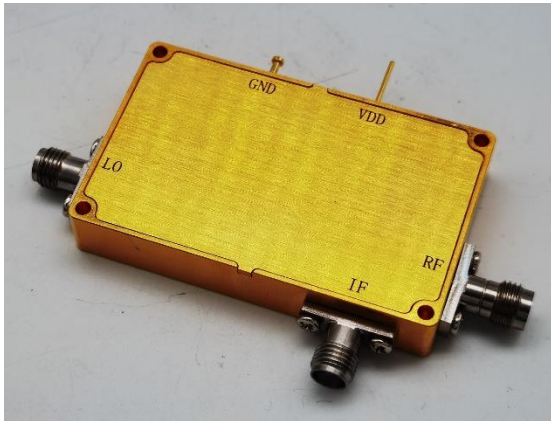


40-60GHz Balance Mixer, 1.85mm

2022-3-3

LO with X4 AMC (Amplified Multiplier Chain)



Description:

AT-4MIX-4060HV is an up and down balance mixer covering 40-60GHz based on GaAs MMIC technology.

RF Port frequency range is from 40-60GHz with 1.85mm connector. LO range is 10-15GHz as X4 multiplier inside on LO chain. IF port frequency from DC to 20GHz with SMA Female connector.

More information, please visit www.atmicrowave.com

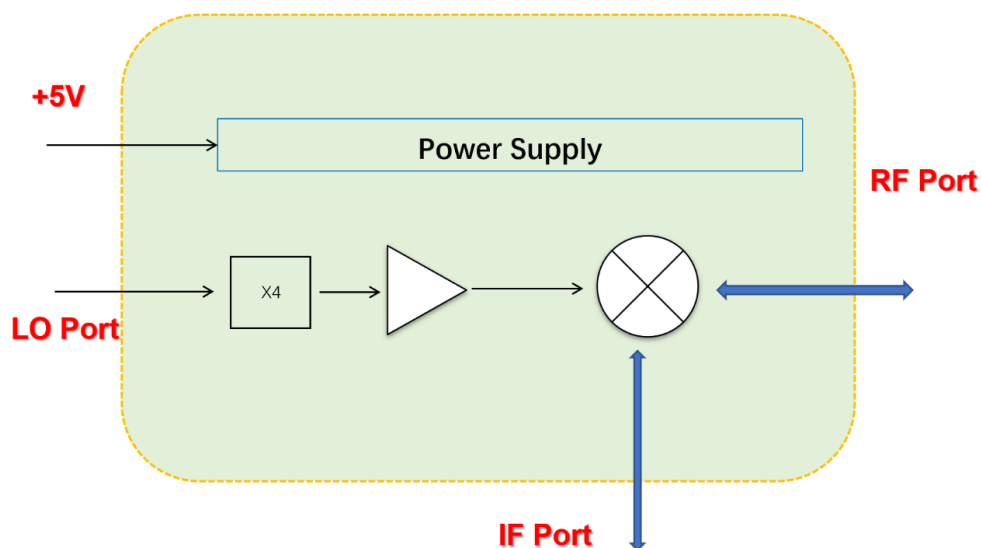
Feature

- ✓ RF Range: 40-60GHz
- ✓ LO Range: 10-15GHz
- ✓ Low Conversion Loss
- ✓ High RF/LO Isolation

Application

- ✓ Automotive Test
- ✓ Test Equipment
- ✓ ROF (RF Over Fiber)
- ✓ Radar System

Diagram Block





AT-4MIX-4060HV

40-60GHz Balance Mixer Integrated with x4

Electronical Specifications: (IF=100MHz if not specified)

Parameter	Min	Typical	Max
RF Frequency		40-60GHz	
IF Range		DC-20GHz	
Conversion Loss		-10dB	-16dB
LO Input Frequency		10-15GHz	
LO Driver	+10	+13dBm	+15
LO Multiplier Factor		X4	
IF Input P1dB		+8dBm	
4XLO to RF Leakage		-20dBm	
Vdd		+5V	+8V
Idd		0.5A	
Spec Temp		25C	

Mechanical Information

Item	Description
RF Port	1.85mm
LO Port	SMA Female
IF Port	SMA Female
Case Material	Copper
Finish	Gold Plated
Weight	130g
Size:	See outline





AT-4MIX-4060HV

40-60GHz Balance Mixer Integrated with x4

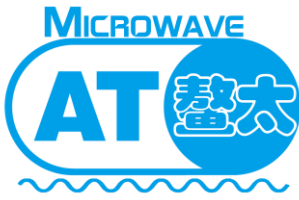
Absolute Maximum Ratings Table

Parameter	Value
IF Power	+15dBm
RF Power	+20dBm
LO Power	+23dBm
Vdd	+9V
Operating Temperature	-20 to +70C
Storage Temperature	-65 to +150C

Notes:

1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.



