

# Magnum Microwave Double Balanced Mixer

Communications Band, Miniature Surface Mount

RF 10.9–12.8 GHz  
LO 11.8–14.0 GHz  
IF DC–2000 MHz

## Electrical Specifications<sup>(1)</sup>:

| Parameter                              | Conditions |           |          | Specifications |                                  |                            |
|--|------------|-----------|----------|----------------|----------------------------------|----------------------------|
|  | RF (GHz)   | LO (GHz)  | IF (MHz) | Min.           | Typ.                             | Max. (Model)               |
| SSB Conversion Loss: <sup>(2)(3)</sup> | 10.9–12.8  | 11.8–14.0 | DC–1300  |                | 5.5 dB                           | 6.5 dB                     |
|  | 10.9–12.8  | 11.8–14.0 | DC–2000  |                | 6.7 dB                           | 8.0 dB                     |
| Isolations                             |            |           |          | 33 dB          | 41 dB                            |                            |
|  | LO to RF:  | 11.8–14.0 |          |                |                                  |                            |
| LO to IF:                              |            | 11.8–14.0 |          | 42 dB          |                                  |                            |
| RF to IF:                              | 10.9–12.8  |           |          | 30 dB          |                                  |                            |
| Input 1-dB Compression Point:          | 10.9–12.8  | 11.8–14.0 | DC–2000  |                | + 1 dBm<br>+ 4 dBm<br>+ 8 dBm    | (MC63)<br>(MC64)<br>(MC66) |
| Input Third Order Intercept Point:     | 10.9–12.8  | 11.8–14.0 | DC–2000  |                | + 11 dBm<br>+ 14 dBm<br>+ 18 dBm | (MC63)<br>(MC64)<br>(MC66) |
| LO Power: <sup>(4)</sup>               | 10.9–12.8  | 11.8–14.0 | DC–2000  |                | + 7 dBm<br>+ 10 dBm<br>+ 13 dBm  | (MC63)<br>(MC64)<br>(MC66) |

## MC6XSMX-3 MC6XSMX-14

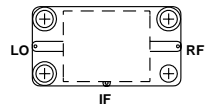
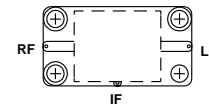
LO Power

3 = +7 dBm  
4 = +10 dBm  
6 = +13 dBm

D = No cover  
H = With cover

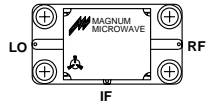
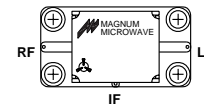
Outline (-3)<sup>(5)</sup>  
D: SMMC4A

Outline (-14)<sup>(5)</sup>  
D: SMMC4B



H: SMMT4A

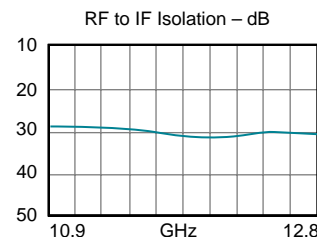
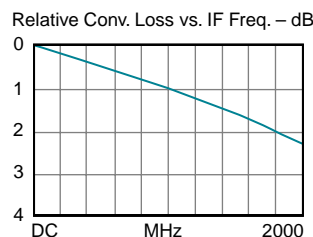
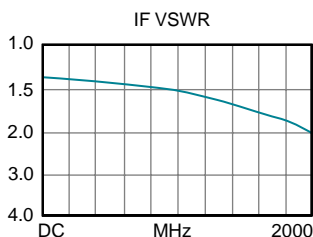
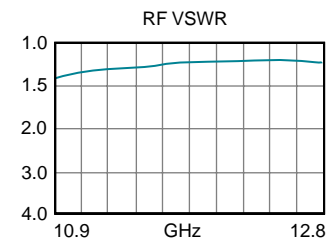
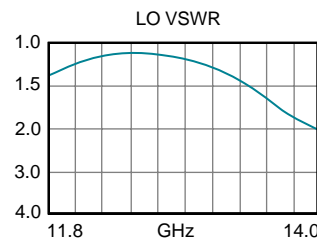
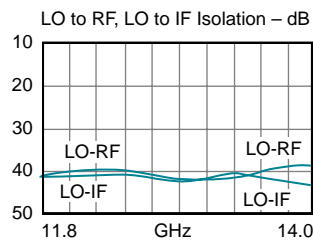
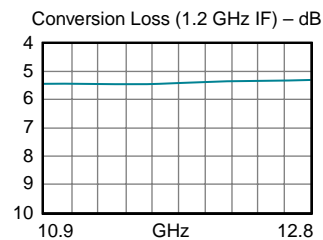
H: SMMT4B



