

Solid State High Power Amplifier Systems

2.5-7.5GHz /60dB Gain/60 dBm Psat/380V AC

Model: TLPA2.5G7.5G-60-60-BC

TLPA2.5G7.5G-60-60-BC is a solid state high power amplifier systems provides high output power and high gain across the 2.5 to 7.5 GHz frequency range. The amplifier features a built-in 380V power supply, making it easy to use in most lab environments. This model features thermal self protection, preventing damage to the amplifier and providing added reliability.

Features:

- Frequency range: 2.5-7.5 GHz
- Gain: 60dB Min
- Psat Output Power:60dBm Min
- Protection:Over TEM,over voltage, over current ,output mismatch protection
- 50 Ohm Matched Input / Output

Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	2.5-7.5			GHz
Working Mode	MOD	CW/PULSE compatible			
Power Gain	GP	60			dB
Gain flatness	ΔGL		± 4		dB
Output Psat	Psat	60			dBm
Spurious@Pout=60dBm	Spur			-60	dBc
Harmonics@Pout=60dBm	HAM		-15		dBc
AC Voltage	Vac		380		V AC
Power Consumption@Pout=60dBm	Pdiss			9000	W
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

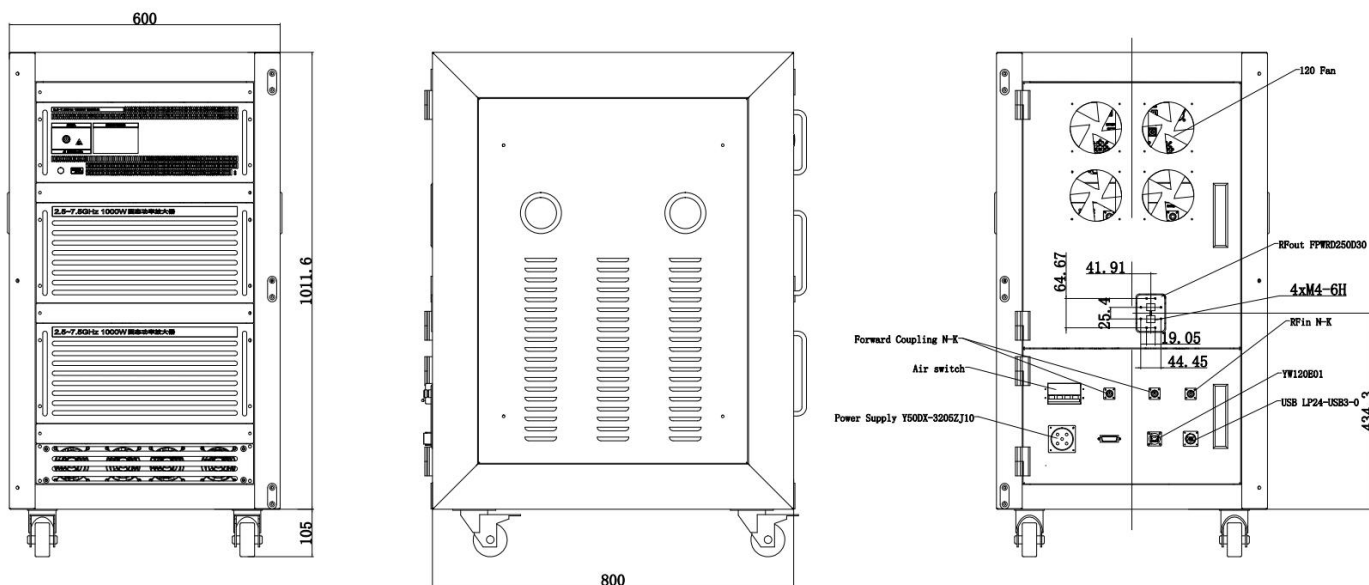
Parameter	Value	Units
Input /Output Connector	N Female/WRD250	
Forward/Reverse Coupling	SMA Female/SMA Female	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Communication Interface	DB9/RJ-45	
Size	20U	
Weight	≤350	Kg

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+5 dBm
ESD sensitivity (Hbm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



Key Features:

Parameter	Advantages
Control functions	1, Power setting On/Off 2, Gain control
Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Output mismatch
Remote control	RS422/LAN
Monitor functions	1, Output power 2, Reflected power 3, TEM 4, Operating voltage 5, Operating current
Cooling system	Built in Cooling system, forced air cooling