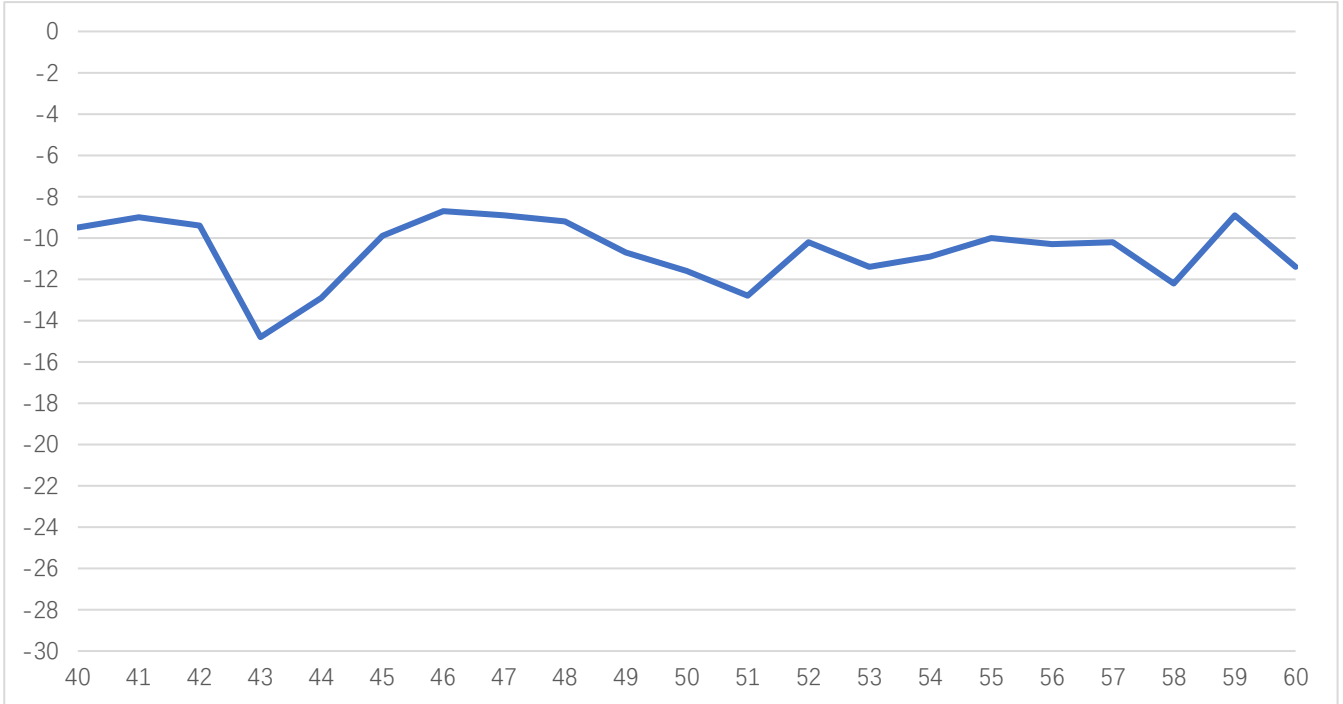


AT-4MIX-4060HV

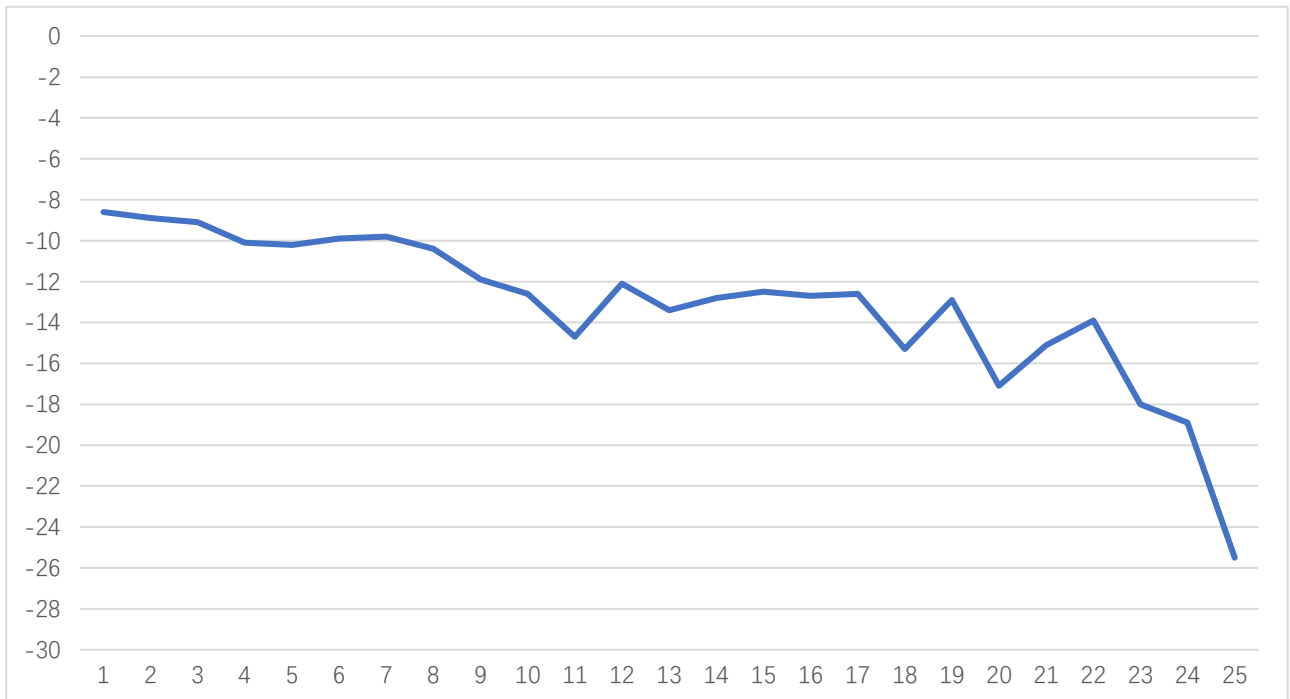
40-60GHz Balance Mixer Integrated with x4

