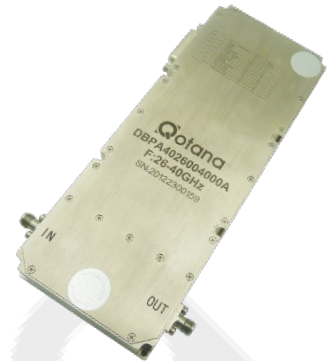


**Features**

- Solid State Power Amplifier
- Gain: 45dB Typical
- Psat: 39dBm Typical
- Supply Voltage: +28V


**Typical Applications**

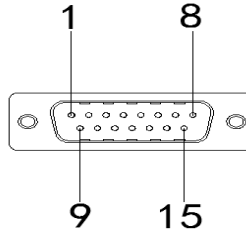
- Wireless Infrastructure
- 5G communication
- Test and measurement Instrument

RF Microwave & VSAT  
Fiber Optics

Parameter	Min.	Typ.	Max.	Units
Frequency Range	26		40	GHz
Gain	40	45		dB
Gain Flatness		±5.0		dB
Gain Variation Over Temperature (-40°C~+70°C )		±6.0		dB
Input Return Loss		10		dB
Saturated Output Power (Psat)	37	39		dBm
Isolation S12		-60		dB
Supply Current (Vcc=+28V)		3	6	A
Power-added Efficiency		10		%

Weight	36 ounces (Max.) Amplifier	Impedance	50ohms
	135 ounces (Max.) Including Heat sink		
Input / Output Connectors	2.92mm-Female	Material	Copper
Finish	Nickel Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Optional)

**Interface Connector**

D-sub 15 (Male)					
PIN #	NAME	FUNCTION	Initial State	Description	Applied
1,2,9,10	VDD	Power Supply	+28V	+28V DC is supply Voltage	Yes
3,11	GND	Ground	GND	Ground	Yes
4	+5V_USER	Power Supply	+5V	Supply +5V power to user	Yes
5	TEMP_SIGNA L	Indicator	Voltage	Display temperature signal	Yes
6	GATE_OFF	Control	LOW	Applying logic HIGH disables gates of amplifiers	Yes
7	AMP_OFF	Control	LOW	Applying logic HIGH disables Positive Supply Voltage of amplifiers	Yes
8	RESET	Control	HIGH	Resets PA when logic LOW is applied and released (Internally Pulled-High +5V)	Yes
12	VSWR Over	Indicator	LOW	Pin will be latched to logic HIGH when output vswr signal is over limit	No
13	RF IN Over	Indicator	LOW	Pin will be latched to logic HIGH when input signal is over limit	Yes
14	Temp Over	Indicator	LOW	Pin will be latched to logic HIGH when driven over Temperature	Yes
15	Current Over	Indicator	LOW	Pin will be latched to logic HIGH when Current Limit is reached	Yes

HIGH/LOW voltages are standard TTL signals:  
 0.0V-0.8V = LOW  
 2V-5V = HIGH

**Absolute Maximum Ratings**

Operating Voltage	+30V
RF Input Power	+5dBm

**Biassing Up Procedure**

Step 1	Connect Ground Pin
Step 2	Connect input and output with 50 Ohm source/load. (in band VSWR10dB return loss)
Step 3	Connect +28V

