

### Features

- Gain: 50dB Typical
- Output Power +50dBm Typical
- Supply Voltage: +28V



### Typical Applications

- Wireless Infrastructure
- 5G communication
- Test and measurement Instrument

RF Microwave & VSAT  
Fiber Optics

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	20		100	100		1000	MHz
Gain	49	50	53	49	50	54	dB
Gain Flatness		±1.0			±1.5		dB
Gain Variation Over Temperature (-40°C~+70°C )		±2.0			±2.0		dB
Input VSWR		1.5	2.0		1.5	2.0	: 1
Saturated Output Power (Psat)	48.5	50		48	50		dBm
IM3		25			25		dBc
Isolation S12		-55			-55		dB
Supply Current (Vcc=+28V)		2.1	13		2.1	13.5	A
Efficiency @ P1dB		45			40		%

Weight	Net	27 Max. ounces	Impedance	50ohms
	Including Heat Sink	134.4 Max. ounces		
Input / Output Connectors	SMA-Female		Material	Aluminum
DC Interface Connector	D-Sub9-Pin ( Male)		Package Sealing	Epoxy Sealed (Standard)
Finish	Conductive Oxidation Wire Drawing			Hermetically Sealed (Optional)

**Absolute Maximum Ratings**

Operating Voltage	+32V
RF Input Power (+28V)	+5dBm

**Biassing Up Procedure**

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +28V biasing

**Power OFF Procedure**

Step 1	Turn off +28V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

**Environmental Specifications**

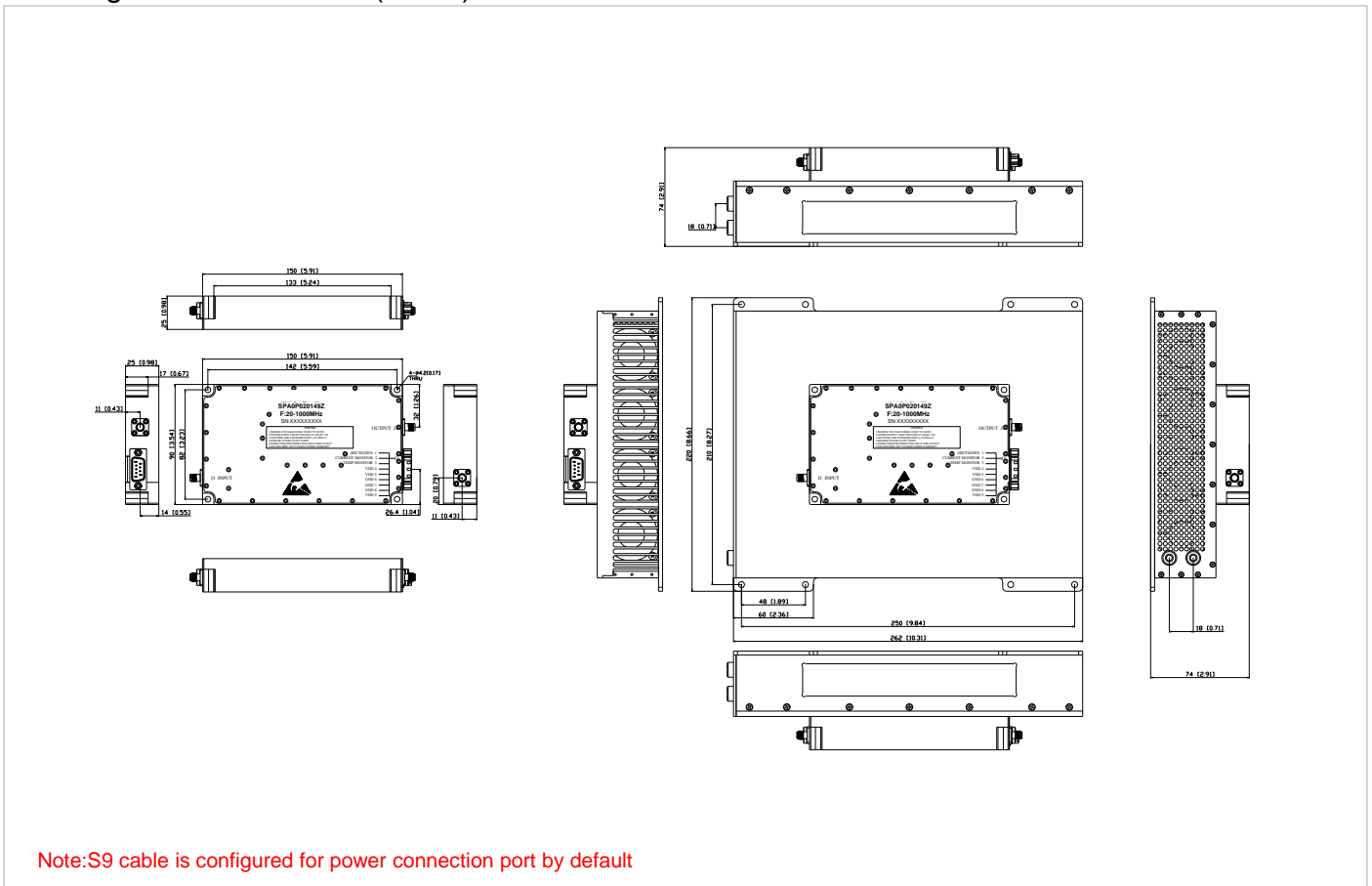
Operational Temperature	-40°C~+70°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

