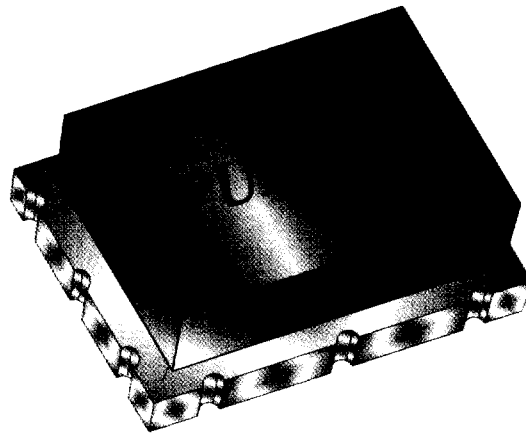
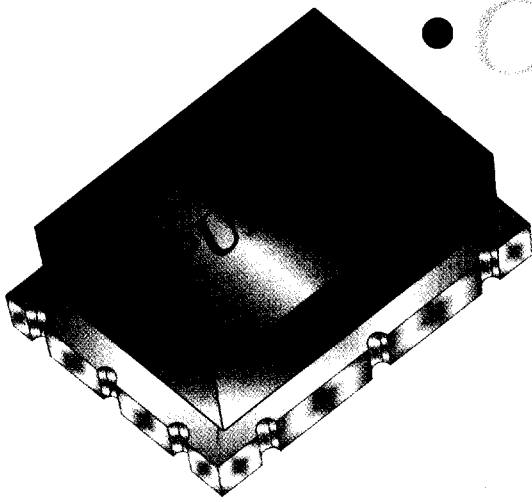


• *Custom Designs*



• *Optimized
Performance*

• *Superior Selection*

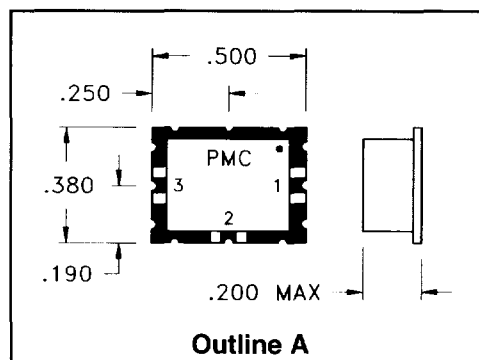
*Pulsar Microwave
Corporation*

PMWVS00003

HIGH INTERCEPT POINT (IP³) TRIPLE BALANCED MIXERS

Pulsar Microwave Corporation features a high performance series of triple balanced mixers. Optimized to cover specific bands (such as Cellular, PCS, LAN), these mixers provide superior IP³ performance. Provide us with your exact frequency ranges and power levels and we will be happy to guarantee an IP³ specification for your application.

These high IP³ mixers are available in our miniature surface mount package Outline A and can be supplied on tape & reel to utilize automated pick & place assembly techniques, making them ideal for large volume applications.



Frequency Range RF (MHz) LO (MHz)		IF (MHz)	LO Power (dBm)	Conv. Loss (dB, max)	IP ³ (dBm) Typ. Min.		Isolation LO/RF LO/IF (dB, min)		P/N
1850-1910	1780-1840	70 ± 2	+10	8.0	+21	+19	25	25	PL-20-A
1850-1910	1780-1840	70 ± 2	+17	8.0	+30	+28	27	25	PM-20-A
1850-1910	1780-1840	70 ± 2	+23	8.3	+35	+33	30	30	PH-20-A
870-970	800-900	70 ± 2	+17	7.2	+31	+28	35	30	PM-21-A
870-970	800-900	70 ± 2	+23	7.0	+35	+33	30	26	PH-21-A
1850-1910	1780-1840	240 ± 5	+17	8.5	+30	+27	26	25	PM-22-A
2370-2470	2300-2400	70 ± 2	+23	9.0	+32	+30	30	30	PH-23-A
1-3500	1-3500	1-2000	+10	8.5	+15	+12	25	20	XL-06-A
1-3500	1-3500	1-2000	+17	8.5	+26	+23	25	20	XM-06-A

AC COUPLED I.F.