**Power OFF Procedure**

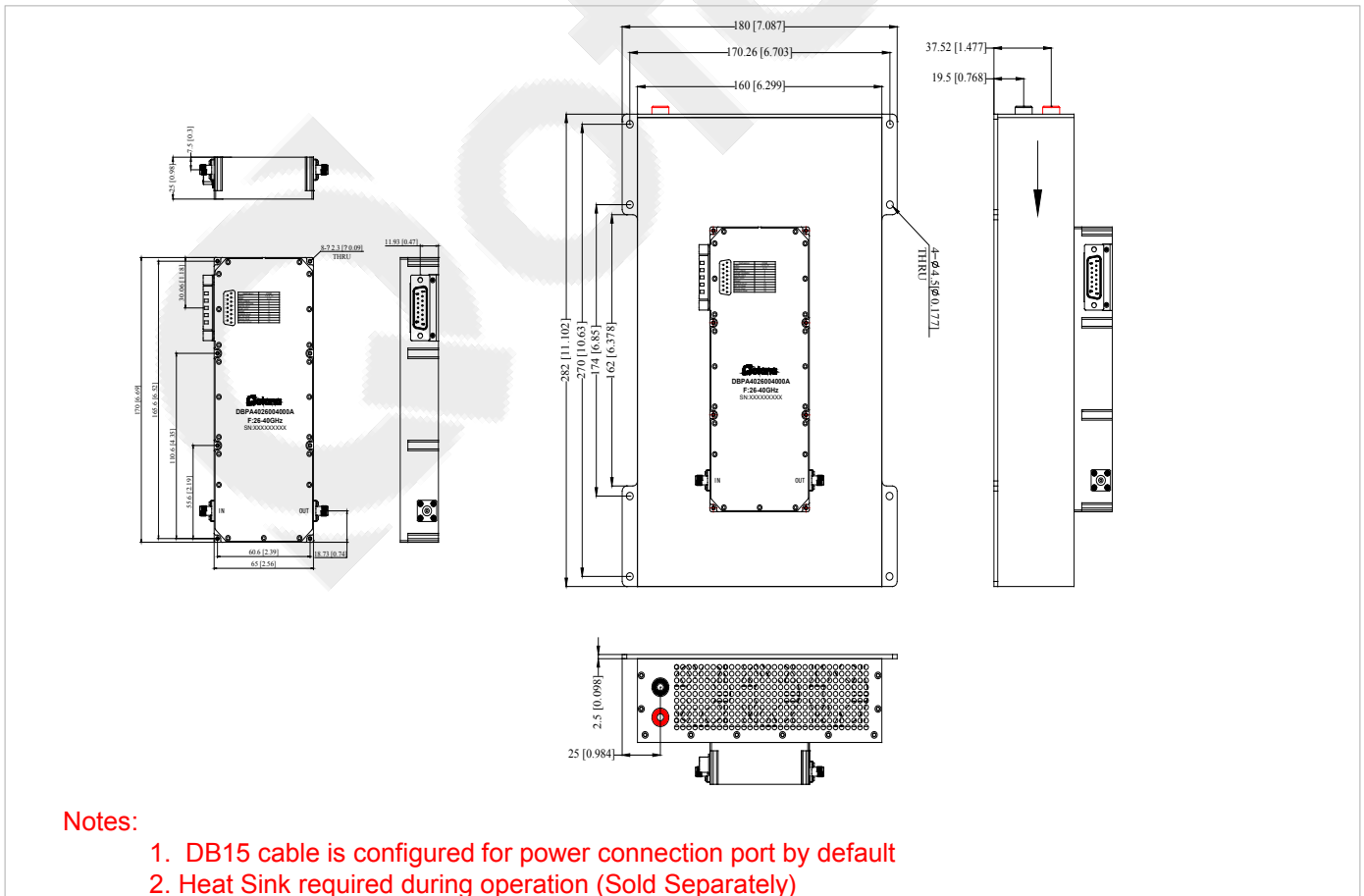
Step 1	Turn off +28V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

**Environmental Specifications**

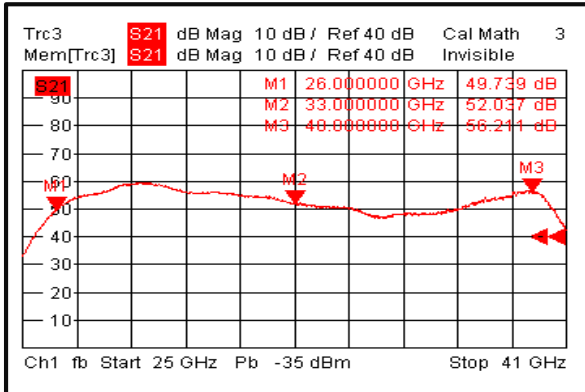
Operational Temperature	-40°C~+70°C
Storage Temperature	-50°C~+105°C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35°C, 95%RH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

**Outline Drawing:**

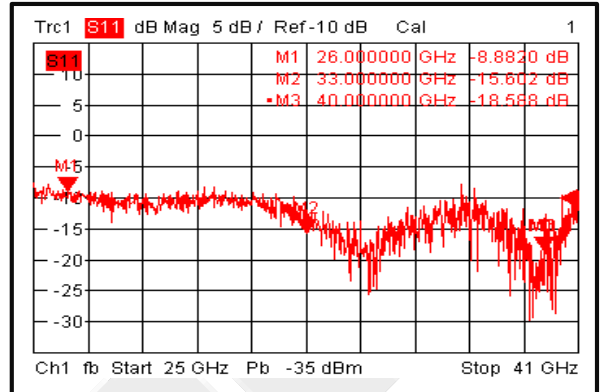
All Dimensions in mm (inches) Housing Tolerances  $\pm 0.1$  (0.004)



