

General Description

Part:	Solid-State High-Power Amplifier System 6-18GHz/60dB Gain/60dBm Psat/380 V AC
Model:	TLPA6G18G-60-60-BC
Part Description:	
The TLPA6G18G-60-60-BC is a solid-state high-power amplifier system provides high output power and high gain across the 6 to 18 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.	

Electrical Characteristics

No.	Parameter	Symbol	Minimum	Typical	Maximum	Units
1	Frequency range	BW	6		18	GHz
2	Power gain	GP	60			dB
3	Gain flatness@Pout = 60dBm	ΔGL		$\pm 4,5$		dB
4	Output P1dB	P1dB	58			dBm
5	Output Psat	Psat	60			dBm
6	Spurious@Pout = 60dBm	Spur			-60	dBc
7	Harmonics@Pout = 60dBm	HAM			-15	dBc
8	Harmonics@Pout = 57dBm	HAM			-20	dBc
9	Input VSWR	VSWRin			2.0	:1
10	AC Voltage	Vac		380		V AC
11	Power consumption	Pdiss			25000	W
12	Impedance	I/O-IMP		50		Ohm

Mechanical Specifications

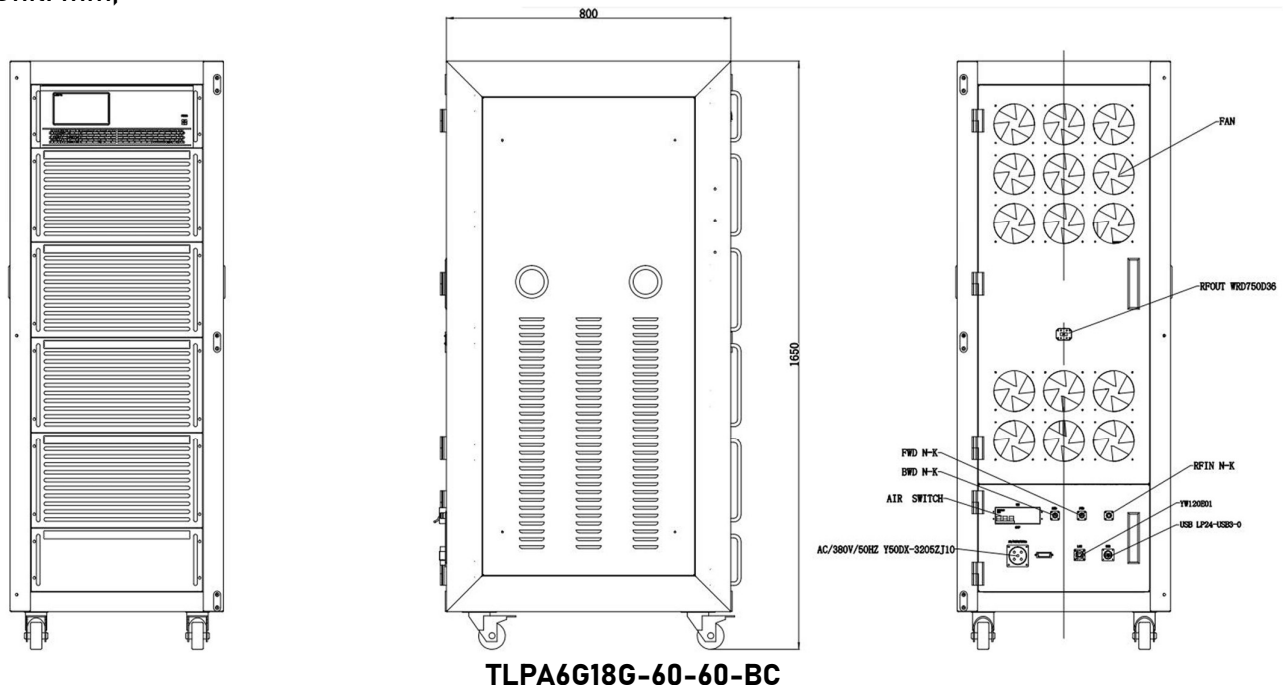
No.	Parameter	Value	Units	Note
1	Input connector	N		Female
2	Output connector	WRD750		
3	Forward coupling	N		Female
4	Reverse coupling	N		Female
5	Communication connector	DB9/RJ45		
6	Front panel LCD screen display	7	inch	LCD Screen Display
7	Size	32U * 800	mm	Depth
8	Weight	≤500	kg	

Absolute Maximum Ratings

No.	Parameter	Value	Units	Note
1	RF Input power	+5	dBm	
2	ESD sensitivity (HBm)	passed 150	V	Class 0

Technical Drawing

Unit: mm;



