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Broad Selection of Ready-to-Ship Mixers, Multipliers and Dividers

Our lines of coaxial packaged mixers, multipliers, and dividers cover select frequency bands from DC to 46 GHz, and waveguide converter mixers cover Ka, Q, U, V, E, and W bands up to 110 GHz. These frequency conversion products are most commonly deployed in a variety of applications involving radar, communication systems, and test instrumentation.

Pasternack mixer models are available in double balanced, triple balanced, and IQ designs with LO drive levels ranging from 10 to 19 dBm. Frequency multipliers and dividers cover 0.5 to 46 GHz. Waveguide converter mixers are available in both up and down converter models with DC to 18 GHz IF frequency bands. These frequency conversion products are an essential element in the signal processing system chain, with the key benefit of reducing complexity and cost.





Our comprehensive and growing portfolio of mixers, multipliers, dividers, and waveguide converter mixers are all available from stock. Some models have added features that include field replaceable coaxial connectors, active LO drives, and integrated waveguide ports. All models cover full operational temperature ranges in rugged package designs and several are MIL-SPEC compliant with environmental test conditions for hermeticity and temperature cycle for high-reliability applications.

Frequency Mixers.....	2
Doubled and Tripled Balanced	2
IQ.....	4
Frequency Dividers.....	5
Frequency Multipliers	7



















Frequency Mixers






Doubled and Tripled Balanced

PE P/N	Type	RF Range (GHz)	LO Range (GHz)	IF Range (GHz)	LO Power (dBm)	Conversion Loss (dB)	LO to RF Isolation (dB)	LO to IF Isolation (dB)	P1dB (dBm)	Connector	ECCN
PE86X1013 	Double Balanced	0.5 MHz - 500 MHz	0.5 MHz - 500 MHz	DC - 500 MHz	10	6.8	55	45		SMA	EAR99
PE86X1020 	Double Balanced	1 MHz - 2.7	1 MHz - 2.7	1 MHz - 2	10	7	39	36		SMA	EAR99
PE86X1021 	Double Balanced	1 MHz - 2.7	1 MHz - 2.7	1 MHz - 2	17	7	38	31		SMA	EAR99
PE86X1014 	Double Balanced	5 MHz - 1	5 MHz - 1	DC - 1	7	7	47	45		SMA	EAR99
PE86X1016 	Double Balanced	5 MHz - 1	5 MHz - 1	DC - 1	13	7	39	30		SMA	EAR99
PE86X1018 	Double Balanced	5 MHz - 1.5	5 MHz - 1.5	DC - 1	7	7.5	40	30		SMA	EAR99
PE86X1022 	Double Balanced	5 MHz - 3.5	5 MHz - 3.5	5 MHz - 2.5	13	8	33	28		SMA	EAR99
PE86X1023 	Double Balanced	5 MHz - 4.2	5 MHz - 4.2	5 MHz - 3.5	13	9.8	29	26		SMA	EAR99
PE86X1015 	Double Balanced	10 MHz - 1	10 MHz - 1	DC - 800 MHz	4	7.2	60	33		SMA	EAR99
PE86X1017 	Double Balanced	10 MHz - 1.2	10 MHz - 1.2	DC - 1.2	13	8	45	42		SMA	EAR99
PE86X1019 	Double Balanced	40 MHz - 2.5	40 MHz - 2.5	DC - 1	13	8	37	35		SMA	EAR99
PE86X1024 	Double Balanced	800 MHz - 4.2	800 MHz - 4.2	DC - 800 MHz	13	9	35	18		SMA	EAR99
PE8650 	Double Balanced	2 - 8	2 - 8	DC - 1.5	10	5.5	35	25	4	SMA	EAR99
PE8652 	Double Balanced	2 - 18	2 - 18	DC - 600 MHz	10	6.5	28	25	4	SMA	EAR99





