Grooved Flange, Non-Conductive
PEWGK1026 	WR-137 Waveguide Electrically Conductive Gasket kit, CPR Grooved Flange
PEWGK1027 	WR-137 Waveguide Electrically Conductive Gasket kit, CPR Grooved Flange
PEWGK1025 	WR-137 Waveguide Electrically Conductive Gasket kit, Round Cover, Choke Flange
PEWGK1011 	WR-137 Waveguide Gasket kit Round Cover, Choke Flange, Non-Conductive
PEWGK1013 	WR-137 Waveguide Gasket kit, CPR137 Flat Flange, Non-Conductive
PEWGK1012 	WR-137 Waveguide Gasket kit, CPR137 Grooved Flange, Non-Conductive

Waveguide Accessories-Shims

PE P/N	Description
PEW10FS2 	WR-10 Waveguide Shim, UG-Cover Round flange, 2mm Brass
PEW12FS2 	WR-12 Waveguide Shim, UG-Cover Round flange, 2mm Brass
PEW15FS2 	WR-15 Waveguide Shim, UG-Cover Round flange, 2mm Brass
PEW19FS3 	WR-19 Waveguide Shim, UG-Cover Round flange, 3mm Brass
PEW22FS3 	WR-22 Waveguide Shim, UG-Cover Round flange, 3mm Brass
PEW28FS3 	WR-28 Waveguide Shim, UG-Cover Square flange, 3mm Brass
PEW34FS4 	WR-34 Waveguide Shim, UG-Cover Square flange, 4mm Brass
PEW42FS4 	WR-42 Waveguide Shim, UG-Cover Square flange, 4mm Brass
PEW62FS5 	WR-62 Waveguide Shim, UG-Cover Square flange, 5mm Brass
PEW75FS5 	WR-75 Waveguide Shim, UG-Cover Square flange, 5mm Brass
PEW90FS5 	WR-90 Waveguide Shim, UG-Cover Square flange, 5mm Brass
PEW112FS5 	WR-112 Waveguide Shim, UG-Cover Square flange, 5mm Brass
PEW137FS7 	WR-137 Waveguide Shim, CPR-137F flange, 7mm Brass
PEW159FS7 	WR-159 Waveguide Shim, CPR-159F flange, 7mm Aluminum
PEW187FS7 	WR-187 Waveguide Shim, CPR-187F flange, 7mm Aluminum
PEW284FS8 	WR-284 Waveguide Shim, CPR-284F flange, 8mm Aluminum

Waveguide Accessories-Shims Continued

PE P/N	Description
PEW340FS10 	WR-340 Waveguide Shim, CPR-340F flange, 10mm Aluminum
PEW430FS10 	WR-430 Waveguide Shim, CPR-430F flange, 10mm Aluminum

Waveguide Accessories-Shorts

PE P/N	Description
PEW10SP4 	WR-10 Waveguide Short Plate, UG-Cover Round Flange, 4mm Copper
PEW12SP4 	WR-12 Waveguide Short Plate, UG-Cover Round Flange, 4mm Copper
PEW15SP4 	WR-15 Waveguide Short Plate, UG-Cover Round Flange, 4mm Copper
PEW19SP4 	WR-19 Waveguide Short Plate, UG-Cover Round Flange, 4mm Copper
PEW22SP4 	WR-22 Waveguide Short Plate, UG-Cover Round Flange, 4mm Copper
PEW28SP4 	WR-28 Waveguide Short Plate, UG-Cover Square Flange, 5mm Copper
PEW34SP4 	WR-34 Waveguide Short Plate, UG-Cover Square Flange, 4mm Copper
PEW42SP4 	WR-42 Waveguide Short Plate, UG-Cover Square Flange, 4mm Copper
PEW62SP5 	WR-62 Waveguide Short Plate, UG-Cover Square Flange, 5mm Copper
PEW75SP5 	WR-75 Waveguide Short Plate, UG-Cover Square Flange, 5mm Copper
PEW90SP5 	WR-90 Waveguide Short Plate, UG-Cover Square Flange, 5mm Brass
PEW112SP5 	WR-112 Waveguide Short Plate, UG-Cover Square Flange, 5mm Copper

