

X4 Full E Band Active Multiplier



Description:

AT-AM4-5590-13 is a full E band, active x4 frequency multiplier. The multiplier has an input frequency of 13.75-22.5 GHz with a typical output +13dBm from 55-90GHz.

The integrated input and output buffers deliver high output power at a low drive level. The multiplier also has a typical harmonic suppression. The input port is SMA female, and the output is WR-12. Other port configurations are available under different requirement.

More information, please visit www.atmicrowave.com

Feature

- ✓ Frequency: 55-90GHz
- ✓ Pout: +13dBm typical
- ✓ Input: 13.75-22.5GHz
- ✓ Low Harmonics

Application

- ✓ E band Communication
- ✓ Test Equipment
- ✓ ROF (RF Over Fiber)
- ✓ Radar System

Electronical Specifications:

Parameter	Min	Typical	Max
Input Frequency	13.75GHz		22.5GHz
Input Power	+8	+10dBm	+15
Multiplier Factor		X4	
Output Frequency	55GHz		90GHz
Output Power	+10dBm	+13dBm	
X3 Suppression vs X4 Pout		-15dBc	
X5 Suppression vs X4 Pout		-45dBc	
Drain Voltage		+5V/0.39A	
Spec Temp		25C	





AT-AM4-5590-13

Active Multiplier x4, 55-90GHz Pout=+13dBm

Mechanical Information

Item	Description
Input Port	SMA Female
Output Port	WR-12
Case Material	Copper
Finish	Gold Plated
Weight	190g
Size:	See outline

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+9V
RF Input Power	+18dBm
Operating Temperature	0 to +50C
Storage Temperature	-65 to +150C

Notes:

- ✓ Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
- ✓ This data is only for reference, not for guaranteed specifications.
- ✓ Please contact AT Microwave team to make sure you have the most current data.
- ✓ Always pay attention to the temperature of the case, heatsink and fan are required if case temperature exceeds over 50C.

Part Number Selection Guide

Part Number	Description
AT-AM4-5590-13	High Input driver +10dBm
AT-AM4-5590-13L	Low Input diver option, +0dBm