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+40	°C
Non-operating Temperature*	-30		+50	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

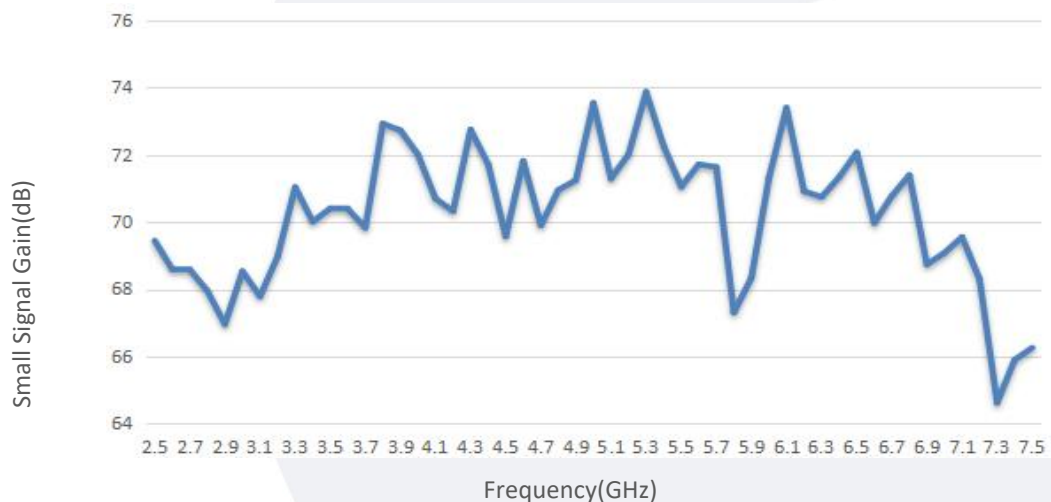
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA2.5G7.5G-60-60-BC	Solid State High Power Amplifier Systems 2.5-7.5GHz,Gain:60dB,Psat:60 dBm,380V AC,Built in Fan Cooling	Rev.1.1

Typical Performance Data:

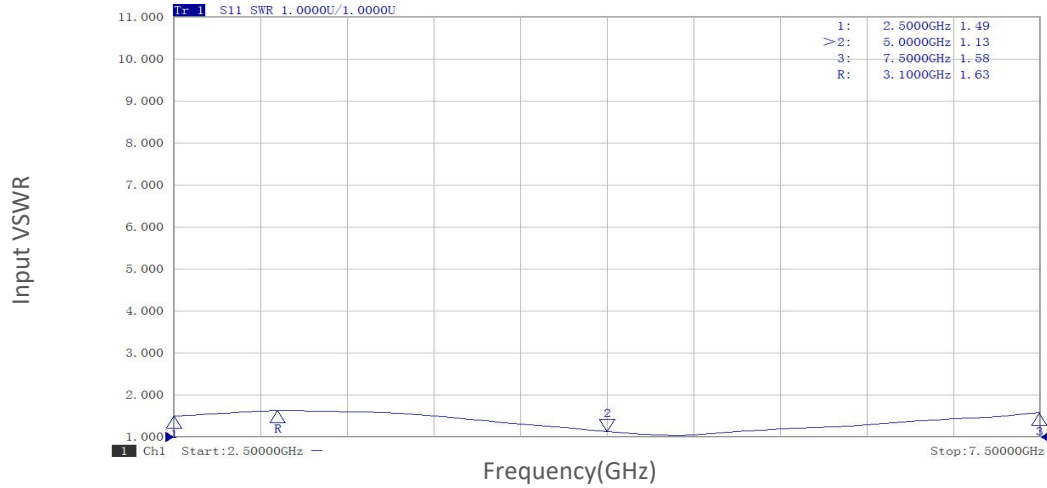
Small Signal Gain vs Frequency



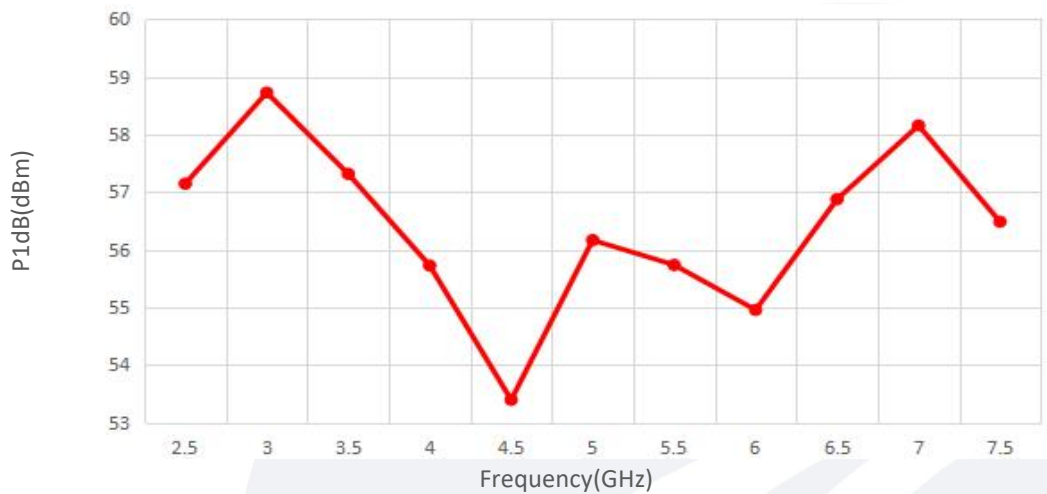
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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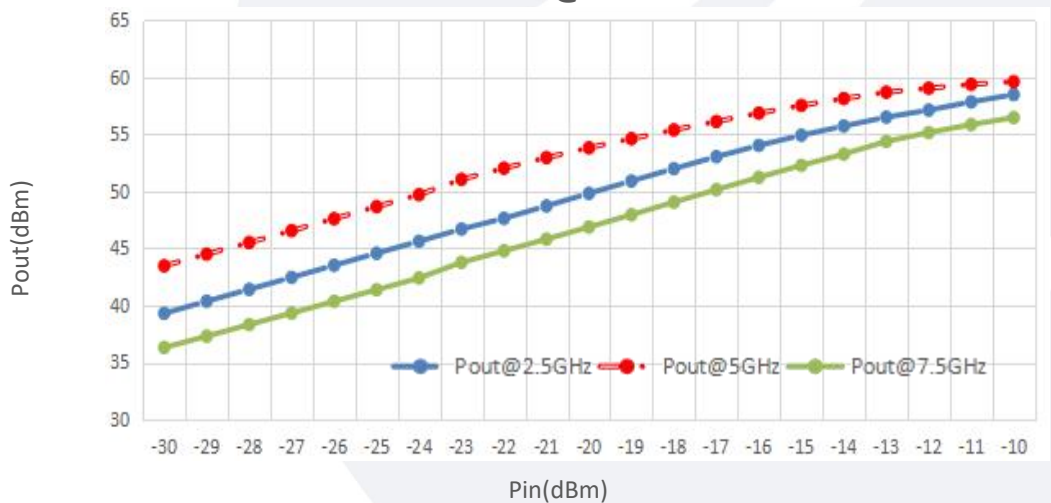
Input VSWR vs Frequency