Waveguide Accessories-Shorts Continued

PE P/N	Description
PEW137SP7 	WR-137 Waveguide Short Plate, CPR-137F Flange, 7mm Copper
PEW159SP7 	WR-159 Waveguide Short Plate, CPR-159F Flange, 7mm Aluminum
PEW187SP7 	WR-187 Waveguide Short Plate, CPR-187F Flange, 7mm Aluminum
PEW284SP8 	WR-284 Waveguide Short Plate, CPR-284F Flange, 8mm Aluminum
PEW340SP10 	WR-340 Waveguide Short Plate, CPR-340F Flange, 10mm Aluminum
PEW430SP10 	WR-430 Waveguide Short Plate, CPR-430F Flange, 10mm Aluminum

Waveguide Accessories-Pressure Windows

PE P/N	Description
PEWGP1014 	WR-28 Waveguide Pressure Window, UG-599/U and UG-599/U-Grooved Flanges, Brass
PEWGP1013 	WR-34 Waveguide Pressure Window, UG Cover and UG Grooved Flanges, Brass
PEWGP1012 	WR-42 Waveguide Pressure Window, UG-595/U and UG-595/U-Grooved Flanges, Brass
PEWGP1011 	WR-51 Waveguide Pressure Window, UG Cover and UG Grooved Flanges, Brass
PEWGP1010 	WR-62 Waveguide Pressure Window, UG-419/U and UG-419/U-Grooved Flanges, Brass
PEWGP1009 	WR-75 Waveguide Pressure Window, UG Cover and UG Grooved Flanges, Brass
PEWGP1008 	WR-90 Waveguide Pressure Window, UG-39/U and UG-39/U-Grooved Flanges, Brass
PEWGP1006 	WR-112 Waveguide Pressure Window, CPR112F and CPR112G Flanges, Brass

Waveguide Accessories-Pressure Windows Continued

PE P/N	Description
PEWGP1007 	WR-112 Waveguide Pressure Window, UG-51/U and UG-51/U-Grooved Flanges, Brass
PEWGP1005 	WR-137 Waveguide Pressure Window, CPR137F and CPR137G Flanges, Brass
PEWGP1004 	WR-159 Waveguide Pressure Window, CPR159F and CPR159G Flanges, Aluminum
PEWGP1003 	WR-187 Waveguide Pressure Window, CPR187F and CPR187G Flanges, Aluminum
PEWGP1002 	WR-229 Waveguide Pressure Window, CPR229F and CPR229G Flanges, Aluminum
PEWGP1001 	WR-284 Waveguide Pressure Window, CPR284F and CPR284G Flanges, Aluminum
PEWGP1000 	WR-340 Waveguide Pressure Window, CPR340F and CPR340G Flanges, Aluminum

Waveguide Accessories-Miscellaneous

PE P/N	Description
PEWAM0000 	0.75 inch Diameter Flange, Standard Antenna Mounting Fixture with UG-385/U and UG-387/U Flanges
PEWAM0001 	0.75 inch Square Flange, Standard Antenna Mounting Fixture with UG-599/U Flanges
PEWAM0002 	0.88 inch Square Flange, Standard Antenna Mounting Fixture with UG-595/U and UG-1530/U Flanges
PEWAM0003 	1.125 inch Diameter Flange, Standard Antenna Mounting Fixture with UG-383/U Flanges
PEWGHW9000 	4-40 with 3/32 inch Hex, Stainless Steel Waveguide Flange Screw
PEWGHW1001 	Waveguide Table Jack, Large
PEWGHW1000 	Waveguide Table Jack, Medium