Key Features

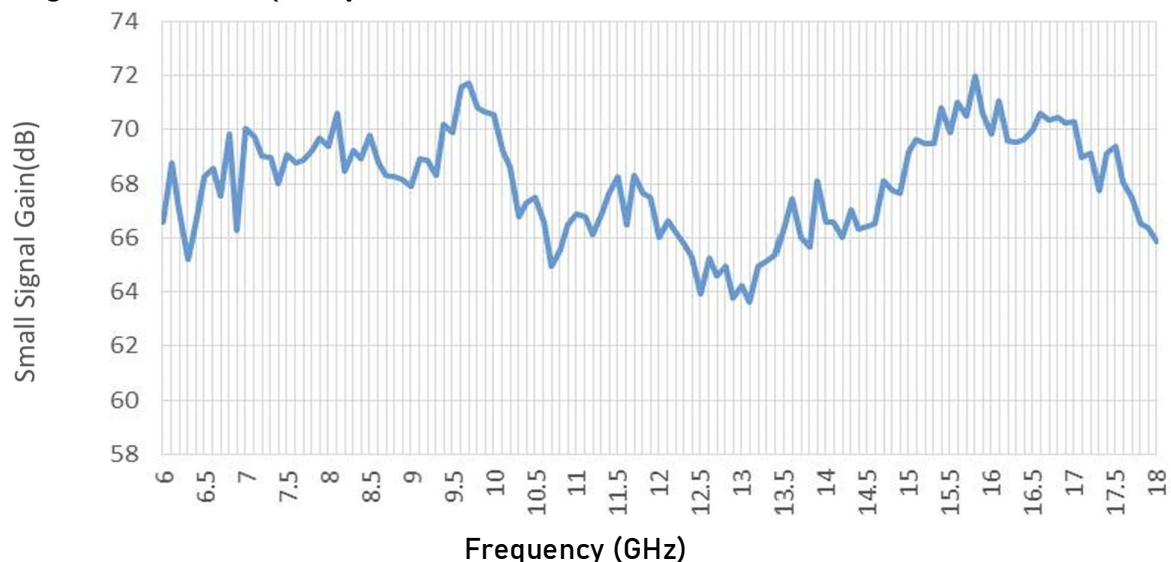
No.	Parameter	Advantages
1	Control functions	Power setting On/Off, ALC automatic level control, Gain control
2	Protection functions	Over TEM, Over voltage, Over current, Over VSWR
3	Remote control	RS422/Ethernet
4	Cooling system	Built in cooling system, forced air cooling

Environmental Conditions

No.	Parameter	Minimum	Typical	Maximum	Units
1	Operating temperature	-20		+40	°C
2	Non-operating temperature	-30		+50	°C
3	Relative humidity		95		%
4	Altitude		10,000		feet
5	Shock/Vibration (MIL-STD-810F)	25g rms (15 degrees 2kHz) endurance, 1 hour per axis			
6	Shock (non-operating)	20G for 11msc half sine wave, 3 axis both directions			

