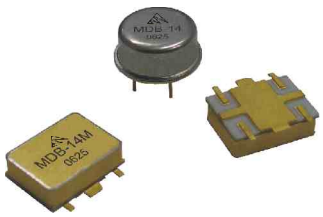
MDB-14/MDB-14M
Broadband Double-balanced Mixer

Features

- LO drive level : +17dBm(Typ)
- LO&RF frequency range:10～3000MHz
- Low Conversion loss , High port-to-port isolation
- 50Ω impedance High reliability
- Hermetic TO-8C and SG03 package available
- Operating temperature range:-55℃～+85℃

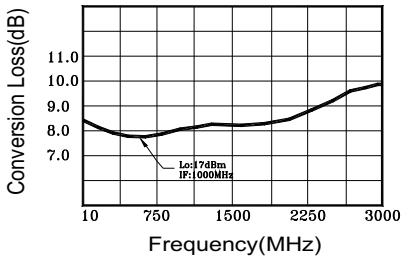


Specifications(measured in a 50Ω system, T_A=25℃)

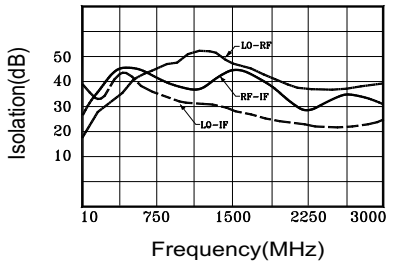
Parameter		Symbol	Unit	Guaranteed	Typical
Frequency Range	LO&RF	f	MHz	10～3000	10～3000
	IF			1～3000	0. 1～3000
Conversion Loss		C. L	dB	8. 0(50～500MHz)	7. 5(50～1000MHz)
				10. 5(1000～2000MHz)	10(1000～2000MHz)
				11. 5(10～3000MHz)	11(10～3000MHz)
Iso	LO-RF	Iso	dB	35(100～3000MHz)	40(100～3000MHz)
				18(10～100MHz)	25(10～100MHz)
	LO-IF			30(10～1000MHz)	35(10～1000MHz)
				15(1000～3000MHz)	25(1000～3000MHz)
	RF-IF			30(50～1500MHz)	35(50～1500MHz)
				25(10～3000MHz)	30(10～3000MHz)
1dB Compression point		P_{-1}	dBm	9. 0	10. 5
Input Intercept 3rd order point		IP3	dBm	—	20

Typical Performance

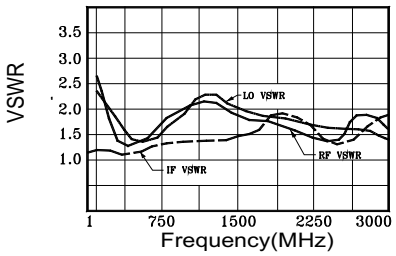
Conversion Loss VS Frequency



Isolation VS Frequency

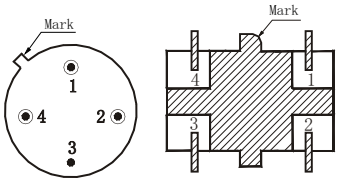


LO&RF VSWRi VS Frequency



Absolute Maximum Ratings

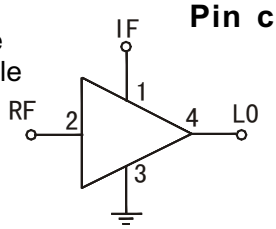
RF Input Power : +25dBm
Storage Temp:+125℃



TO-8C Bottom View　　SG03 Bottom View

Application Notes:

1. LO drive level : +17dBm
2. Input/output pin should be connected to 50Ω microstrip.
3. Land pattern should be place as close to ground as possible for better RF grounding
4. MDB-14 : TO-8C package
   MDB-14M :SG03 package
5. See assembly section for mounting information



Pin connection:

1. IF
2. RF
3. GND
4. LO
   Metal case is ground

Conversion Loss VS Lo power