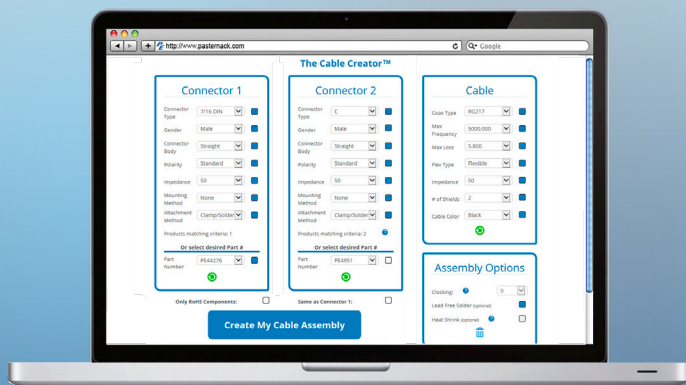
Waveguide Size

EIA WR-(size)	IEC R(size)	Minimum Frequency	Maximum Frequency	Cutoff Frequency TE10 (GHz)	Cutoff Frequency TE20 (GHz)	Inside Dimension "a" (in)	Inside Dimension "b" (in)	Inside Tolerance (±)	Wall Thickness (in)
2300	3	0.32	0.49	0.256	0.51	23	11.5	0.02	0.15
2100	4	0.35	0.53	0.28	0.56	21	10.5	0.02	0.125
1800	5	0.41	0.62	0.32	0.65	18	9	0.02	0.125
1500	6	0.49	0.75	0.39	0.78	15	7.5	0.015	0.125
1150	8	0.64	0.96	0.51	1.02	11.5	5.75	0.015	0.125
975	9	0.75	1.12	0.6	1.21	9.75	4.875	0.01	0.125
770	12	0.96	1.46	0.76	1.53	7.7	3.85	0.01	0.125
650	14	1.12	1.7	0.908	1.82	6.5	3.25	0.01	0.08
510	18	1.45	2.2	1.157	2.31	5.1	2.55	0.01	0.08
430	22	1.7	2.6	1.372	2.74	4.3	2.15	0.008	0.08
340	26	2.2	3.3	1.736	3.47	3.4	1.7	0.005	0.08
284	32	2.6	3.95	2.078	4.15	2.84	1.34	0.005	0.08
229	40	3.3	4.9	2.577	5.15	2.29	1.145	0.005	0.064
187	48	3.95	5.85	3.152	6.3	1.872	0.872	0.005	0.064
159	58	4.9	7.05	3.711	7.42	1.59	0.795	0.004	0.064
137	70	5.85	8.2	4.301	8.6	1.372	0.622	0.004	0.064
112	84	7.05	10	5.259	10.51	1.122	0.497	0.004	0.064
102		7	11	5.785	11.57	1.02	0.51	0.003	0.064
90	100	8.2	12.4	6.557	13.11	0.9	0.4	0.003	0.05
75	120	10	15	7.868	15.73	0.75	0.375	0.003	0.05
62	140	12.4	18	9.486	18.97	0.622	0.311	0.002	0.04
51	180	15	22	11.574	23.14	0.51	0.255	0.002	0.04
42	220	18	26.5	14.047	28.1	0.42	0.17	0.002	0.04
34	260	22	33	17.328	34.71	0.34	0.17	0.002	0.04
28	320	26.5	40	21.08	42.15	0.28	0.14	0.002	0.04
22	400	33	50	26.34	52.69	0.224	0.112	0.001	0.04
19	500	40	60	31.36	62.78	0.188	0.094	0.001	0.04
15	620	50	75	39.86	79.74	0.148	0.074	0.001	0.04
12	740	60	90	48.35	96.74	0.122	0.061	0.0005	0.04
10	900	75	110	59.01	118	0.1	0.05	0.0005	0.04
8	1200	90	140	73.6	147.53	0.08	0.04	0.0003	0.02
7	1400	110	170	90.9	181.5	0.065	0.0325	0.0002	0.02
5	1800	140	220	115.7	231.42	0.051	0.0255	0.0002	0.02
4	2200	172	260	137.243	274.485	0.043	0.0215	0.0002	0.02
3	2600	220	330	173.571	347.143	0.034	0.017	0.0002	0.02

Visit the RF Superstore at pasternack.com

Your Parts are In-Stock and Ready
to Ship!

