

Low Cost High IP3 Mixer for **PCS/WLL Applications**

Rev. V3

Features

- LO & RF 10 TO 2800 MHz
- IF 10 TO 2000 MHz
- LO DRIVE +13 dBm (NOMINAL)
- SURFACE MOUNT
- HIGH INTERCEPT +22 dBm (TYP.)
- +260°C REFLOW COMPATIBLE

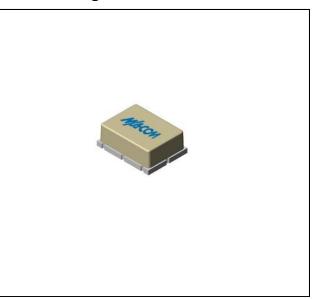
Description

The CSM2-13 is a double balanced mixer, designed for use in the high volume wireless applications. The design utilizes Schottky ring quad diodes and broadband baluns to attain excellent performance.

Ordering Information

| Part Number | Package |
|-------------|---------------|
| CSM2-13 | Surface Mount |

Product Image



Electrical Specifications: $Z_0 = 50\Omega$ Lo = +13 dBm (Downconverter application only)

| Davamatas | Tot Conditions | | Typical | Guaranteed | |
|-----------------------------|--|------------|--------------------------------|-------------|---------------|
| Parameter Test Conditions | | Units | | +25°C | -40° to +85°C |
| SSB Conversion Loss(max) | fR = 10 to 1200 MHz, fL = 10 to 1200 MHz, fI = 10 to 1000 MHz fR = 1200 to 2800 MHz, fL = 1200 to 2800 MHz, fi = 10 to 2000 MHz | dB dB | 7.5 9.0 | 8.0 10.0 | 8.5 10.5 |
| SSB Noise Figure | | dB | Within 1 dB of conversion loss | | |
| L - R Isolation (min) | fL = 10 to 1200 MHz fL = 1200 to 2800 MHz | dB dB | 35 30 | 32 28 | 30 26 |
| L - I Isolation (min) | fL = 10 to 2800 MHz | dB | 25 | 23 | 21 |
| R - I Isolation (min) | fR = 10 to 2800 MHz | dB | 21 | | |
| 1 dB Conversion Comp. | fL = +13 dBm | dBm | +10 | | |
| Input IP3 | $\label{eq:fl} \begin{array}{l} {\rm fL} = 10 \ {\rm to} \ 2000 \ {\rm MHz}, \ {\rm fl} = 10 \ {\rm to} \ 1000 \ {\rm MHz}, \ {\rm fR} = 10 \ {\rm to} \ 2000 \ {\rm MHz} \\ {\rm fL} = 2000 \ {\rm to} \ 2800 \ {\rm MHz}, \ {\rm fl} = 10 \ {\rm to} \ 2000 \ {\rm MHz}, \ {\rm fR} = 2000 \ {\rm to} \ 2800 \ {\rm MHz} \\ \end{array}$ | dBm dBm | +22 +20 | | |
| R-Port VSWR | fR = 10 to 2800 MHz | | 1.7:1 | | |
| L-Port VSWR | fL =10 to 2000 MHz fL = 2000 to 2800 MHz | | 2.0:1 2.5:1 | | |
| I-Port VSWR | fl = 10 to 2000 MHz | | 1.8:1 | | |

Commitment to produce in volume is not guaranteed.

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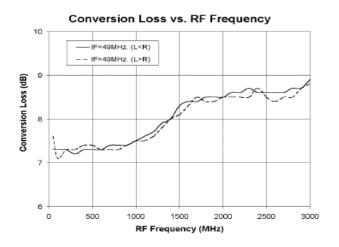
[•] India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588 Visit www.macomtech.com for additional data sheets and product information.

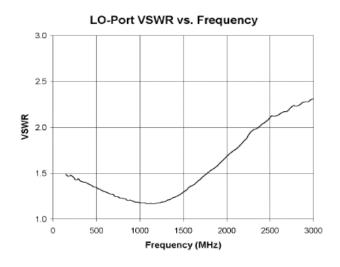


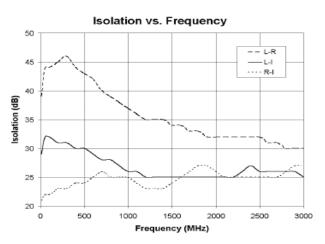
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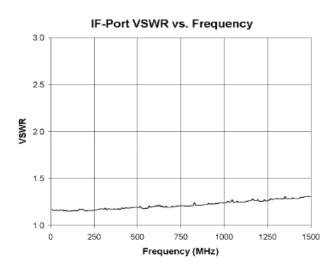
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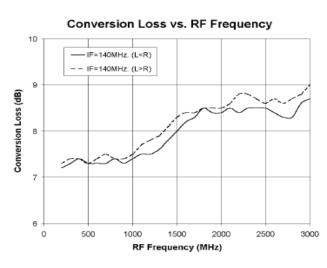
Typical Performance Curves

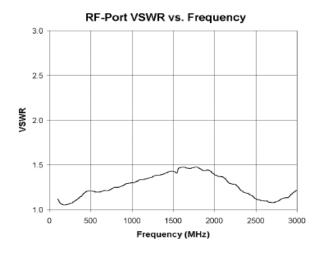












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PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology
Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available.

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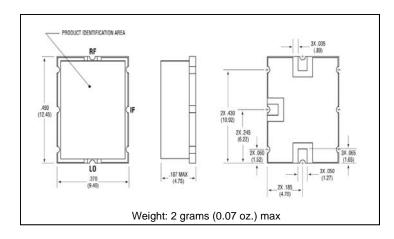
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Outline Drawing: Surface Mount *



* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

Absolute Maximum Ratings

| Parameter | Absolute Maximum | | |
|-----------------------|--|--|--|
| Operating Temperature | -54°C to +85°C | | |
| Storage Temperature | -65°C to +100°C | | |
| Peak Input Power | +20 dBm max @ -25°C +17 dBm max @ +85°C | | |
| Peak Input Current | 50 mA DC | | |

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