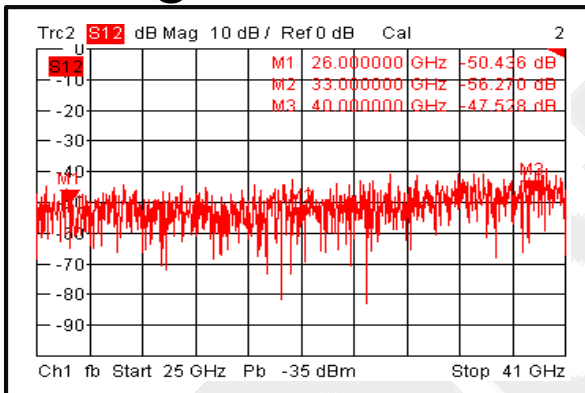
Gain @ +25°C



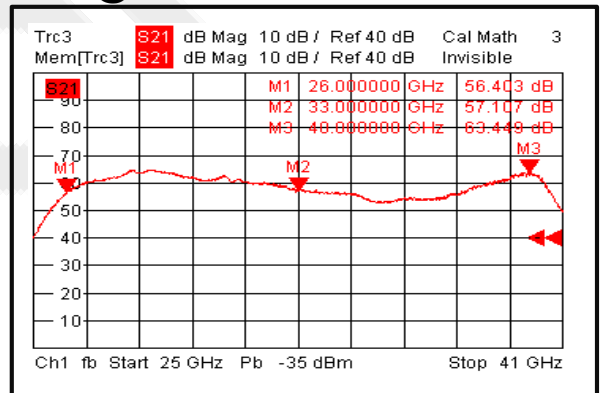
Input Return Loss @+25°C



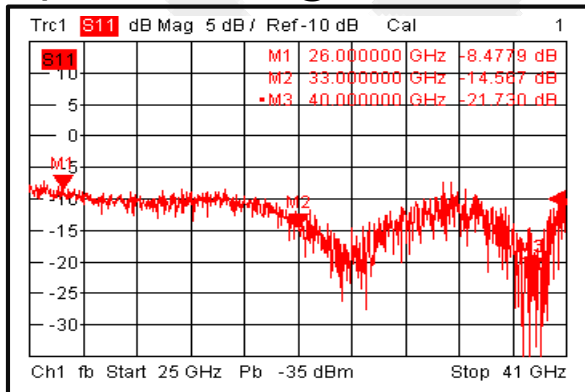
Isolation @ +25°C



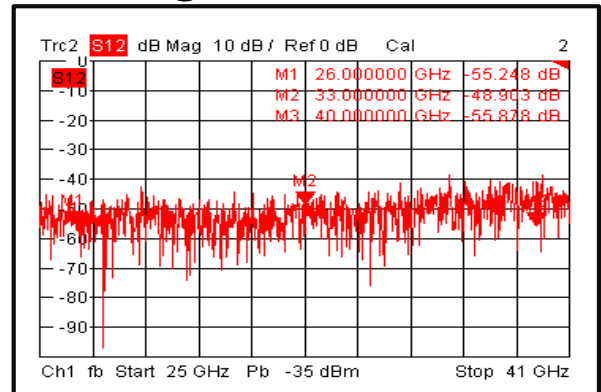
Gain @ -40°C



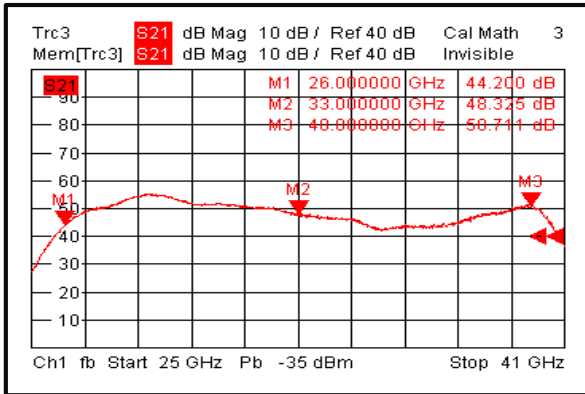
Input Return Loss @ -40°C



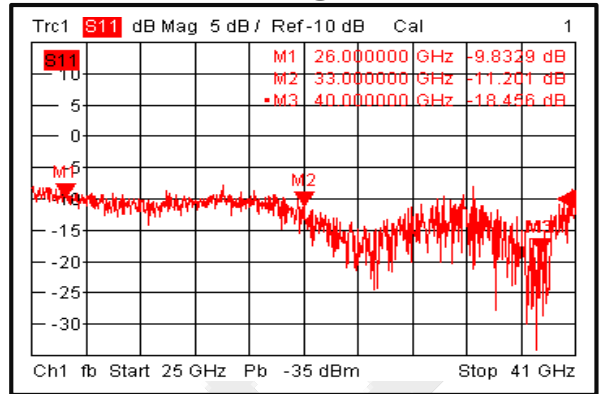
Isolation @ -40°C