**Outline Drawing:**

All Dimensions in mm (inches)

Housing Tolerances ±0.2 (0.008)

Heat Sink required during operation(Sold Separately)



Note:S9 cable is configured for power connection port by default

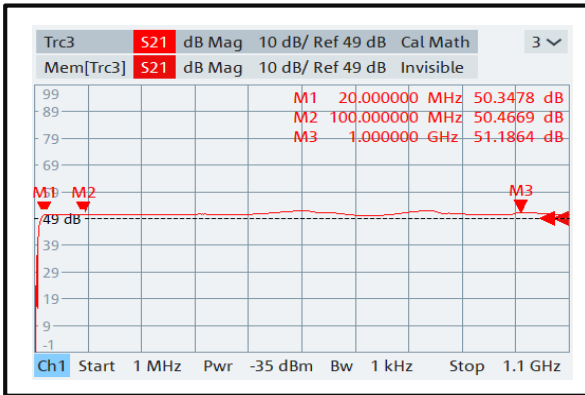
**Packing List**

ID	Description	QTY
1	Fig a. S15 cable	1

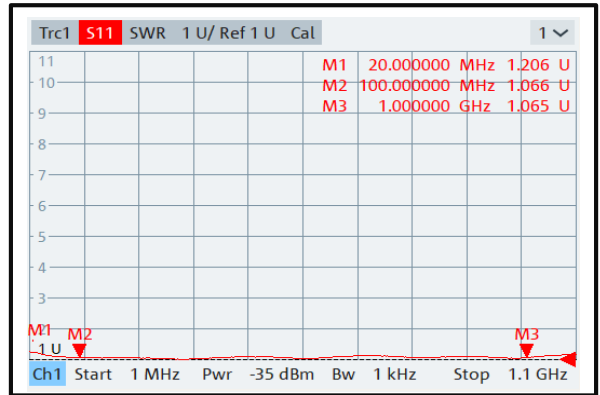

**Fig a.**
**DC Interface Connector**

Pin #	Description	Specifications
4,5,9	VDD	+28VDC
6,7,8	GND	Ground
1	SHUTDOWN	Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low)
2	CURRENT MONITOR	Analog voltage relative to IDD @ 100mV per Ampere
3	TEMP MONITOR	Analog voltage relative to Module's Temperature (500mV+10 mV/°C)

