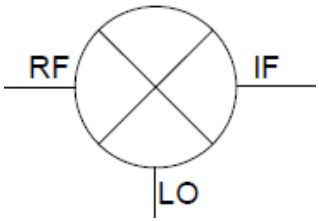
Super Wide Band Double Balanced Glass Mixer
ED2-0024



OVERVIEW: ED2-0024 is a double balanced passive 2.5 mm by 2.5 mm glass package mixer technology. The ED2-0024 mixer can be used as an upconverter or downconverter for LO and RF frequencies from 20 GHz to 65 GHz and covers IF bandwidths from DC-20GHz. The mixer provides excellent LO to RF and LO to IF isolation. The mixer is ideal for use in wideband millimeter wave systems for communications, defense and test and measurement applications. All technical data based on Mini-Circuits Die MDB-653H-D+

APPLICATIONS:

- Test & Measurement
- 5G mmWave and Back Haul Radio
- Satellite Communications
- Radar, EW and ECM Defense Systems

PRIMARY DIFFERENTIATORS:

- Wideband RF and LO, 20 to 65 GHz
- Wideband IF , DC to 20 GHz
- High L-R isolation, 40 dB typical at 40 GHz, and High input IP3, +23 dBm typical.
- Useable as Up and Down converter

Assembly Diagram:

FEATURES:

- High image rejection, 25 dB
- High LO-RF isolation, 45 to 50 dB
- High LO-IF isolation, 30 dB
- Wide bandwidth, 18 to 65 GHz
- Wide IF Bandwidth, DC to 20GHz
- SMT package works up to 90GHz
- Double balanced
- Useful in wideband systems
- Usable in first and second down coverter applications. IF as low as DC enables use in phase detectors applications
- Operating temperature -40 °C to 85 °C
- 2.5 x 2.5 x .264 mm, SMT glass package

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Electrical Specifications[1] at 25°C, Zo =50Ω

Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
RF Frequency Range		20		65	GHz
LO Frequency Range		20		65	GHz
IF Frequency Range		DC		20	GHz
LO Power		14	15	16	dBm
Conversion Loss at (IF= 2 GHZ)	20 30 40 50 60 65		9.6 9.9 11.3 10.3 11.8 13.8		dB
LO-RF Isolation	20 30 40 50 60 65		38 41 38 54 44 38		dB
LO-IF Isolation	20 30 40 50 60 65		34 48 39 24 32 30		dB
RF-IF Isolation	20 30 40 50 60 65		32 30 24 20 29 34		dB
Pin at 1dB Compression	20-60		11		dBm
Input IP3	20-60		21		dBm

