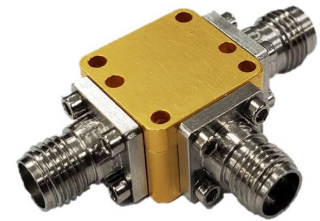


MIXER PRODUCTS

47.2 to 51.4 GHz Double-Balanced Mixer Model M4751VW1A

ELECTRICAL SPECIFICATIONS					
INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
IF frequency range	3 dB Bandwidth	GHz	-	DC to 18	-
IF VSWR (IF = -10 dBm, LO = +17 dBm)	-	Ratio	-	2.0:1	-
LO frequency range	-	GHz	33.4	34.75	47.2
LO power range	-	dBm	+17	+18.5	+20
LO VSWR (LO = +17 dBm)	33.4 to 47.2 GHz	Ratio	-	2.5:1	-
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss (IF = 12.5 to 16.65 GHz, LO = +17 dBm) LO = 34.75 GHz	-	dB	-	12	15
Conversion loss (IF = DC to 4.5 GHz, LO = +17 dBm) LO = 47.2 GHz	47.2 to 51.4 GHz	dB	-	10	-
Single-sideband noise figure	47.2 to 51.4 GHz	dB	-	15	-
LO-to-RF isolation	47.2 to 51.4 GHz	dB	25	30	-
LO-to-IF isolation	47.2 to 51.4 GHz	dB	-	35	-
IF-to-RF isolation	47.2 to 51.4 GHz	dB	-	30	-
Input power at 1 dB compression	LO = +17 dBm	dBm	-	+5	-
Input two-tone third-order intercept point	LO = +17 dBm	dBm	-	+13	-
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range	-	GHz	47.2	-	51.4
RF VSWR (RF = -10 dBm, LO = +17 dBm)	47.2 to 51.4 GHz	Ratio	-	2.0:1	-



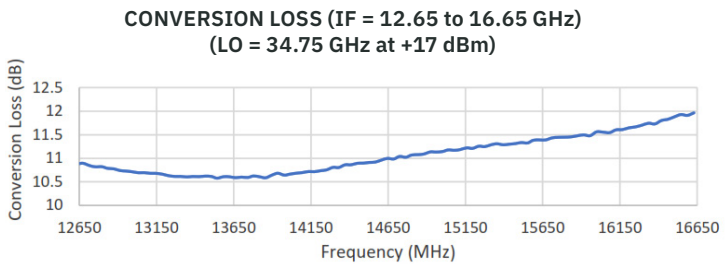
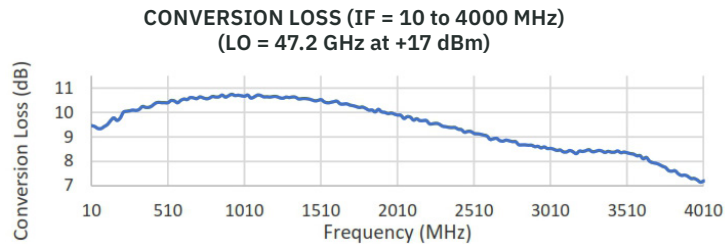
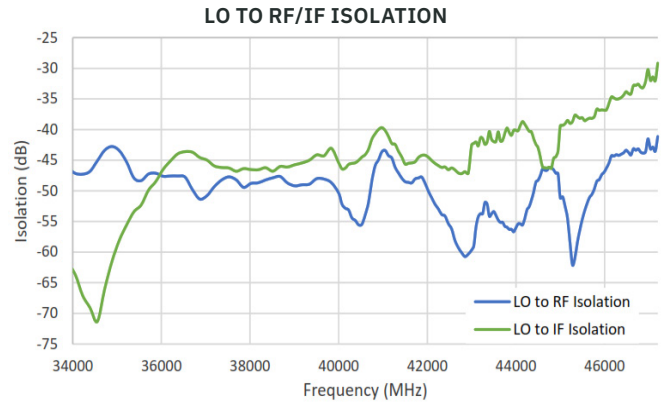
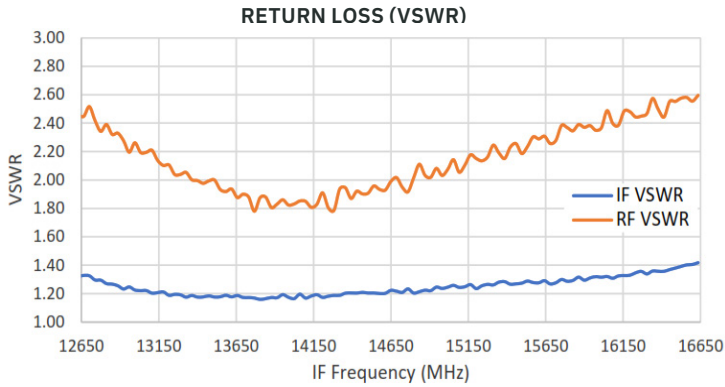
The Narda-MITEQ double-balanced M4751VW1A mixer is designed specifically for the V-band up conversion SATCOM market. This device can be used as an up or down converter.