Frequency Range LO/RF (MHz) IF (MHz)		LO Drive (dBm)	Conversion Loss (dB) max.	1 dB Comp. Pt. (dBm) typ.	Isolation L/R (dB) min. L/I (dB) min.		P/N
0.05-250	0.05-250	+10	7.0	+5	40	30	X1L-01-*
500-1500	50-500	+10	7.5	+5	30	30	X1L-04-*
20-2500	20-600	+7	9.5	+1	25	20	X1L-08-*
1-2500	1-1000	+10	8.5	+5	25	20	X1L-09-*
5-3000	5-2000	+10	8.5	+5	25	25	X1L-10-*
5-4200	5-2000	+10	10.0	+5	20	25	X1L-11-*
0.05-250	0.05-250	+13	7.0	+7	40	30	X1T-01-*
500-1500	50-500	+13	7.5	+7	30	30	X1T-04-*
20-2500	20-600	+13	9.5	+7	25	20	X1T-08-*
1-2500	1-1000	+13	8.5	+7	25	20	X1T-09-*
5-3000	5-2000	+13	8.5	+7	25	25	X1T-10-*
5-4200	5-2000	+13	10.0	+7	20	25	X1T-11-*
0.05-250	0.05-250	+17	7.0	+7	40	30	X1M-01-*
500-1500	50-500	+17	7.5	+7	30	30	X1M-04-*
20-2500	20-600	+17	9.5	+7	25	20	X1M-08-*
1-2500	1-1000	+17	8.5	+7	25	20	X1M-09-*
5-3000	5-2000	+17	8.5	+7	25	25	X1M-10-*
5-4200	5-2000	+17	10.0	+7	20	25	X1M-11-*

Pulsar Microwave Corporation

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Frequency Range LO/RF (MHz) IF (MHz)		LO Drive (dBm)	Conversion Loss (dB) max.	1 dB Comp. Pt. (dBm) typ.	Isolation L/R (dB) min. L/I (dB) min.		P/N
0.05-250	0.05-250	+23	7.0	+16	40	30	X1H-01-*
500-1500	50-500	+23	7.5	+16	30	30	X1H-04-*
20-2500	20-600	+23	9.5	+16	25	20	X1H-08-*
1-2500	1-1000	+23	8.5	+16	25	20	X1H-09-*
5-3000	5-2000	+23	8.5	+16	25	25	X1H-10-*
5-4200	5-2000	+23	10.0	+16	20	25	X1H-11-*
0.05-250	0.05-250	+27	7.0	+20	40	30	X1V-01-*
500-1500	50-500	+27	7.5	+20	30	30	X1V-04-*
20-2500	20-600	+27	9.5	+20	25	20	X1V-08-*
1-2500	1-1000	+27	8.5	+20	25	20	X1V-09-*
5-3000	5-2000	+27	8.5	+20	25	25	X1V-10-*
5-4200	5-2000	+27	10.0	+20	20	25	X1V-11-*

* Available in outline # A, D, 101, 103, 104, 108 & 301

* Available in outline # 411 & 414 - SMA female connectors are standard, no suffix required
Outline # 411 is available with BNC, TNC & N connectors - Specify by adding B, T or N suffix to P/N

DC COUPLED I.F.

Frequency Range LO/RF (MHz) IF (1) (MHz)		LO Drive (dBm)	Conversion Loss (dB) max.	1 dB Comp. Pt. (dBm) typ.	Isolation L/R (dB) min. L/I (dB) min.		P/N
0.1-500	DC-500	+7	7.5	+1	30 (25*)	20	X2L-03-**
1-1000	DC-1000	+7	8.0	+1	25 (20*)	20	X2L-06-**
800-1000	DC-200	+7	7.5	+1	25 (20*)	20	X2L-07-**
10-1500	DC-1000	+7	8.5	+1	25 (20*)	20	X2L-08-**
800-2500	DC-400	+7	8.0	+1	20	15	X2L-09-*
0.1-500	DC-500	+17	7.5	+10	30 (25*)	20	X2M-03-**
1-1000	DC-1000	+17	8.0	+10	25 (23*)	20	X2M-06-**
800-1000	DC-200	+17	7.5	+10	25 (23*)	20	X2M-07-**
10-1500	DC-1000	+17	8.5	+10	25 (20*)	20	X2M-08-**
800-2500	DC-400	+17	8.0	+10	20	15	X2M-09-*
0.1-500	DC-500	+23	7.5	+17	30 (25*)	20	X2H-03-**
1-1000	DC-1000	+23	8.0	+17	25 (23*)	20	X2H-06-**
800-1000	DC-200	+23	7.5	+17	25 (23*)	20	X2H-07-**
10-1500	DC-1000	+23	8.5	+17	25 (20*)	20	X2H-08-**
800-2500	DC-400	+23	8.0	+17	20	15	X2H-09-*

+ LO/RF isolation is less when supplied in surface mount package

* Available in outline # 101 (models above 1500 MHz - Pin 4 is grounded)

* Available in outline # 411 & 414 - SMA female connectors are standard, no suffix required