- ✓ Parameter-based online search for quick and easy product selection
- ✓ Online pricing and inventory for over 40,000 components and assemblies
- ✓ Detailed product datasheets with specifications and CAD drawings
- ✓ One page checkout saves time and streamlines the purchasing process
- ✓ “Engineer Resource Center” with RF calculators, conversion tools, RF-Opedia glossary of terms, technical articles and more
- ✓ Downloadable RF Product Guide
- ✓ Same-day shipping, with no minimum order
- ✓ Payment terms available to qualified businesses



Your Immediate Source for RF Parts and RF Smarts

Since 1972, Pasternack has been satisfying the requirements of engineers around the world by offering the largest in-stock, ready-to-ship selection of RF, microwave, and mmWave components, assemblies and devices, including over 40,000 popular and hard-to-find items across 107 categories of interconnect, passives, actives, antennas, and test and measurement. In addition, our 99.4% in-stock availability allows us to ship your products the same day they're ordered, with no minimum order size requirements.

To ensure you get the support you need when you need it, our product line engineers and experts are on-hand, ready to help troubleshoot your technical issues and deliver the creative solutions you require for your specific project. Pasternack's highly trained sales and service team is also available to assist you 24/7 by phone, email or chat, and an extensive network of international distribution partners ensures you receive the same high level of service and support no matter where you may be.

With Over 45 Years of RF Expertise, It's More Than Parts That Sets Us Apart

Over 250,000 Custom Cable Configurations Available to Ship Same-Day!

- Choose from over 2,030 RF coax connectors
- 123 coaxial cable types, including Twinax
- Choose your desired length (metric or standard)
- Includes high-reliability and low PIM assembly types



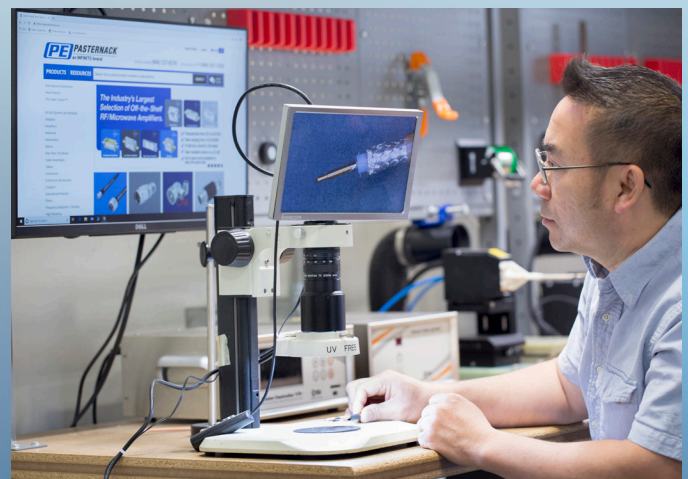
Value-Added Services for Custom Assemblies Include...

- Custom booting/heat shrink
- Special labeling
- Test plots provided for an additional fee
- Custom connector clocking of right angle connectors
- Serialized test data available for high performance test cables



Full-Service Testing Including...

- RF testing to 65 GHz
- PIM testing up to -117 dBm (-160 dBc)
- Phase Matching +/- 2 degrees per GHz
- Hi Pot testing to 5,000 volts DC and 6,000 volts AC





USA & Canada: +1 (866) 727-8376 | International: +1 (949) 261-1920
Secure Online Ordering: pasternack.com | sales@pasternack.com

© 2022 Infinite Electronics, Inc. Pasternack is a registered trademark of Infinite Electronics, Inc.