### Notes:

- Specifications are guaranteed when tested as a downconverter in a 50 Ohm system at +25°C with the nominal LO power. Specifications indicated as typical are not guaranteed.
- Noise figure is typically within ±0.5 dB of conversion loss for IF frequencies greater than 10 MHz.
- Conversion loss typically degrades less than 0.5 dB at +100°C and improves less than 0.5 dB at -55°C.
- Usable LO drives are up to 2 dB below and 3 dB above nominal.
- See Application Note M112, for aid in selecting the outline and for mounting and installation information.

## Typical Performance at 25°C



Specifications subject to change without notice

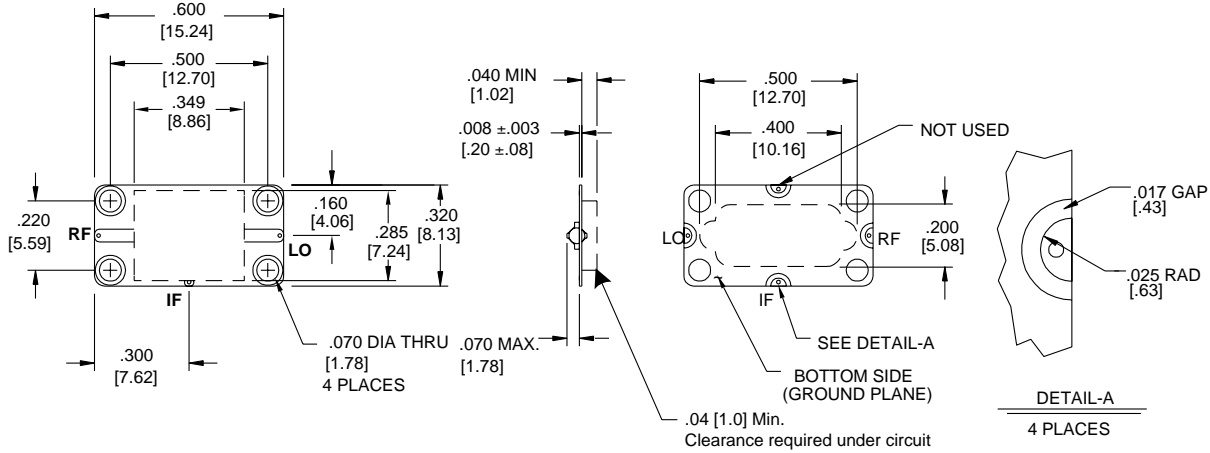
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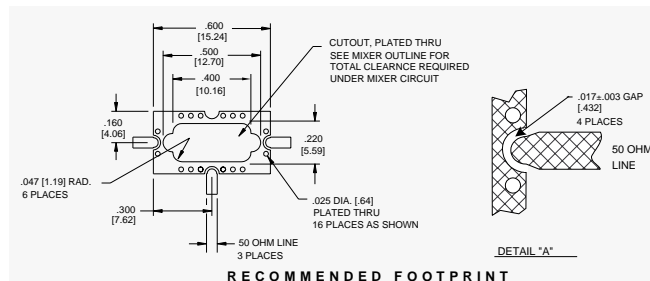
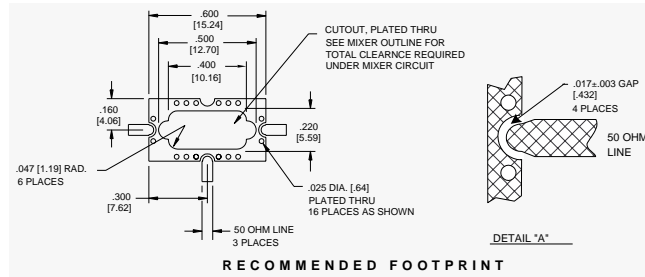
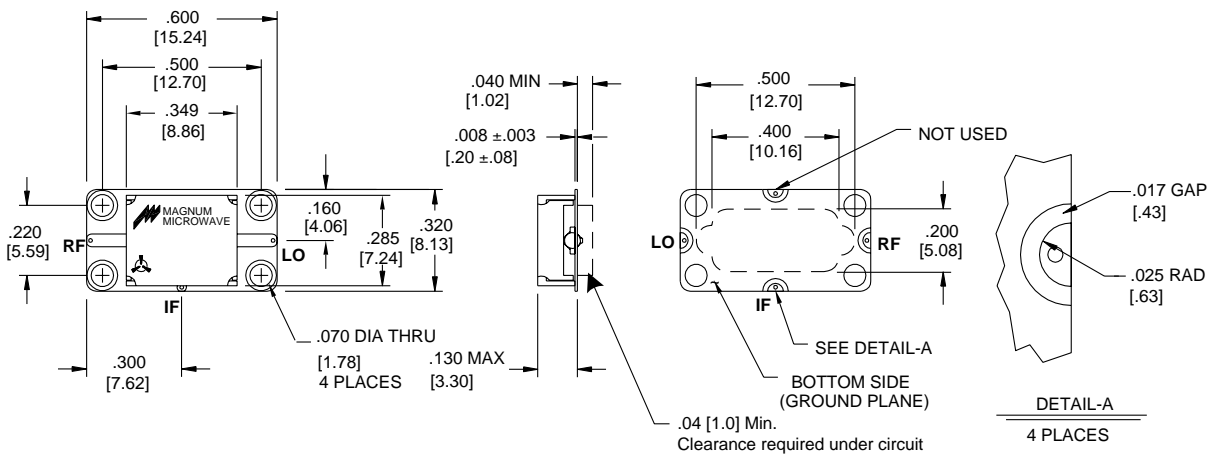
RF 10.9-12.8 GHz  
LO 11.8-14.0 GHz  
IF DC-2000 MHz