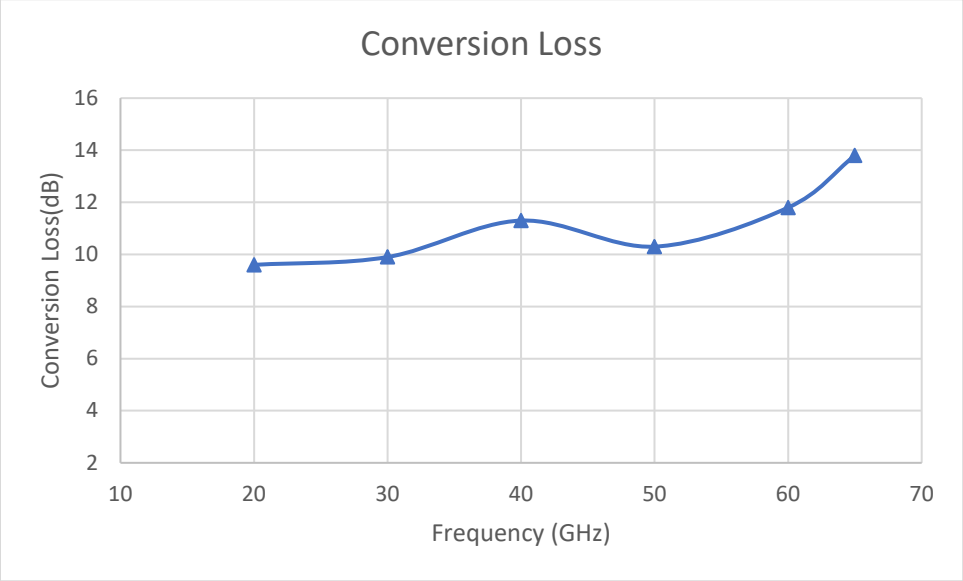
1 Package loss expected added

Absolute Maximum Ratings

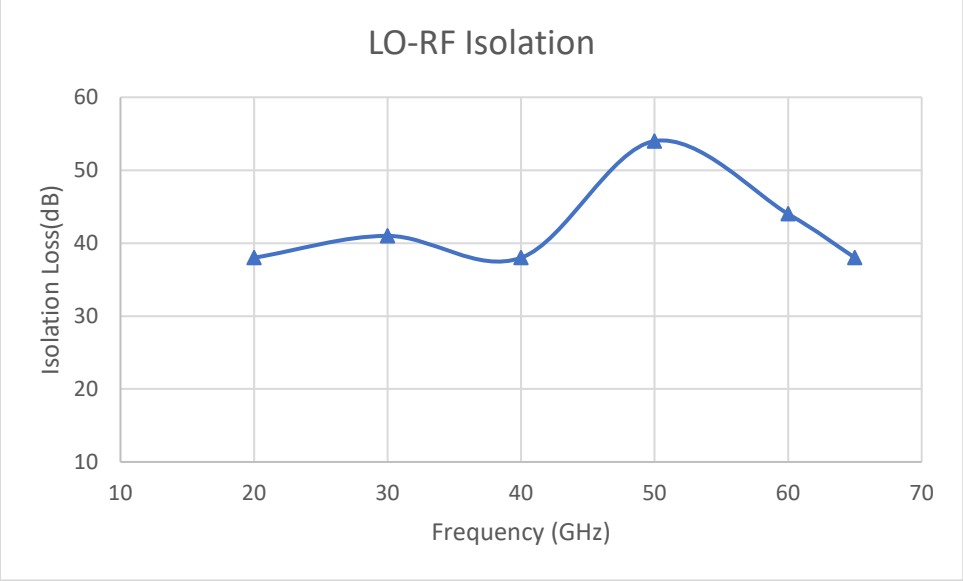
Parameter	Condition (GHz)
Operating temperature	-40 °C to 85°C
RF Power	22 dBm
LO Power	22 dBm
IF Current	30 mA

