

# I & Q MODULATORS

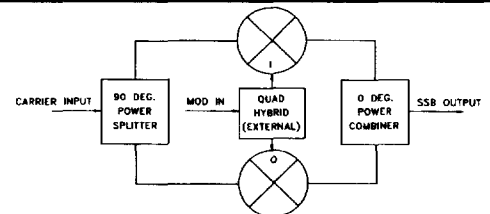
## SINGLE SIDEBAND MODULATORS

Carrier Frequency (MHz) +10 dBm	Modulation Frequency (MHz) -10 dBm	Carrier Power (dBm) nom.	Conversion Loss (dB) max.	1 dB Comp. Pt. (dBm) min.	Sideband Suppression (dBc) min.	Carrier Suppression (dBc) min.	P/N
10.2-11.3	DC-5	+10	7.5	0	30	30	IM-01-*
20.3-22.4	DC-10	+10	7.5	0	30	30	IM-02-*
28.5-31.5	DC-10	+10	7.5	0	30	30	IM-03-*
57.0-63.0	DC-20	+10	7.5	0	30	30	IM-04-*
66.5-73.5	DC-20	+10	7.5	0	30	30	IM-05-*
95.0-105	DC-50	+10	7.5	0	30	30	IM-06-*
100-120	DC-50	+10	7.5	0	20	30	IM-110-E
133-147	DC-50	+10	8.0	0	30	30	IM-07-*
190-210	DC-100	+10	8.0	0	30	30	IM-08-*
228-252	DC-50	+10	8.0	0	20	30	IM-240-E
285-315	DC-100	+10	8.0	0	30	30	IM-09-*
380-420	DC-100	+10	8.0	0	30	30	IM-10-*
810-830	DC-100	+10	9.0	0	30	30	IM-11-*
865-900	DC-100	+10	9.0	0	30	30	IM-12-*
935-960	DC-100	+10	9.0	0	30	30	IM-13-*
1425-1575	DC-100	+10	10.0	0	25	25	IM-14-*
1710-1735	DC-100	+10	10.0	0	25	25	IM-15-*
1805-1880	DC-100	+10	10.0	0	25	25	IM-16-*
10-20	DC-5	+10	8.0	0	25	25	IMO-01-**
20-40	DC-10	+10	8.0	0	25	25	IMO-02-**
40-80	DC-30	+10	8.0	0	25	25	IMO-03-**
60-120	DC-50	+10	8.5	0	25	25	IMO-04-**
100-190	DC-50	+10	8.5	0	25	25	IMO-05-**
150-280	DC-100	+10	8.5	0	25	25	IMO-06-**
200-370	DC-100	+10	9.0	0	25	25	IMO-07-**
300-550	DC-100	+10	9.0	0	25	25	IMO-08-**
10-50	DC-5	+10	8.0	0	25	25	IMO-09-***
30-150	DC-10	+10	8.0	0	25	25	IMO-10-***
50-250	DC-30	+10	9.0	0	25	25	IMO-11-***
2000-4000	DC-500	+10	9.0	0	18	15	IMOH-01-458
3000-8000	DC-500	+10	9.0	0	18	15	IMOH-02-458
4000-8000	DC-500	+10	9.0	0	18	15	IMOH-03-458

Modulators/  
Demodulators

- \* Available in outline # 102, 105, 302, 412, & E
- \*\* Available in outline # 105 & 302, 412, & F
- \*\*\* Available in outline # 412

SMA female connectors standard on outline #412, refer to page 98 for more information.

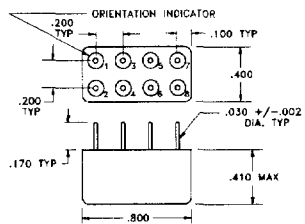


Notes: Single Sideband Modulators do not include baseband quadrature hybrids.

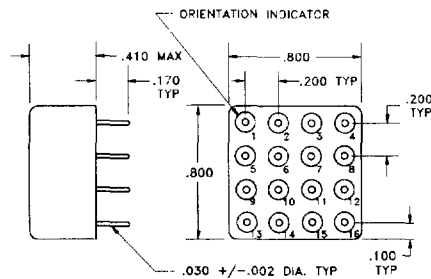
Lower Sideband is suppressed when modulation frequency Q is + 90° relative to modulation frequency I.

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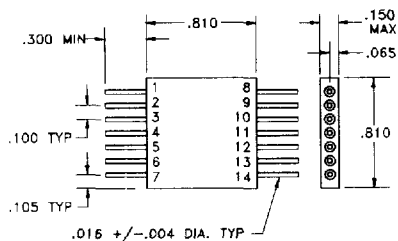
## SINGLE SIDEBAND MODULATORS



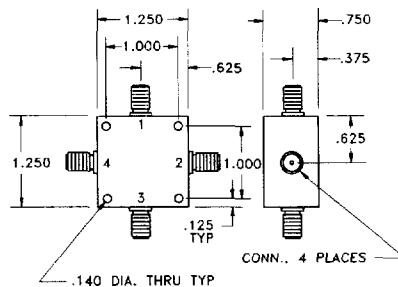
**Outline 102**



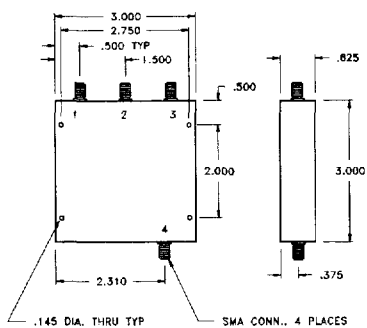
**Outline 105**



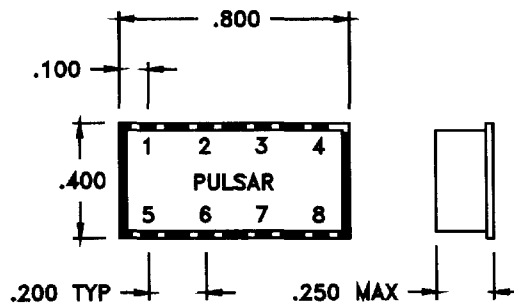
**Outline 302**



**Outline 412**

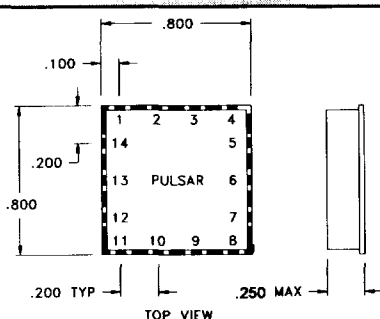


**Outline 458**



**Outline E**

Modulators/  
Demodulators



**Outline F**

### Port Configuration

Outline	Carrier	Mod. I	Mod. Q	RF Out	Ground
102	8	3	4	1	2,5,6,7
105	16	13	4	1	2,3,5-12,14,15
302	1	12	5	14	2-4,6-11,13
412	1	2	4	3	Housing
458	4	1	3	2	Housing
E	5	3	7	4	1, 2, 6, 8
F	12	9	3	6	All Others