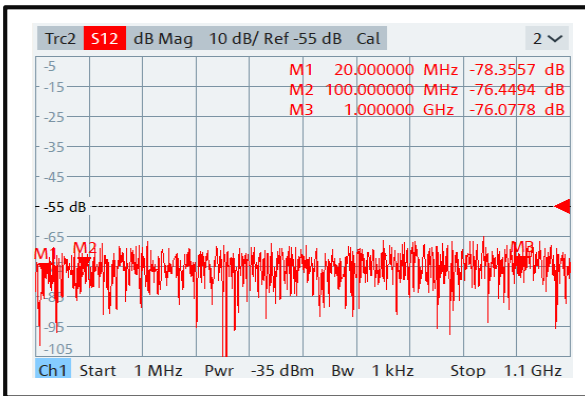
**Gain @ +25°C**



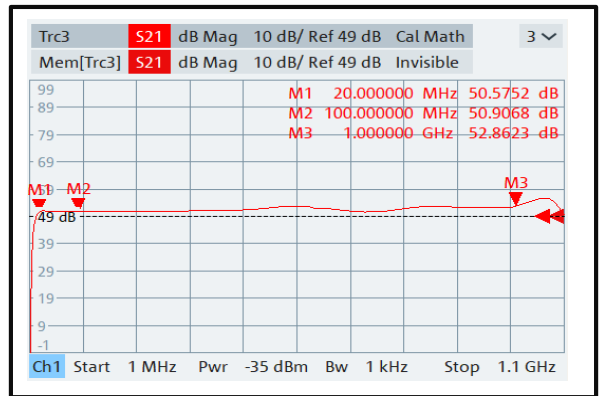
**Input VSWR @ +25°C**



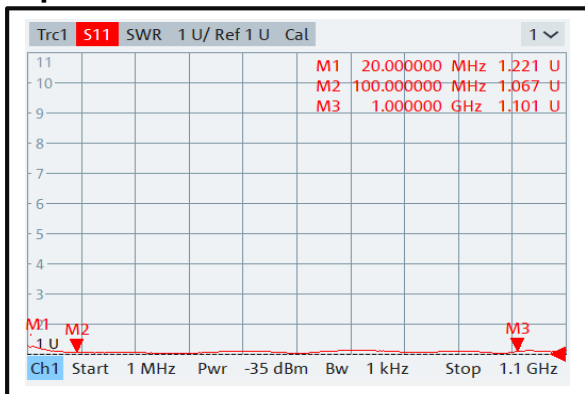
**Isolation @ +25°C**



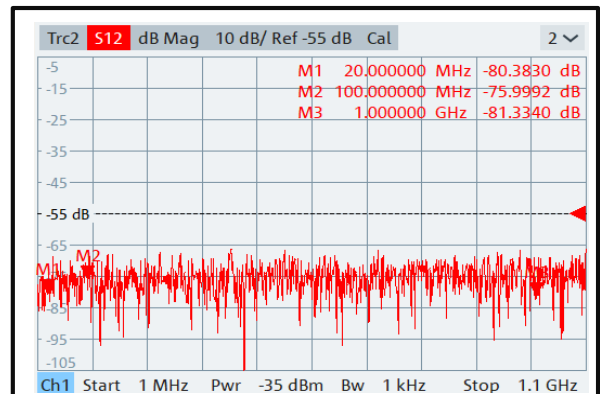
**Gain @ -40°C**



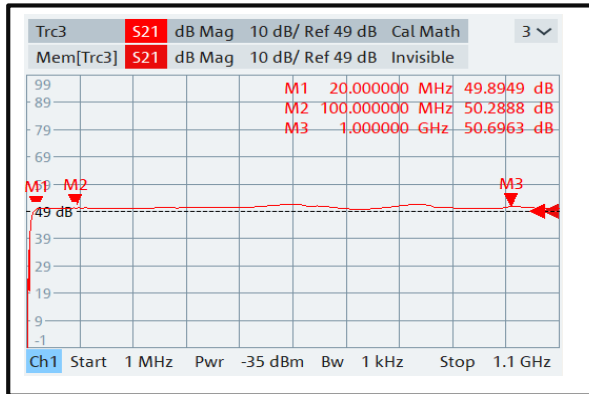
**Input VSWR @ -40°C**



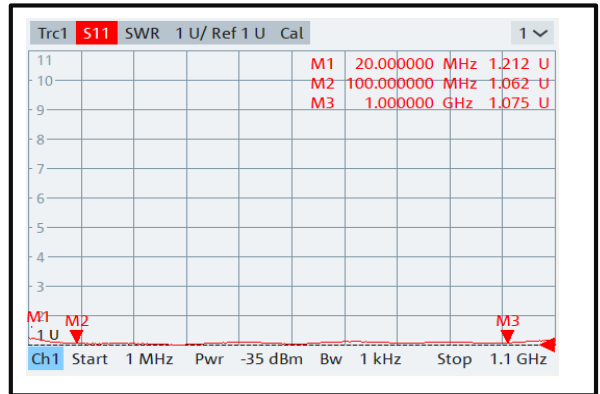