Doubled and Tripled Balanced Continued

PE P/N	Type	RF Range (GHz)	LO Range (GHz)	IF Range (GHz)	LO Power (dBm)	Conversion Loss (dB)	LO to RF Isolation (dB)	LO to IF Isolation (dB)	P1dB (dBm)	Connector	ECCN
PE86X1026 	Double Balanced	2.25 - 18	2.25 - 18	DC - 3	13	11	35	20		SMA	EAR99
PE86X1025 	Double Balanced	2.5 - 6	2.5 - 6	DC - 1.5	17	8.7	28	14		SMA	EAR99
PE86X1027 	Double Balanced	3 - 10	3 - 10	DC - 4	17	9	45	45	15	SMA	EAR99
PE8653 	Double Balanced	5 - 18	5 - 18	DC - 4	10	6.2	35	30	4	SMA	EAR99
PE86X1006 	Double Balanced	5 - 20	5 - 20	DC - 3	20	10	30	17		SMA	EAR99
PE86X1008 	Double Balanced	5 - 20	5 - 20	DC - 3	20	10	30	17		SMA	EAR99
PE86X1007 	Double Balanced	6 - 18	6 - 18	DC - 3	6	7.5	23	20		SMA	EAR99
PE86X1028 	Double Balanced	6 - 26	6 - 26	DC - 8	13	10	37	37	11	SMA	EAR99
PE86X1003 	Double Balanced	7 - 14	7 - 14	DC - 5	13					SMA	EAR99
PE86X1029 	Double Balanced	7 - 34	7 - 34	DC - 8	13	11	35	30	13	2.92mm	EAR99
PE86X1009 	Double Balanced	7 - 43	7 - 43	DC - 10	13	9	35	35		2.92mm	EAR99
PE86X1004 	Double Balanced	11 - 20	11 - 20	DC - 6	13					2.92mm	EAR99
PE86X1030 	Double Balanced	16 - 30	16 - 30	DC - 8	13	9	40	32	13	2.92mm	EAR99
PE86X1000 	Double Balanced	16 - 32	16 - 32	DC - 8	13					2.92mm	EAR99
PE86X1002 	Double Balanced	23 - 37	23 - 37	DC - 13	13	9	35	35		2.92mm	EAR99
PE86X1031 	Double Balanced	24 - 32	24 - 32	DC - 8	13	10.5	38	40	13	2.92mm	EAR99
















Doubled and Tripled Balanced Continued

PE P/N	Type	RF Range (GHz)	LO Range (GHz)	IF Range (GHz)	LO Power (dBm)	Conversion Loss (dB)	LO to RF Isolation (dB)	LO to IF Isolation (dB)	P1dB (dBm)	Connector	ECCN
PE86X1001 	Double Balanced	24 - 38	24 - 38	DC - 8	13	9	35	40		2.92mm	EAR99
PE86X1010 	Double Balanced	24 - 40	24 - 40	DC - 18	13	8	35	28		2.92mm	EAR99
PE8651 	Triple Balanced	2 - 8	2 - 8	100 MHz - 4	10	6.2	26	28	4	SMA	EAR99
PE86X1005 	Triple Balanced	2 - 18	2 - 18	1 - 6	10	7	20	23		SMA	EAR99
PE8654 	Triple Balanced	6 - 18	6 - 18	1.5 - 8	10	7	27	25	4	SMA	EAR99


IQ

PE P/N	Type	RF Range (GHz)	LO Range (GHz)	IF Range (GHz)	LO Power (dBm)	Conversion Loss (dB)	LO to RF Isolation (dB)	LO to IF Isolation (dB)	P1dB (dBm)	Connector	ECCN
PE86X9000 	IQ	4 - 8.5	4 - 8.5	DC - 3.5	15					SMA	EAR99
PE86X9001 	IQ	6 - 10	6 - 10	DC - 3.5	19	7.5	45	25	17	SMA	EAR99
PE86X9002 	IQ	8.5 - 13.5	8.5 - 13.5	DC - 2	19	8	38	25	17	SMA	EAR99
PE86X9003 	IQ	11 - 16	11 - 16	DC - 3.5	19	9	35	25		SMA	EAR99
PE86X9004 	IQ	15 - 23	15 - 23	DC - 3.5	17	8	35	22	15	SMA	EAR99
PE86X9005 	IQ	20 - 31	20 - 31	DC - 4.5	17	10	42	30	17	2.92mm	EAR99
PE86X9006 	IQ	30 - 38	30 - 38	DC - 3.5	17					2.92mm	EAR99