Test Data (25C)

Please note that test curves will vary slightly from unit to unit.



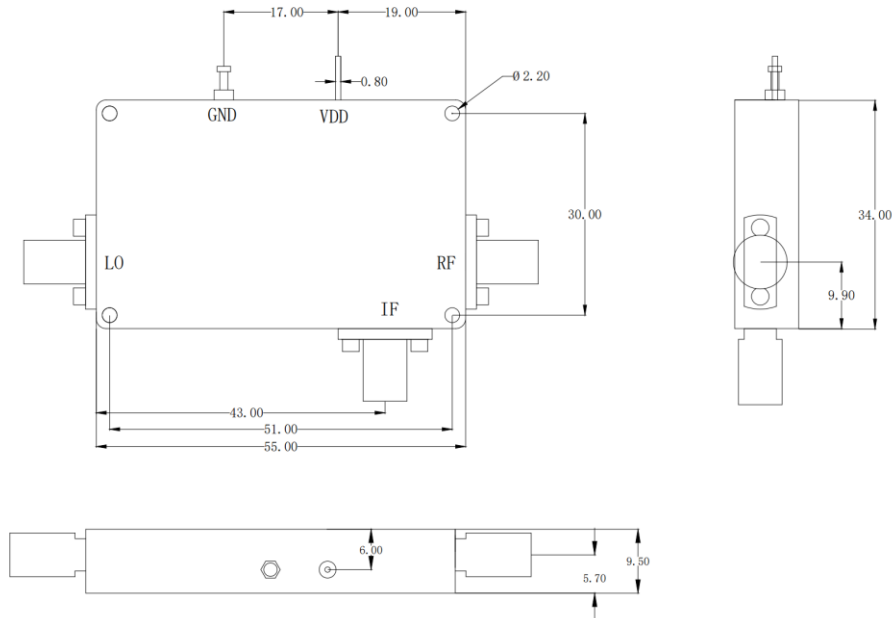
Conversion Loss vs RF Frequency, IF=100MHz, Down-conversion test



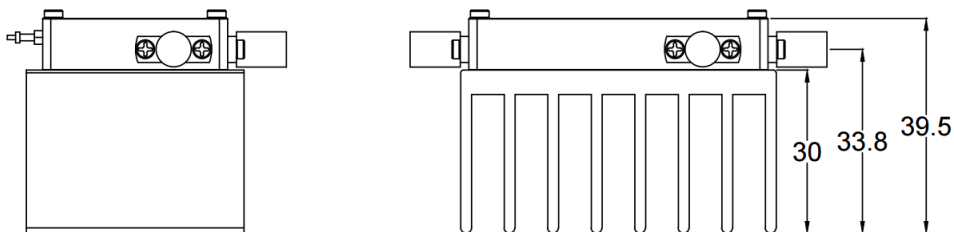
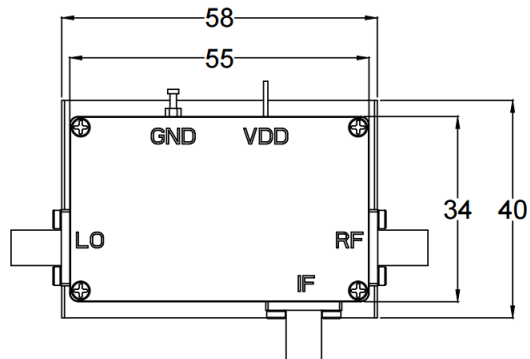
IF Response/GHz, Fixed 4xLO=40GHz



Dimension (mm)



Outline without heatsink



Outline with small heatsink in default,
which can be removed according to customer's actual application.