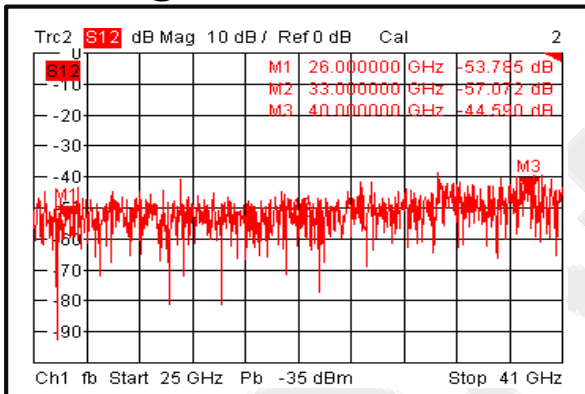
Gain @ +70°C



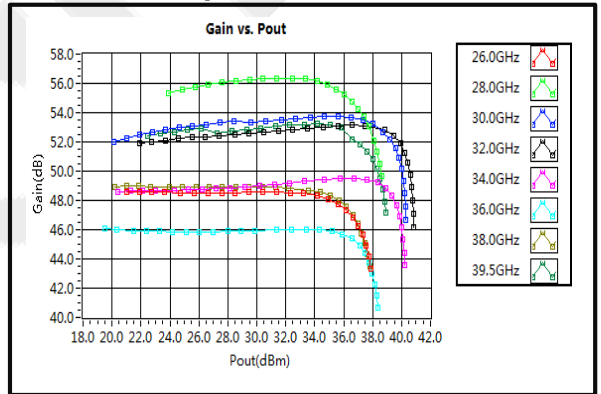
Input Return Loss @ +70°C



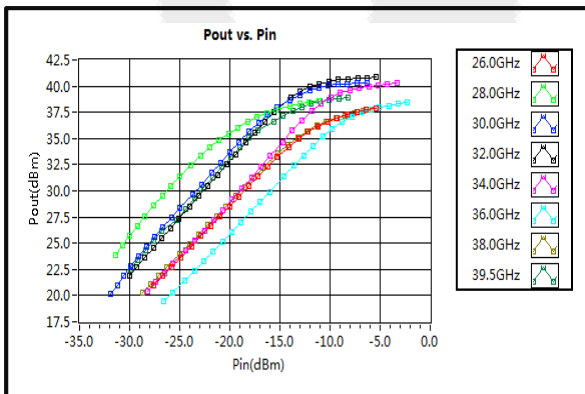
Isolation @ +70°C



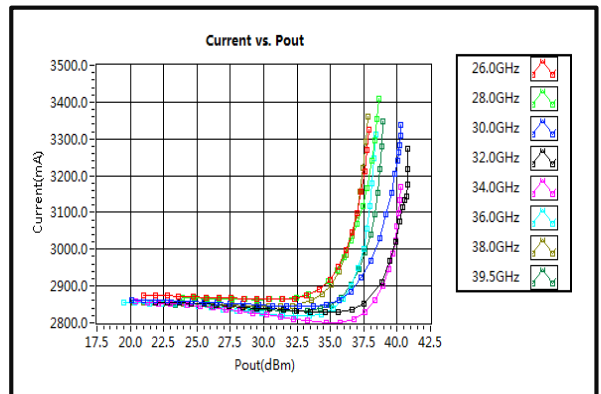
Gain vs. Output Power



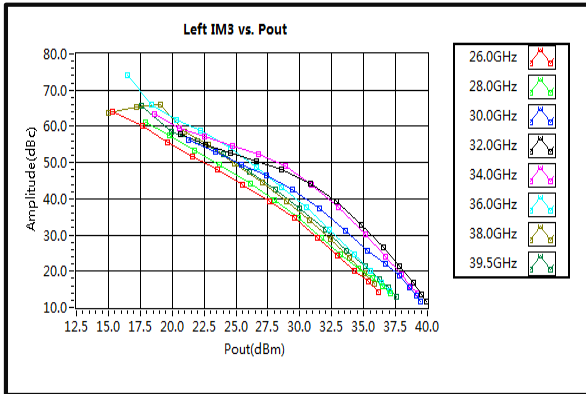
Pout vs. Pin



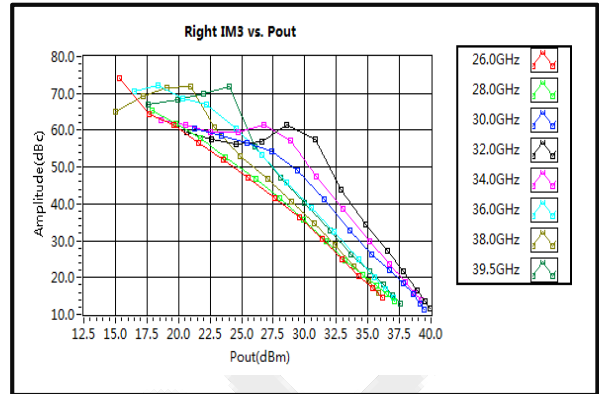
Current