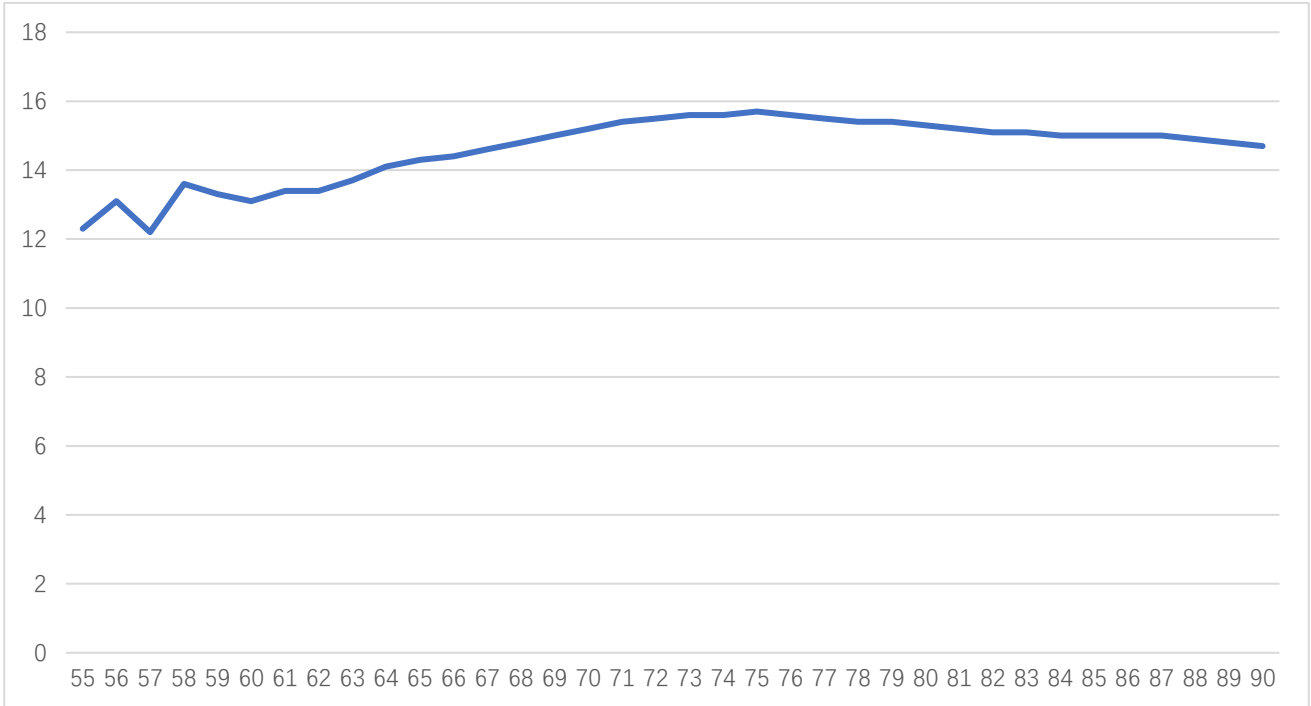


AT-AM4-5590-13

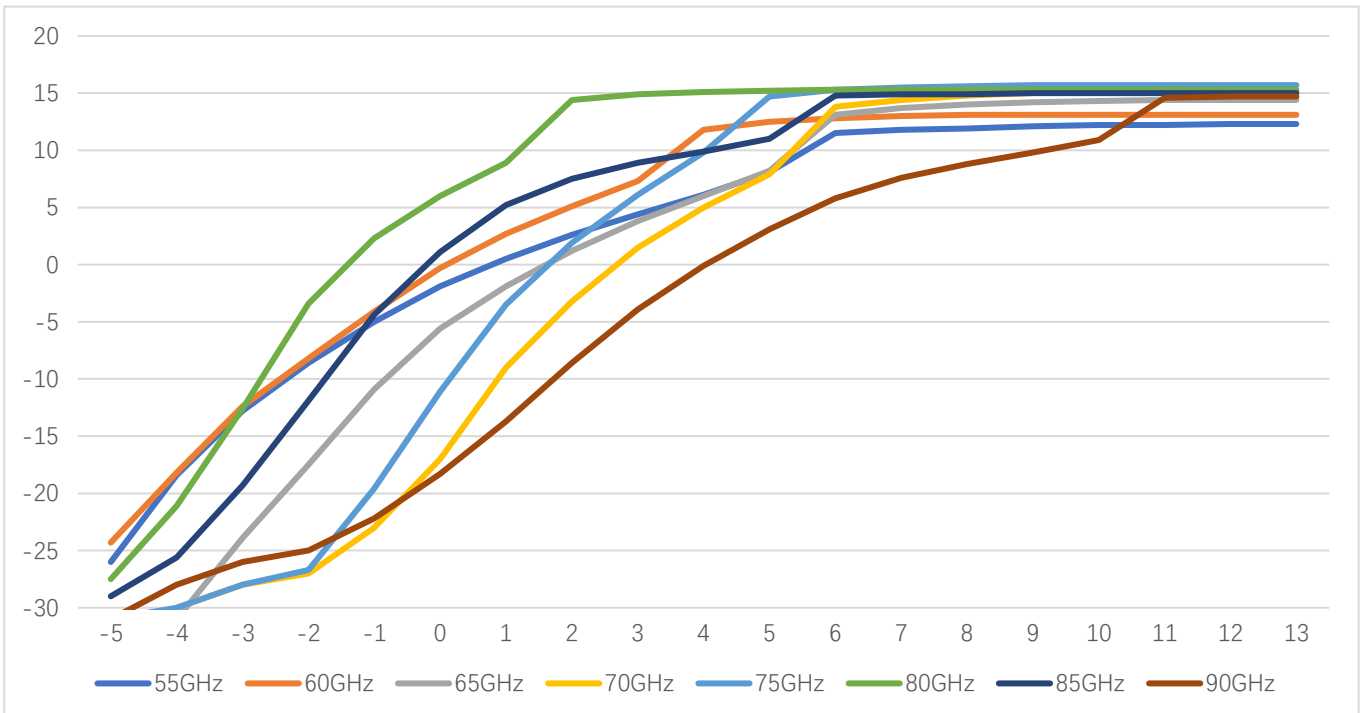
Active Multiplier x4, 55-90GHz Pout=+13dBm

