

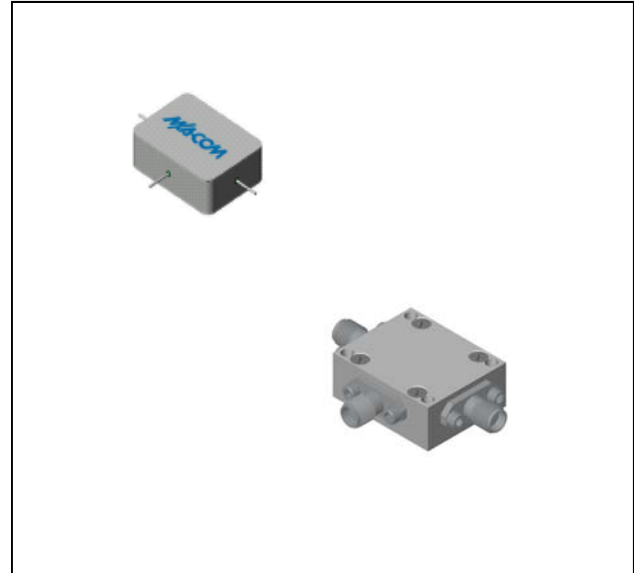
Features

- LO 2.0 TO 26.0 GHz
- RF 2.0 TO 26.0 GHz
- IF 1.0 TO 15.0 GHz
- LO DRIVE +10 dBm (nominal)
- HIGH COMPRESSION POINT
- VERY WIDE BANDWIDTH

Description

The M50 is a triple balanced mixer, designed for use in military, commercial and test equipment applications. The design utilizes Schottky ring quad diodes and broadband soft dielectric baluns to attain excellent performance. The use of high temperature solder and welded assembly processes used internally makes it ideal for use in manual, semi-automated assembly. Environmental screening available to MIL-STD-883, MIL-STD-202 or MIL-DTL-28837, consult factory.

Product Image



Ordering Information

| Part Number | Package |
|-------------|-------------------|
| M50 | Minpac |
| M50C | SMA Connectorized |

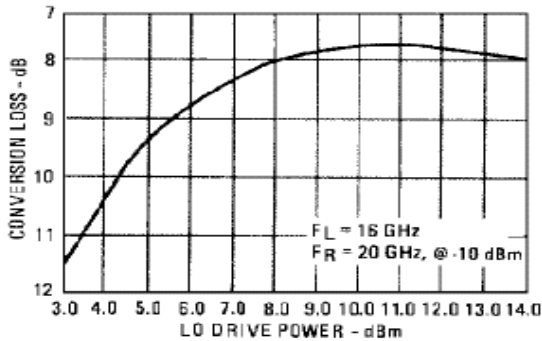
Electrical Specifications: $Z_0 = 50\Omega$ $L_o = +10$ dBm (Downconverter application only)

| Parameter | Test Conditions | Units | Typical | Guaranteed | |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------|------------|-----------------|
| | | | | +25°C | -54° to +85°C * |
| SSB Conversion Loss (max) & SSB Noise Figure (max) | fR = 2.5 to 18 GHz, fL = 2 to 18 GHz, fI = 2 to 10 GHz fR = 2 to 18 GHz, fL = 2 to 26 GHz, fI = 2 to 12 GHz fR = 2 to 26 GHz, fL = 2 to 26 GHz, fI = 2 to 15 GHz | dB | 7.5 | 9.5 | 10.0 |
| | | | dB | 8.0 | 11.0 |
| | | | dB | 9.0 | 12.0 |
| Isolation, L to R (min) | fL = 2 to 3 GHz fL = 3 to 26 GHz | dB | 30 | 15 | 13 |
| | | | dB | 22 | 18 |
| Isolation, L to I (min) | fL = 2 to 7 GHz fL = 7 to 26 GHz | dB | 30 | 15 | 13 |
| | | | dB | 22 | 20 |
| 1 dB Conversion Comp. | fL @ +10 dBm | dBm | +5 | | |
| Input IP3 | fR1 = 5 GHz @ -6 dBm, fR2 = 5.01 GHz @ -6 dBm, fL = 8 GHz @ 10 dBm fR1 = 25 GHz @ -6 dBm, fR2 = 25.01 GHz @ -6 dBm, fL = 15 GHz @ 10 dBm | dBm | +15 | | |
| | | | dBm | +15 | |

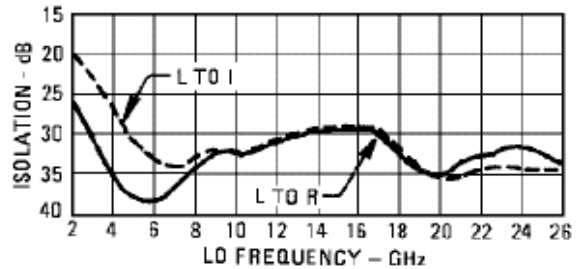
* The M50C specification limits apply at 0°C to +50°C.

Typical Performance Curves

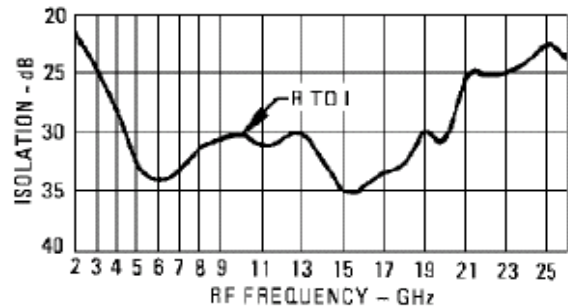
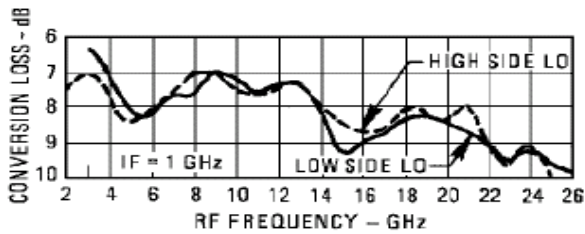
Conversion Loss vs. LO Drive Level



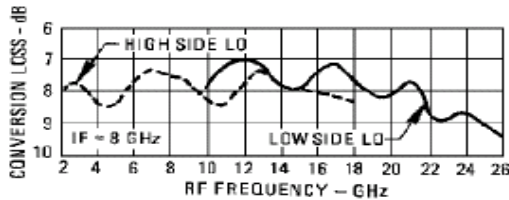
Isolation vs. Frequency



Conversion Loss vs. Frequency



Conversion Loss vs. Frequency



L-Port VSWR