P1dB vs Frequency



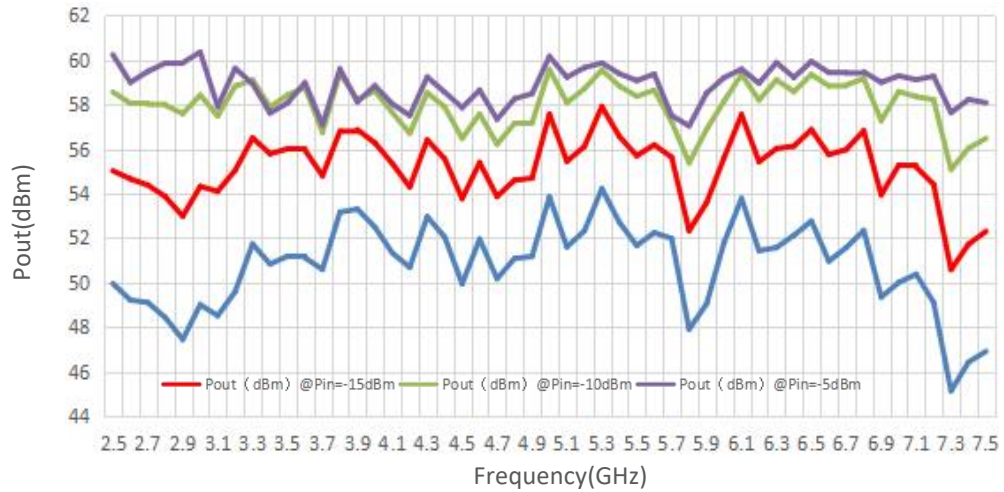
Pout@Pin



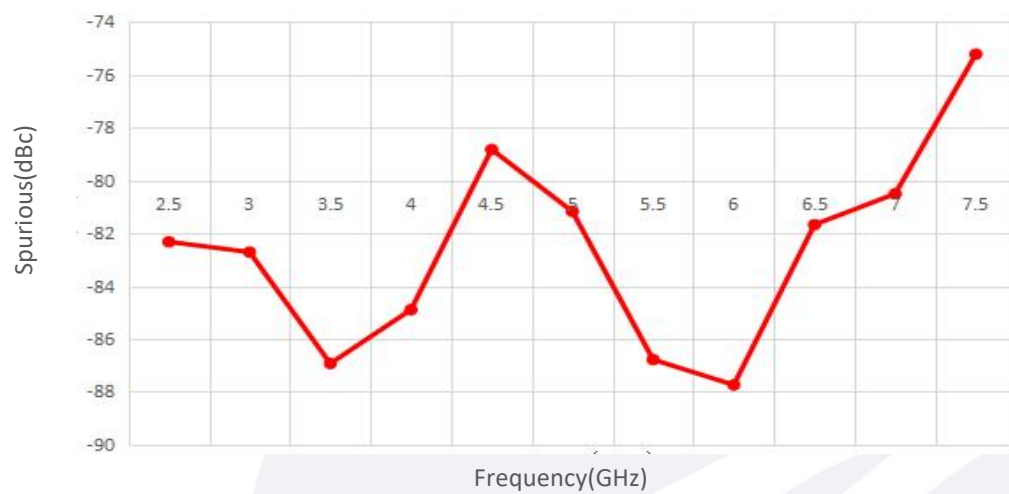
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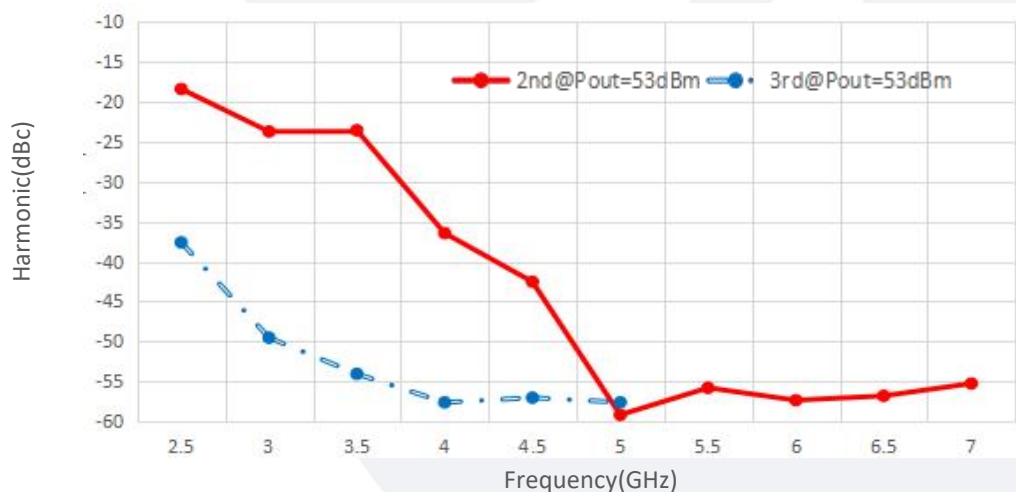
Pout@Equal_Pin