Performance Chart

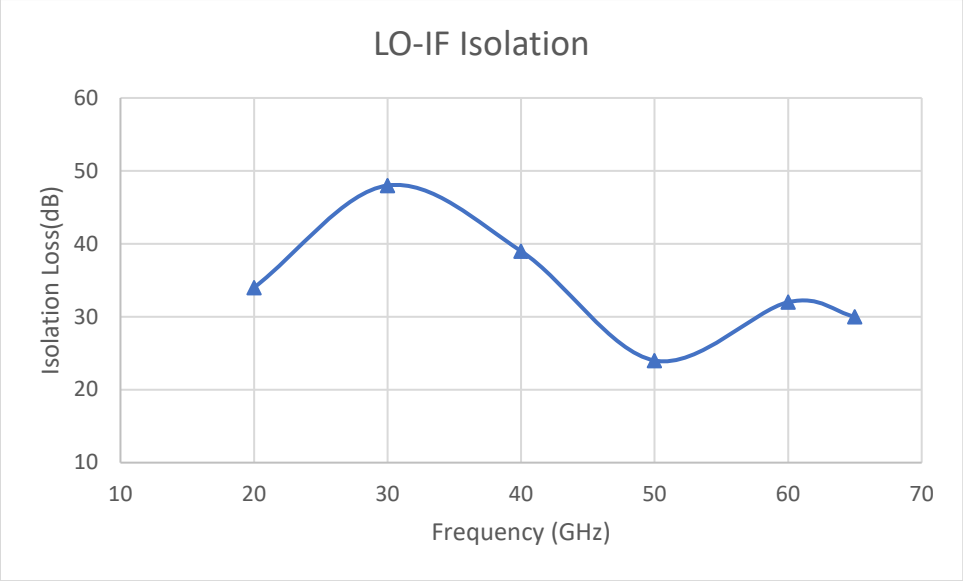
Conversion Loss



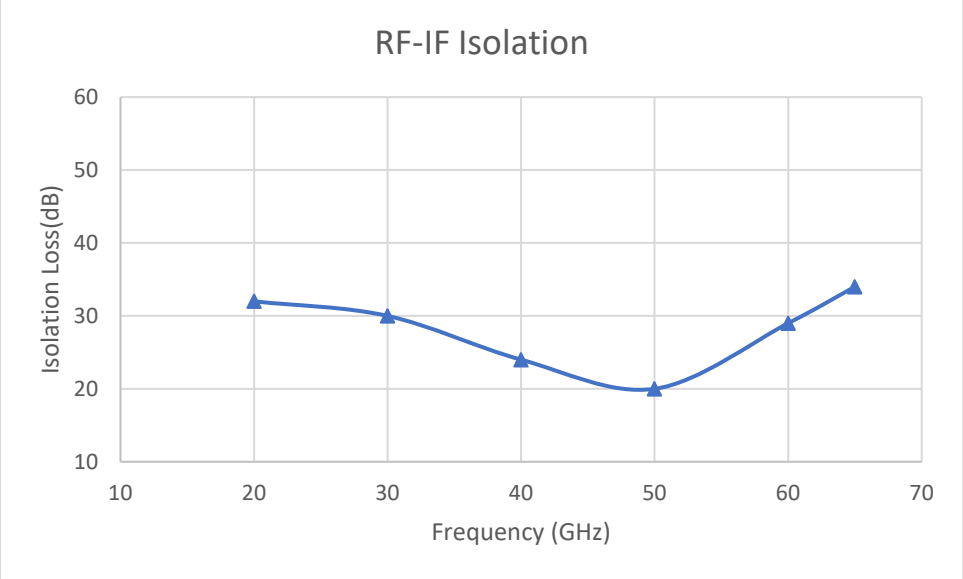
LO-IF Isolation



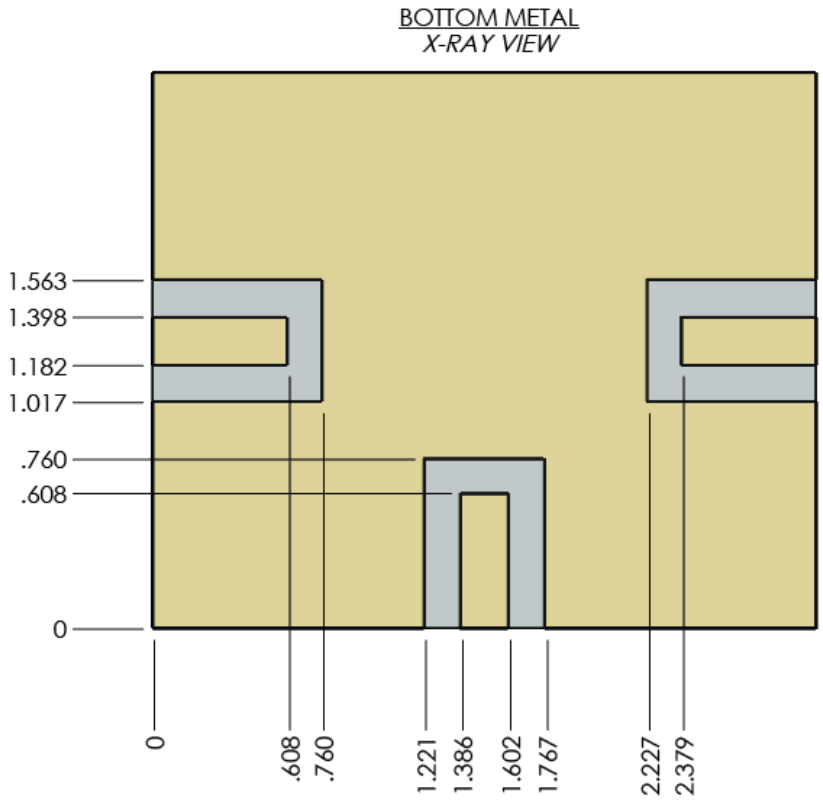