Frequency Dividers

PE P/N	Frequency (GHz)	Divide-By Prescaler	CW Input Power (CW) (dBm)	Max Input Power (CW) (dBm)	Typ Output Power (dBm)	Reserve Leakage (dB)	DC Bias (V/mA)	Connector	ECCN
PE88D3000 	0.1 - 7	3	-12		-1		0.171428571	SMA - SMA	3A001.A.11.B
PE88D25000 	0.1 - 7	5	-12		-1		0.15	SMA - SMA	3A001.A.11.B
PE88D15000 	0.1 - 7	15			-1		0.08	SMA - SMA	3A001.A.11.B
PE88D8003 	0.1 - 12	8			-6		0.171428571	SMA - SMA	3A001.A.11.B
PE88D24000 	0.1 - 12	24			-1		0.085714286	SMA - SMA	3A001.A.11.B
PE88D40000 	0.1 - 12	40			-1		0.08	SMA - SMA	3A001.A.11.B
PE88D1001 	0.1 - 12.5	10			-1		0.064864865	SMA - SMA	3A001.A.11.B
PE88D4003 	0.1 - 13	4			5		0.1	SMA - SMA	3A001.A.11.B
PE88D12000 	0.1 - 13	12			-1		0.064864865	SMA - SMA	3A001.A.11.B
PE88D20000 	0.1 - 13	20			-1		0.061538462	SMA - SMA	3A001.A.11.B
PE88D5001 	0.1 - 15	5			5		0.024390244	SMA - SMA	3A001.A.11.B
PE88D6000 	0.1 - 15	6			5		0.024390244	SMA - SMA	3A001.A.11.B
PE88D7000 	0.1 - 15	7			5		0.024390244	SMA - SMA	3A001.A.11.B
PE88D9000 	0.1 - 15	9			5		0.024390244	SMA - SMA	3A001.A.11.B
PE88D2002 	0.1 - 20	2			5		0.03125	SMA - SMA	3A001.A.11.B

Frequency Dividers continued

PE P/N	Frequency (GHz)	Divide-By Prescaler	CW Input Power (CW) (dBm)	Max Input Power (CW) (dBm)	Typ Output Power (dBm)	Reserve Leakage (dB)	DC Bias (V/mA)	Connector	ECCN
PE88D4002 	0.1 - 20	4			5		0.029411765	SMA - SMA	3A001.A.11.B
PE88D8002 	0.1 - 20	8			5		0.028571429	SMA - SMA	3A001.A.11.B
PE88D1002 	0.2 - 6	10			-2		0.12	SMA - SMA	3A001.A.11.B
PE88D20001 	0.2 - 6	20			2		0.126315789	SMA - SMA	3A001.A.11.B
PE88D16000 	0.4 - 4	16			-1		0.16	SMA - SMA	3A001.A.11.B
PE88D32000 	0.4 - 4	32			0		0.16	SMA - SMA	3A001.A.11.B
PE88D5000 	0.5 - 8	5	-20		-1	58	0.0625	SMA - SMA	3A001.A.11.B
PE88D2001 	0.5 - 18	2	-15		-4		0.141176471	SMA - SMA	3A001.A.11.B
PE88D4000 	0.5 - 18	4	-20		-4	60	0.053763441	SMA - SMA	3A001.A.11.B
PE88D4001 	0.5 - 18	4	-15		-4		0.109090909	SMA - SMA	3A001.A.11.B
PE88D8000 	0.5 - 18	8	-20		-4	55	0.051020408	SMA - SMA	3A001.A.11.B
PE88D8001 	0.5 - 18	8	-15		-4		0.109090909	SMA - SMA	3A001.A.11.B
PE88D1000 	0.5 - 18	10	-20		-1	70	0.032894737	SMA - SMA	3A001.A.11.B