Spurious vs Frequency



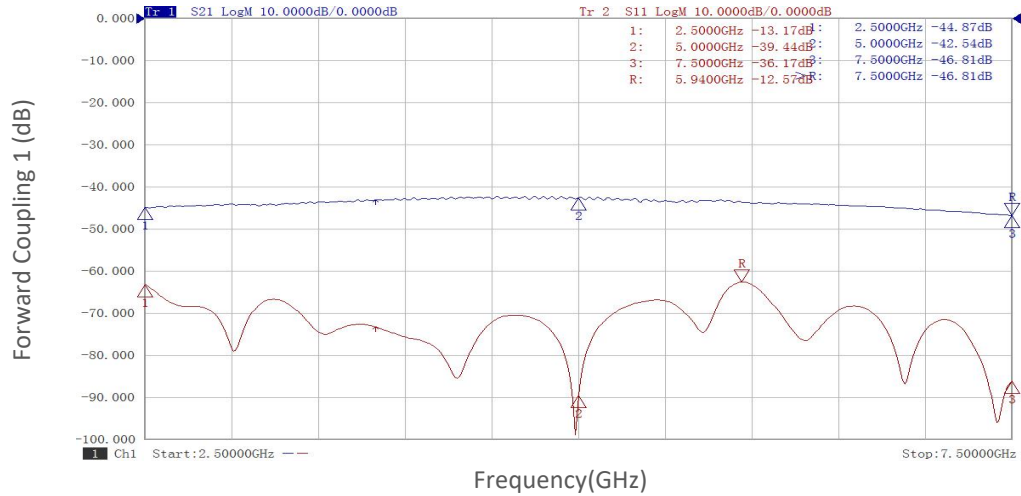
Harmonic vs Frequency



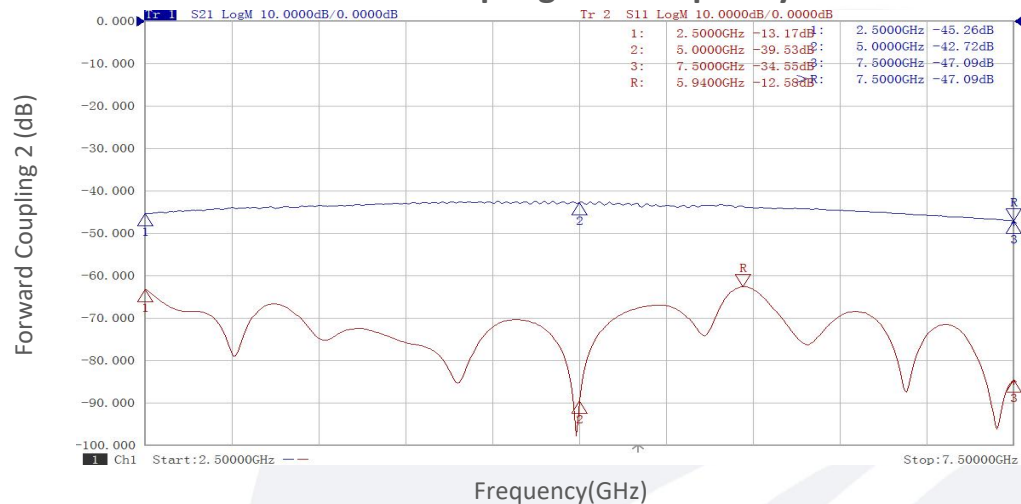
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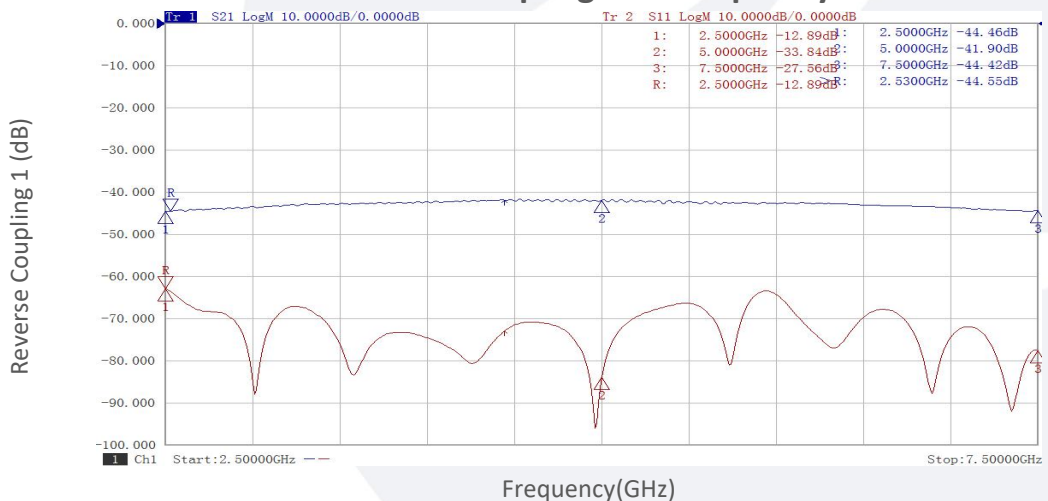
Forward Coupling 1 vs Frequency