## MC6XSMX-3 MC6XSMX-14

Outline (-3)<sup>(5)</sup>  
D: SMMC4A



H: SMMT4A



Specifications subject to change without notice

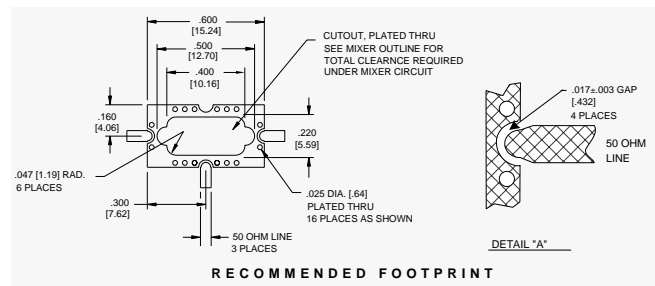
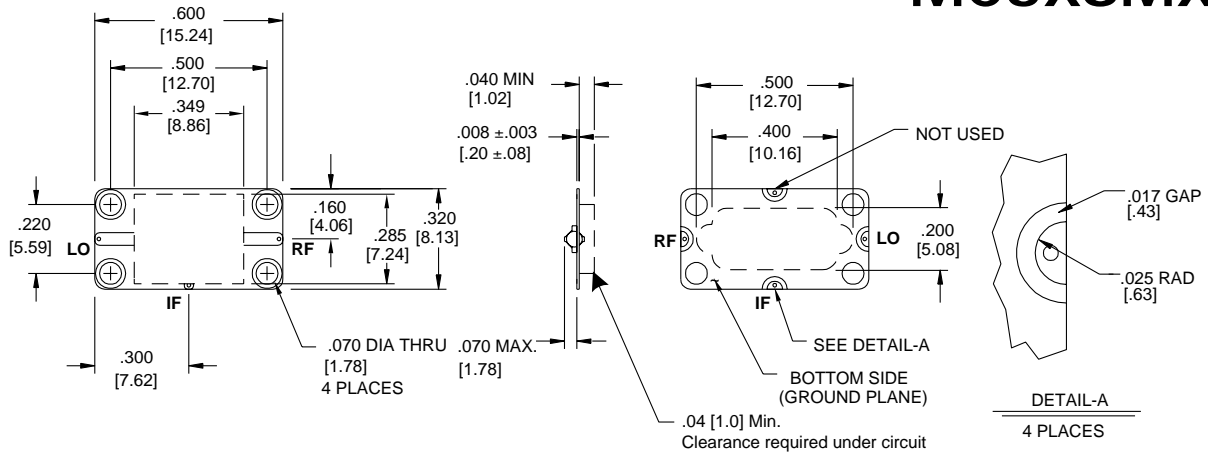
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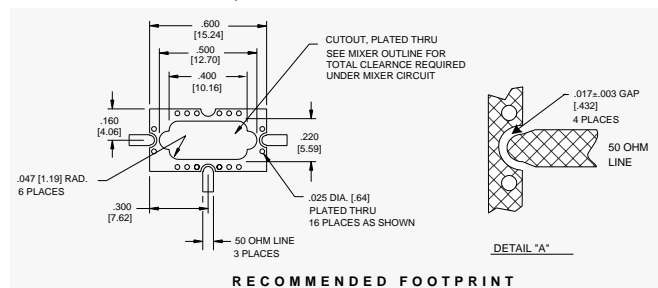
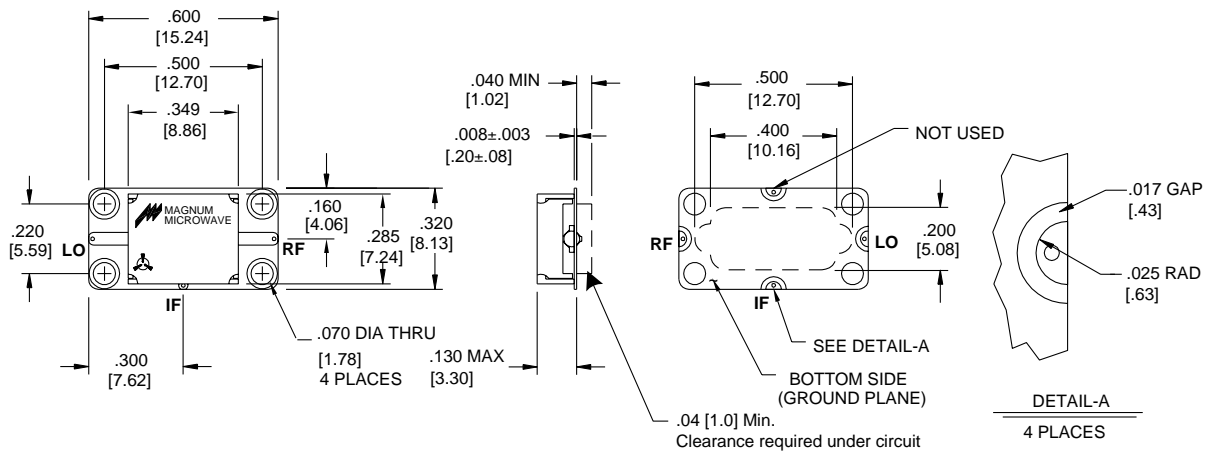
RF 10.9-12.8 GHz  
LO 11.8-14.0 GHz  
IF DC-2000 MHz

Outline (-14)<sup>(5)</sup>  
D: SMMC4B

## MC6XSMX-3 MC6XSMX-14



H: SMMT4B



Specifications subject to change without notice

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