Frequency Multipliers

PE P/N	Type	Input Frequency (GHz)	Output Frequency (GHz)	Input Drive Power (GHz)	Output Power Typ (dBm)	Fundamental Isolation Typ (dBm)	CW Input Power Max (dBm)	DC Bias (V/mA)	Connector	ECCN
PE8600 	Passive	1.5 - 5	3 - 10				13		SMA	EAR99
PE8601 	Passive	2 - 6	4 - 12				13		SMA	EAR99
PE8602 	Passive	4 - 9	8 - 18			25	13		SMA	EAR99
PE8603 	Passive	9 - 13	18 - 26			25	13		SMA	EAR99
PE88X2003 	Active	4 - 10.5	8 - 21	6	14			12/102 -5/5	SMA	EAR99
PE88X2000 	Active	9 - 14.5	18 - 29		16			5	2.92mm	EAR99
PE88X2001 	Active	12 - 16.5	24 - 33		17			5	2.92mm	EAR99
PE88X2002 	Active	16 - 23	32 - 46		13			5	2.92mm	EAR99



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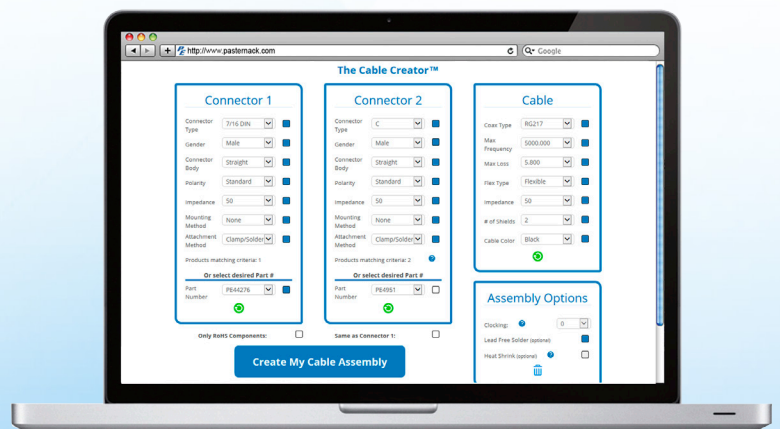
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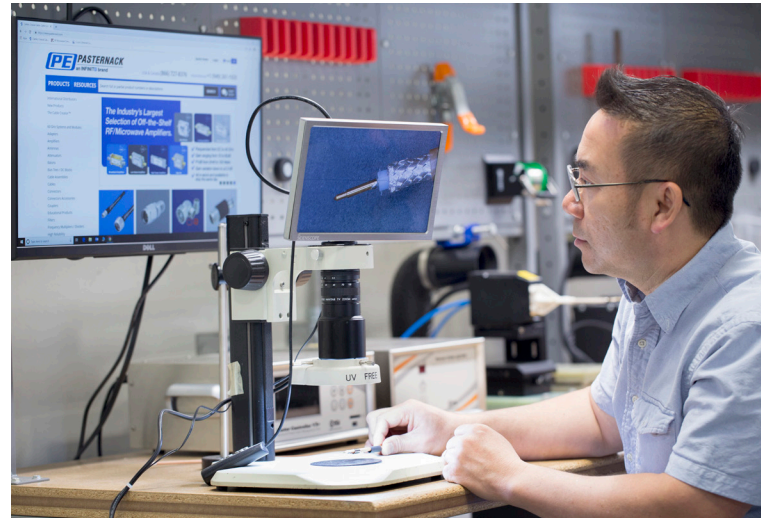
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