Test Data (25C)

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



Pout vs Frequency, Pin=+12dBm



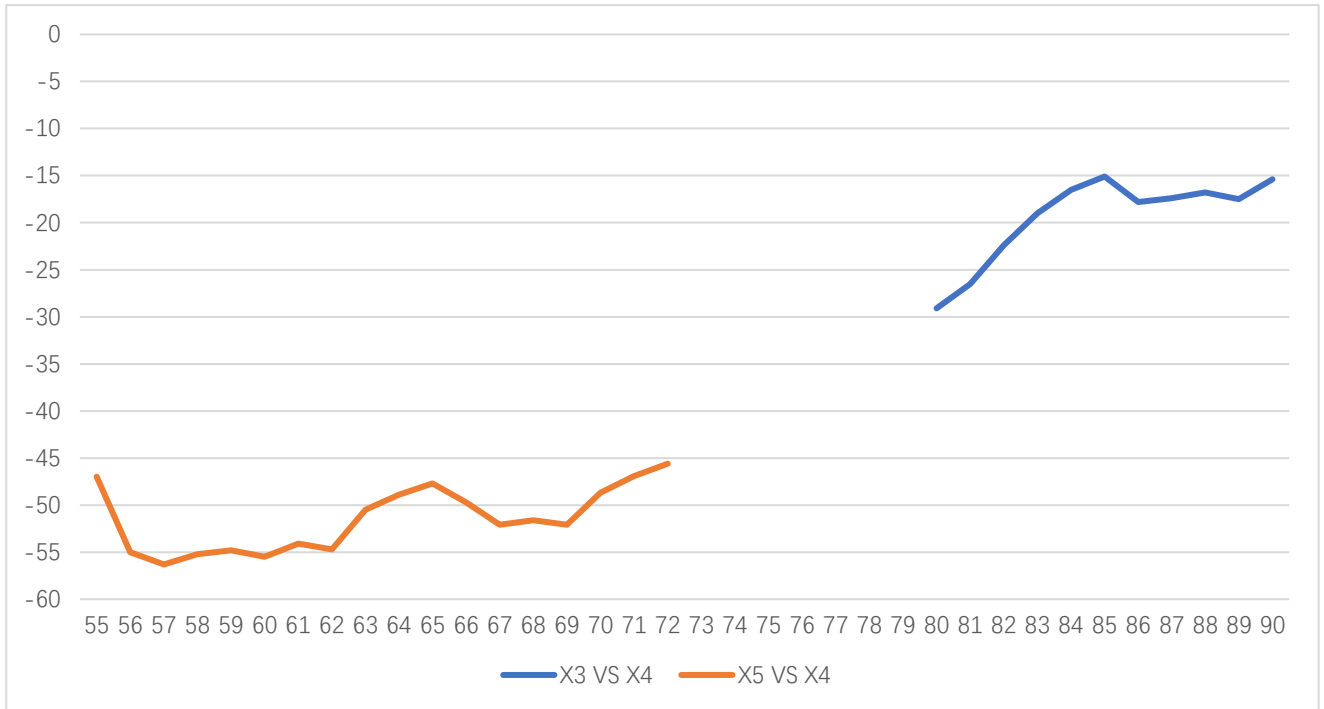
Pout vs Pin





AT-AM4-5590-13