**Isolation @ -40°C**



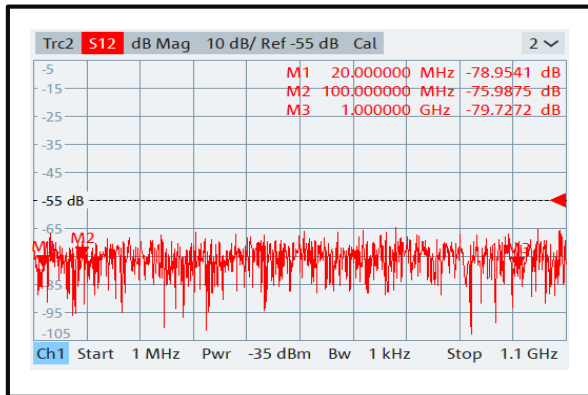
### Gain @ +70°C



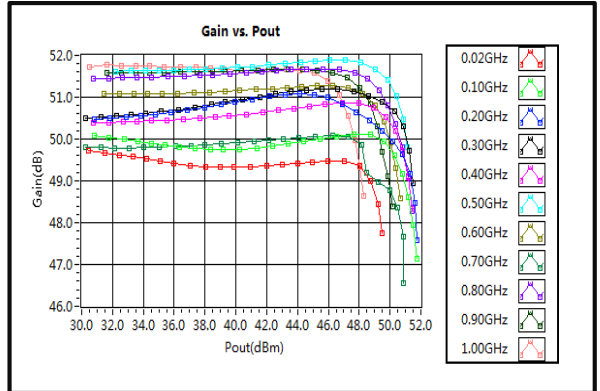
### Input VSWR @ +70°C



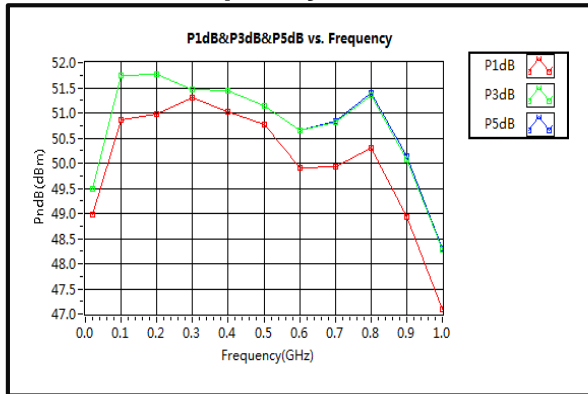
### Isolation @ +70°C



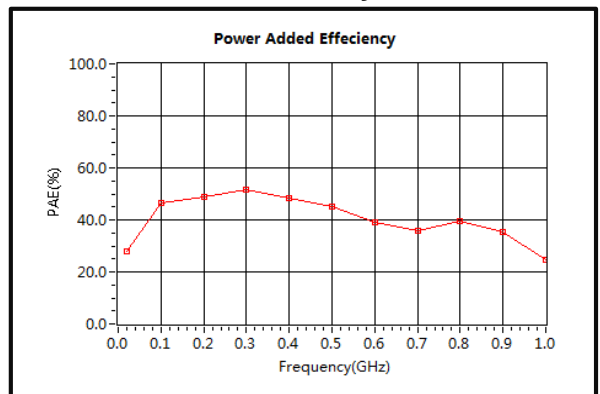
### Gain vs. Output Power



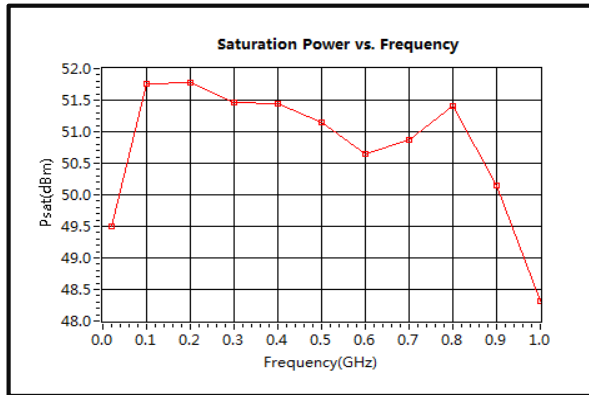
### PndB vs. Frequency



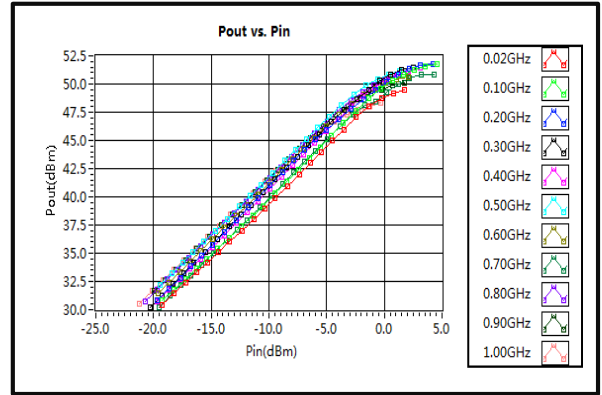