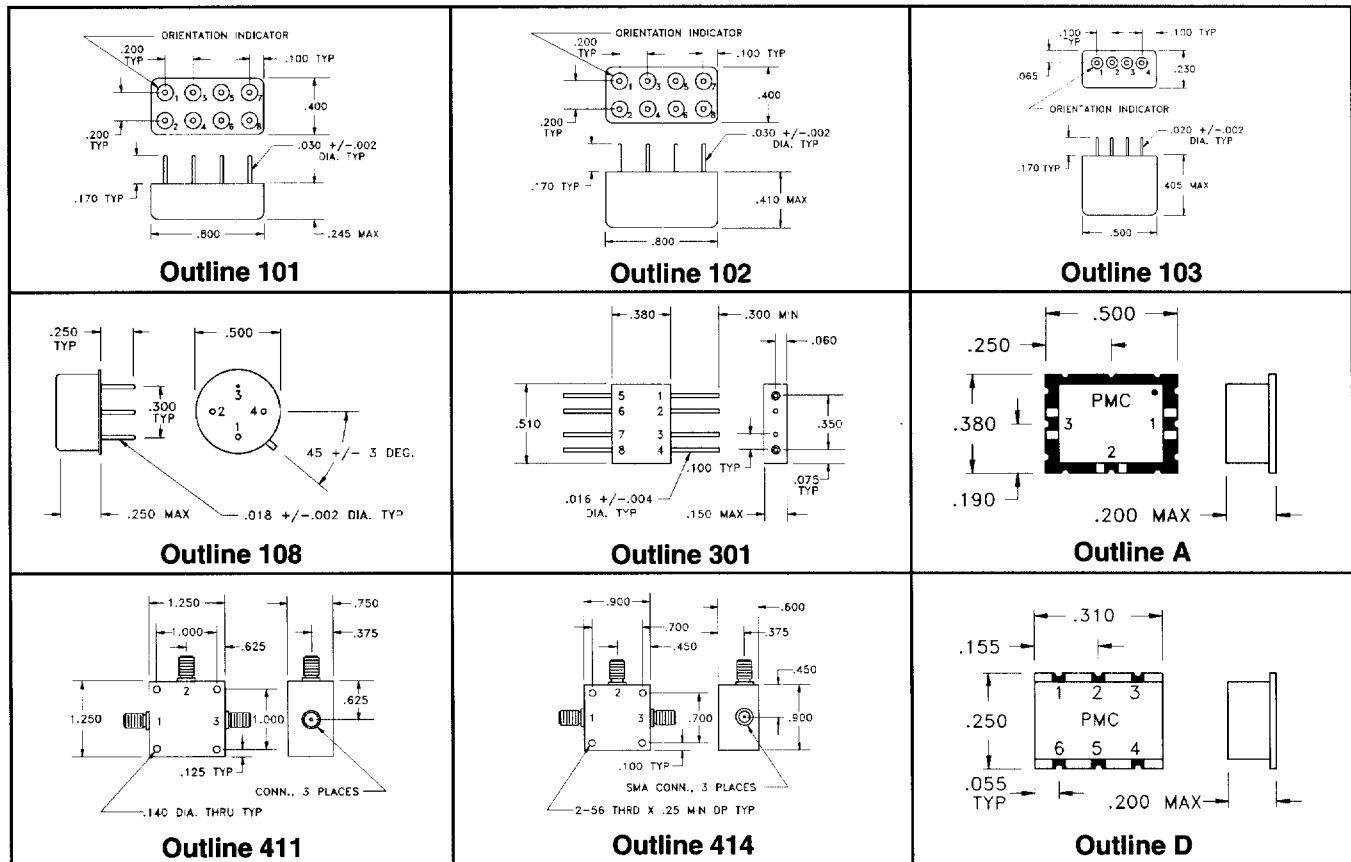
** Available in outline # 101, (models above 1500 MHz - Pin 4 is grounded), 103, 108 & 301

** Available in outline # 411 & 414 - SMA female connectors are standard, no suffix required

Outline # 411 is available with BNC, TNC & N connectors - Specify by adding B, T or N suffix to P/N

Notes: (1) Polarity is negative for DC coupled mixers.

OUTLINE PACKAGES



AC Coupled Port Configuration				
Outline	RF	LO	IF	Ground
A	1	3	2	4 Corners
D	4	1	5	2,3,6
101	1	8	3	2,5-7
103	1	4	2	3
104	1	8	3	2,5-7
108	4	2	1	3
301	1	4	5	2,3,6-8
411	1	3	2	Housing
414	1	3	2	Housing

DC Coupled Port Configuration				
Outline	RF	LO	IF	Ground
A	1	3	2	4 Corners
D	4	1	5	2,3,6
101	1	8	3,4	2,5-7
103	1	8	3,4	2,5-7
104	1	4	2	3
108	4	2	1	3
301	1	4	5	2,3,6-8
411	1	3	2	Housing
414	1	3	2	Housing

PULSAR MICROWAVE CORPORATION also offers a complete line of . . .

- Mixers (Including High IP³ Mixers)
- Bias Tees
- 90° & 180° Hybrids
- RF Transformers
- Power Dividers
- Modulators/Demodulators
- Phase Shifters
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- Couplers
- Image Reject Mixers
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. . . Covering bands from DC to 18 GHz.

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