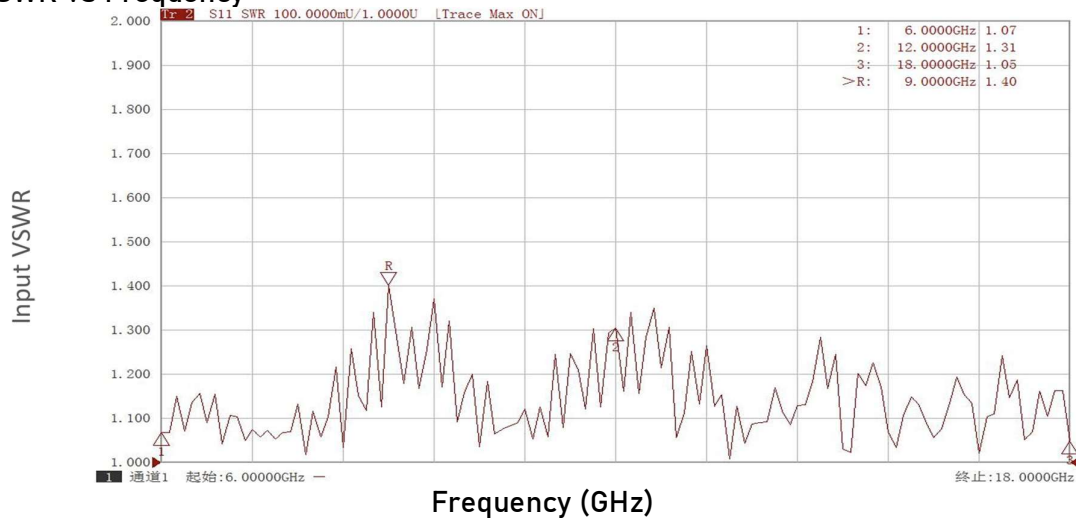
Typical Performance Data

Small Signal Gain vs Frequency

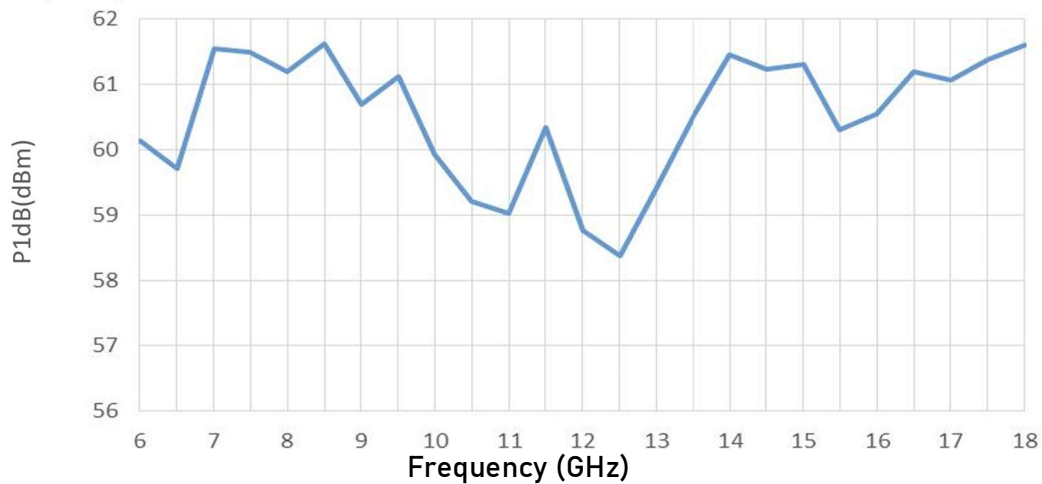


Note: Above data is for reference only, actual data may vary from unit to unit depending on operating environment and other factors like material lots, etc.