Forward Coupling 2 vs Frequency

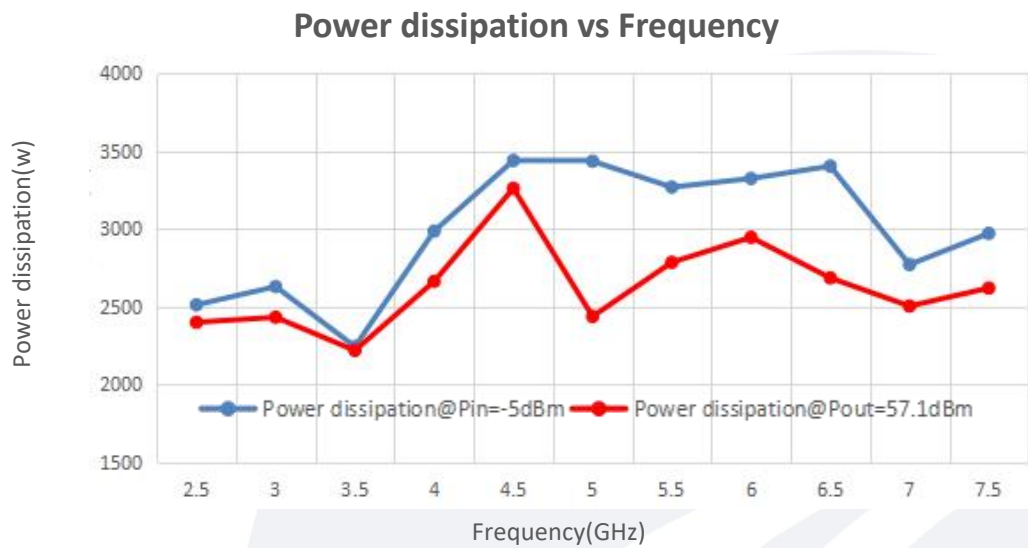
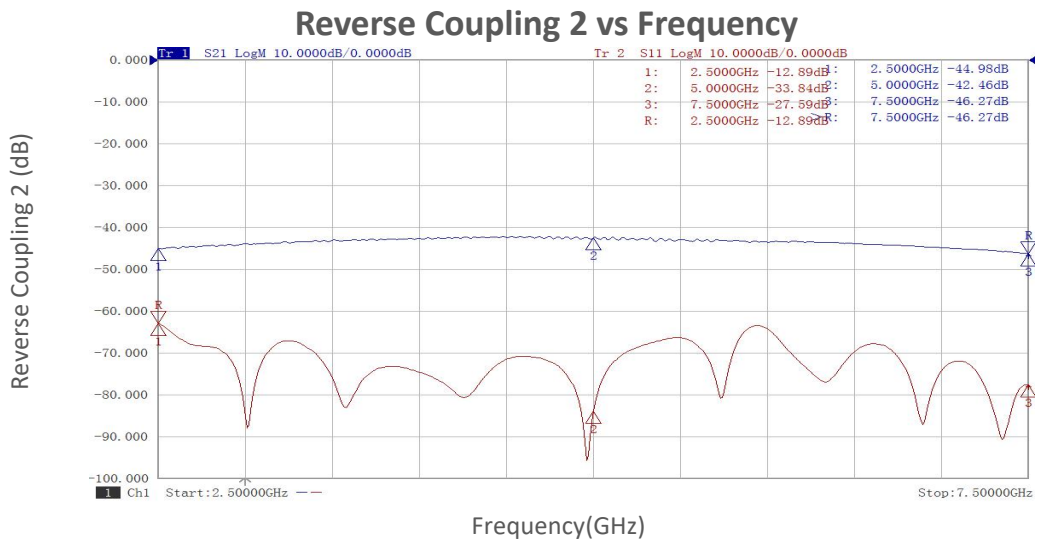


Reverse Coupling 1 vs Frequency



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Typical Performance Data:



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