### Power Added Efficiency



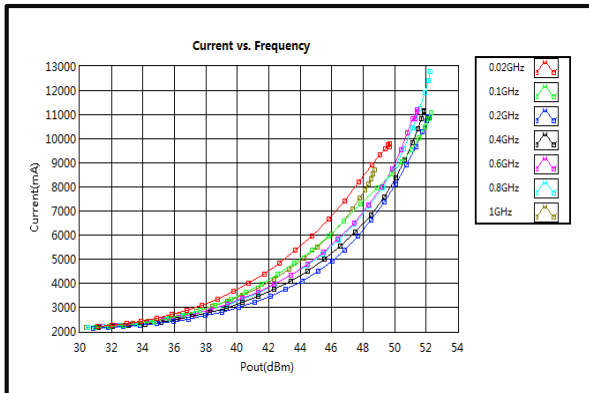
### Saturation Power vs. Frequency



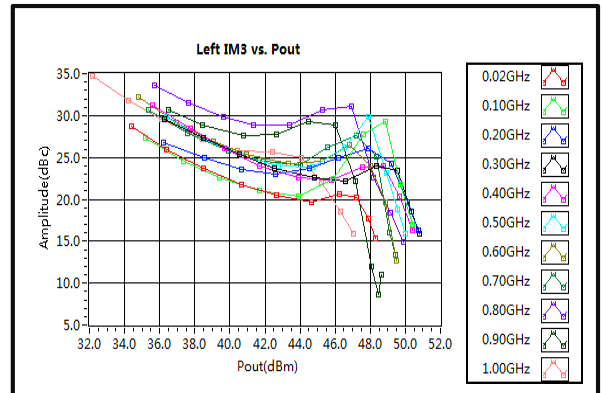
### Pout vs. Pin



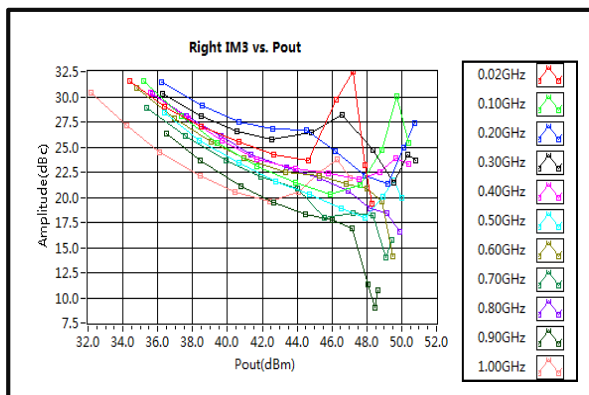
### Current vs. Pout



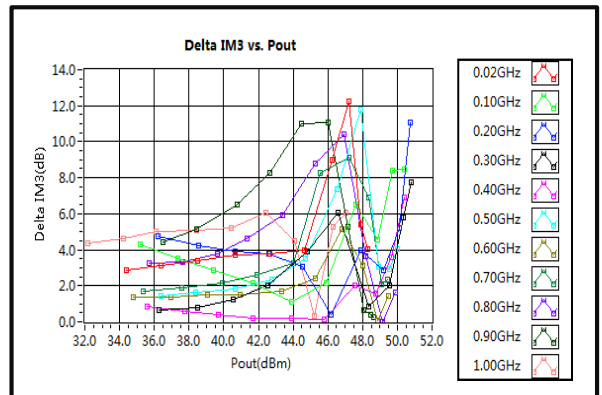
### Left IM3 vs. Pout



### Right IM3 vs. Pout



### Delta IM3 vs. Pout



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