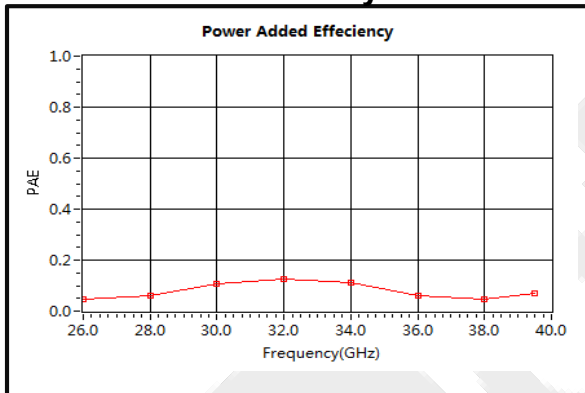
Left IM3 vs. Pout



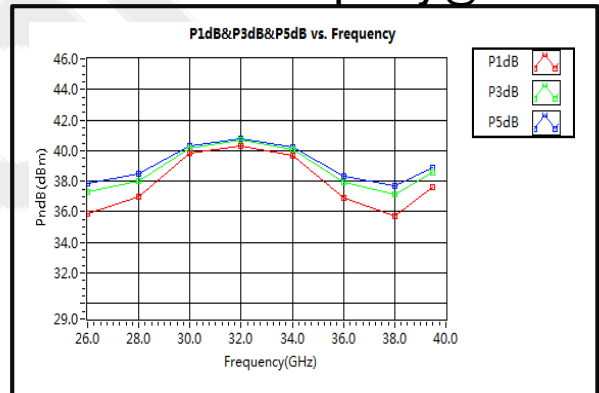
Right IM3 vs. Pout



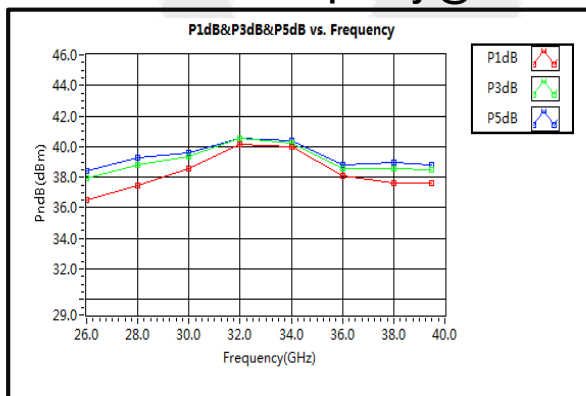
Power Added Efficiency



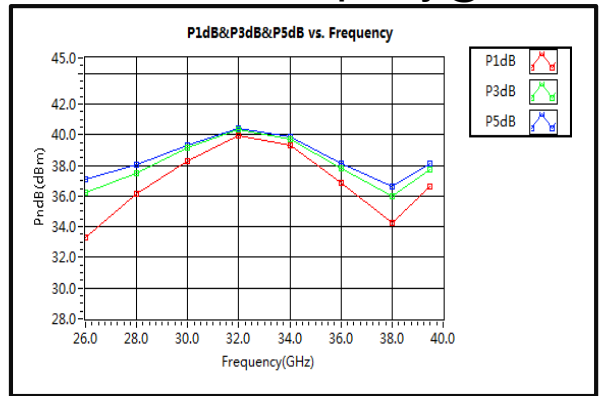
P1dB – P5dB vs. Frequency @+25°C



P1dB – P5dB vs. Frequency @-40°C



P1dB – P5dB vs. Frequency @+70°C



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