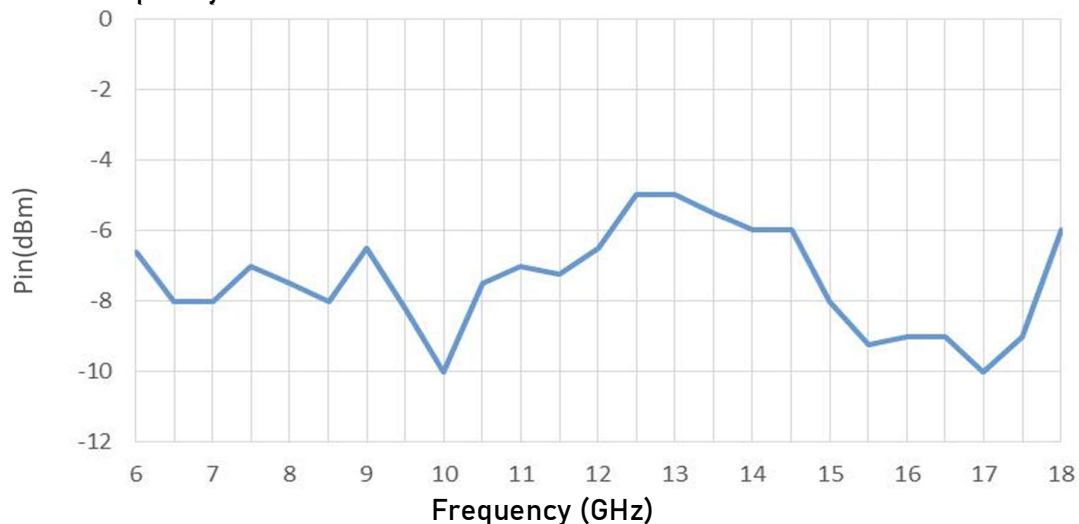
Input VSWR vs Frequency



P1dB vs Frequency

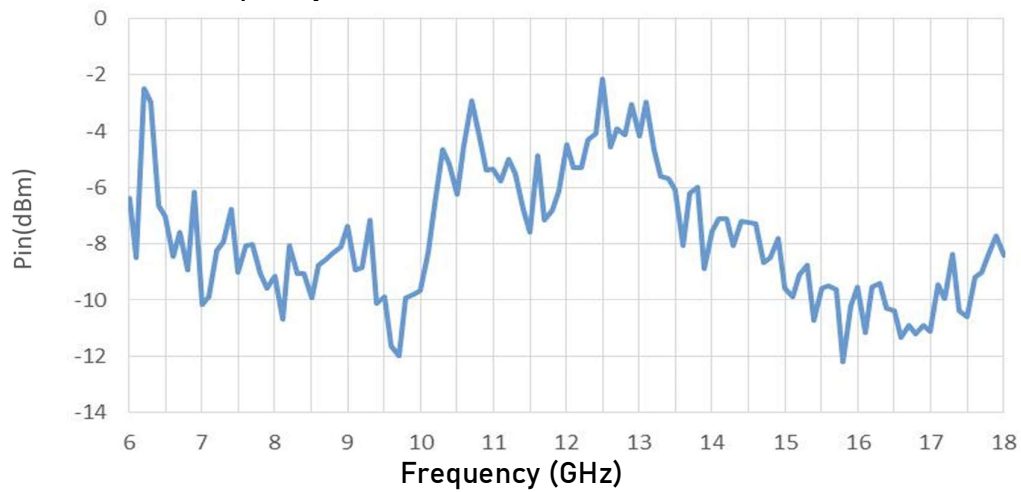


Pin@P1dB vs Frequency

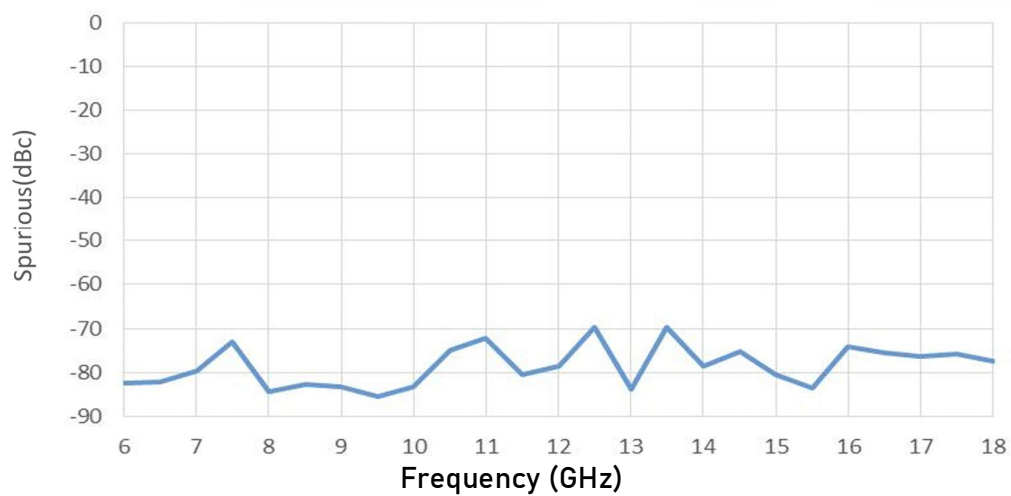


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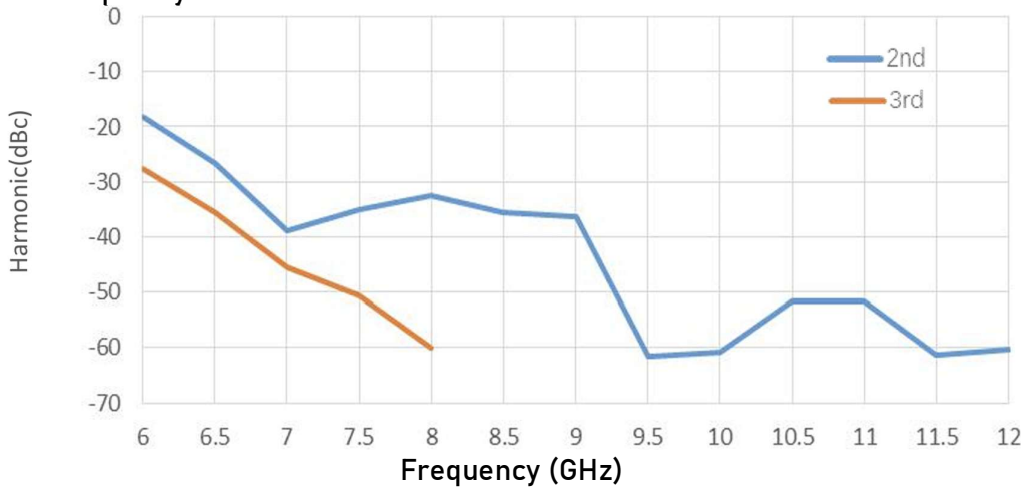
Pin@Pout = 60.1dBm vs Frequency



Spurious vs Frequency



Harmonic vs Frequency



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