The mixer can be used to upconvert broadband input frequencies of DC to 18 GHz directly up to V-band.

KEY FEATURES

- > RF/LO Coverage47.2 to 51.4 GHz
- > IF OperationDC to 18 GHz
- > LO Power range.....+17 to +20 dBm
- > Input 1 dB comp....+5 dBm typical
- > Packaging.....Connecterized

M4751VW1A TYPICAL TEST DATA



**SINGLE-TONE (m) RF x (n) LO RELATIVE SPUR LEVEL (dBc)
(AVERAGE MIDBAND RF, LO FREQUENCIES,
RF = -10 dBm, LO = +17 dBm)**

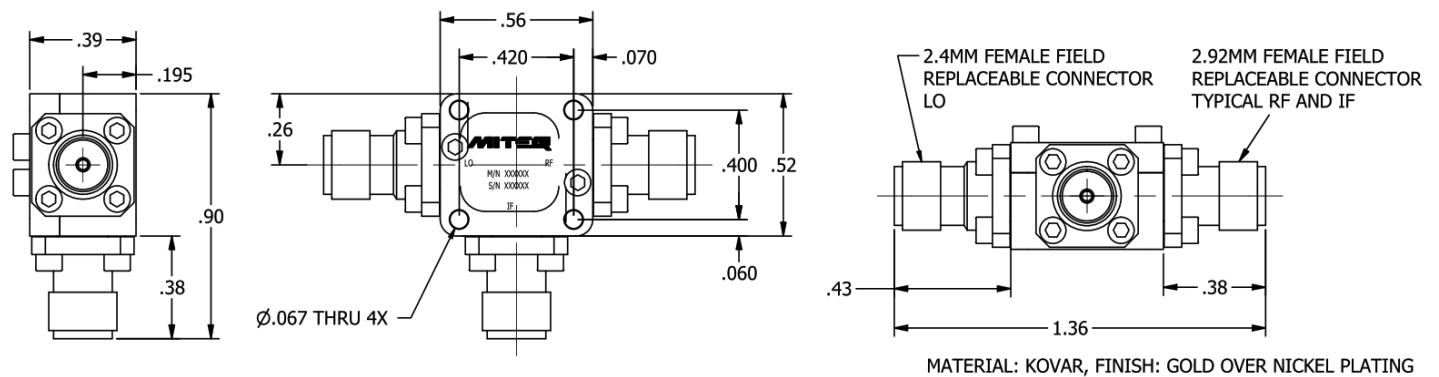
SPUR (m) RF x (n) LO	RF TEST FREQ. (GHz)	LO TEST FREQ. (GHz)	SPUR LEVEL (dBc)
1 x 1	20	20.1	REF
1 x 2	20	10.05	29
1 x 3	20	6.7	14
2 x 1	10	20.1	45
2 x 2	10	10.05	63
2 x 3	20	6.7	55
3 x 1	6.67	20.1	57
3 x 2	6.67	10.05	72
3 x 3	6.67	6.7	70

MAXIMUM RATINGS

Specification temperature..... +25°C
 Operating temperature..... -54°C to +85°C
 Storage temperature..... -65°C to +125°C

Note: Test data supplied at 25°C;
 conversion loss and LO-to-RF isolation.

OUTLINE DRAWING 219353



Note: Unless otherwise specified dimensions are in inches.



Mixer Products - 47.2 to 51.4 GHz Double-Balanced Mixer, Model m4751vw1a

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Narda-MITEQ is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.

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