LO-IF Isolation



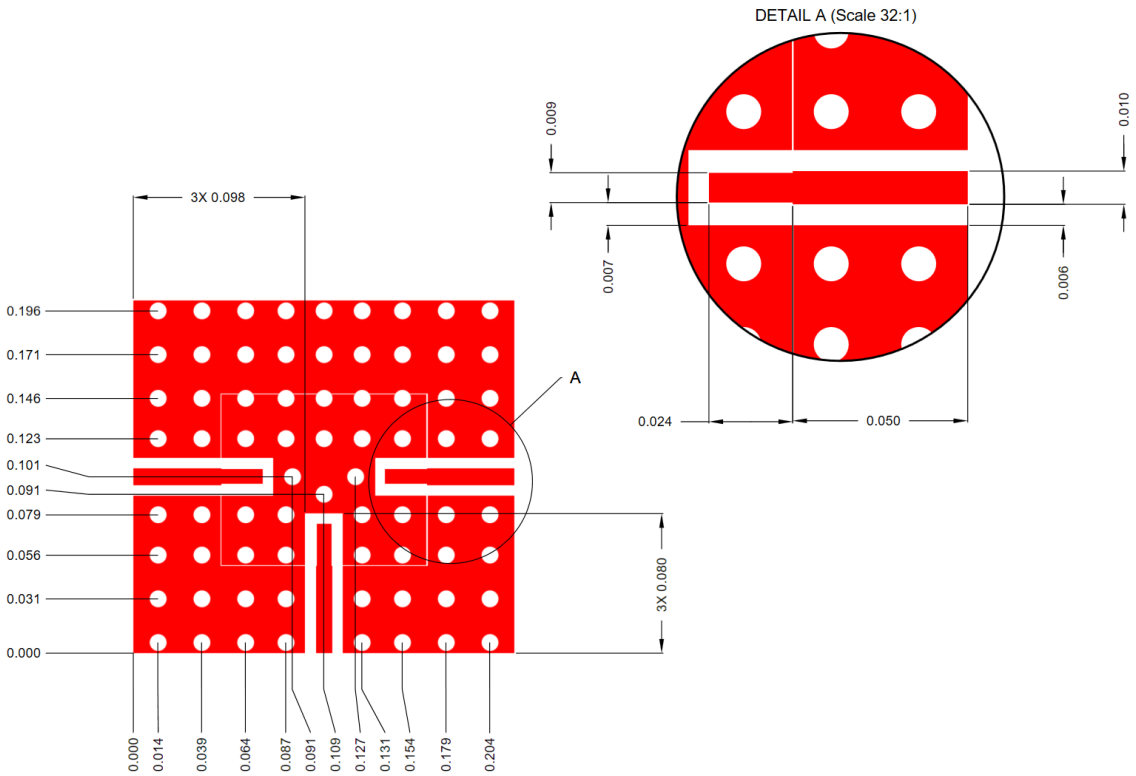
RF-IF Isolation



Outline Drawing and Dimensions



Recommended Footprint



NOTES:
1. ALL VIAS SHOWN ARE .010"
2. UNITS ARE INCHES