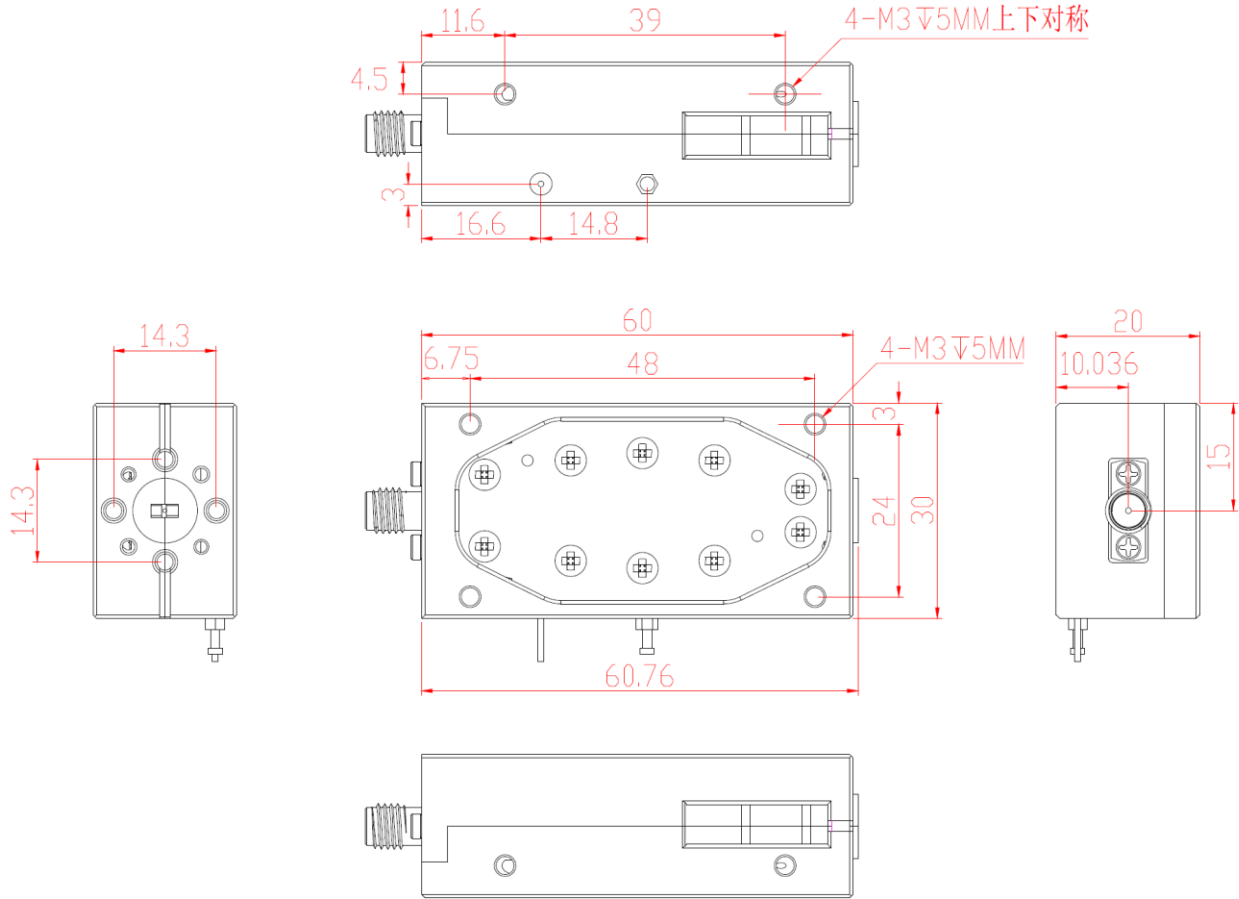
Active Multiplier x4, 55-90GHz Pout=+13dBm



X3/X5 Harmonics Suppression vs X4 Pout



Dimension (unit mm)



PCN History

Date	Description
2022-9-1	Outline Updated

