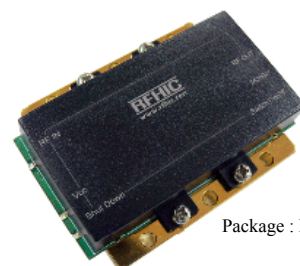


Product Features

- GaN on SiC Broadband High Power Amplifier
- Operation across 450MHz to 880MHz
- 40Watts P3dB typical
- GaN HFET

Application

- UHF Television



Package : DP-75

Description

The RWP06040-10 is designed for Wideband Power Amplifier application frequencies from 450 to 880MHz. This module uses GaN HEMT technology which performs high breakdown voltage, high linearity, wide bandwidth and high efficiency.

Gallium Nitride on SiC technology is used and attached on an aluminum sub carrier. Full in/out matching for broadband performance is already applied.

Improved thermal handling by patented technology.

Typical Specifications

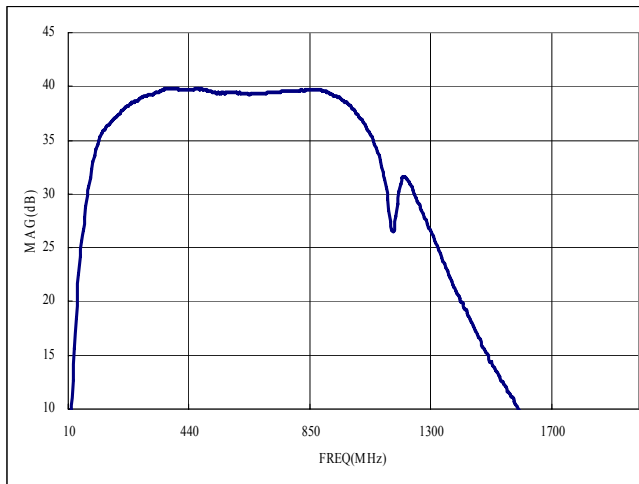
$V_{CC} = +28V$; $T = 25^{\circ}C$; $Z_S = Z_L = 50\Omega$

Ref.	CHARACTERISTIC	CONDITIONS		Min.	Typ.	Max.	Units
1.	Bandwidth			450		880	MHz
2.	Gain			38	40	42	dB
3.	Gain variation vs temperature	-20°C to 60°C		-2.0		+2.0	dB
4.	Gain variation vs frequency				±1	±2	dBpp
5.	P _{3dB}	450MHz to 650MHz		44	45		dBm
		650 MHz to 880MHz		44	45		
6.	OIP3 2tone 1MHz @ +30dBm output power	450MHz to 650MHz		49	51		dBm
		650 MHz to 880MHz		49	51		
7.	Input Return Loss				-12	-10	dB
8.	Output Return Loss				-11	-7	dB
9.	ACLR@Pout=28dBm W-CDMA,64PCH,4FA Spectrum Analyzer Setting : RBW=30KHz, VBW=10KHz	450MHz	△=5MHz	45	48		dBc
			△=10MHz	48	51		
		880MHz	△=5MHz	44	45		
			△=10MHz	47	48		
10.	Supply voltage				+28	+30	V
11.	Quiescent Current consumption			2.3	2.5	2.7	A
12.	On/Off Switch Time	On: TTL "Low" Off: TTL "High"(100mA@Disable)			3.0	5.0	uS

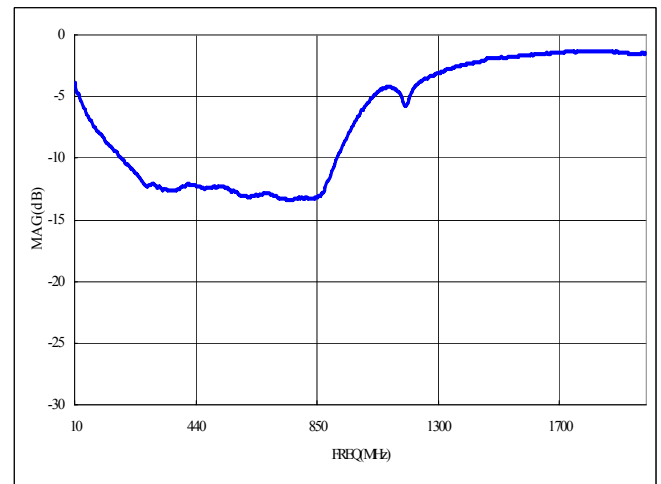
RWP06040-10 Typical Performance @ 25°C

Frequency (MHz)	P1dB (dBm)	P3dB (dBm)	Current@ P1dB (A)	Current@ P3dB (A)	OIP3@1GHz (dBm)	W-CDMA 64CH 4FA @ 28dBm			
						-5MHZ	+5MHZ	-10MHZ	+10MHZ
450MHz	44.4	45.6	2.3	2.4	51.6	-48.0	-48.1	-50.8	-51.0
550MHz	42.5	44.9	2.4	3.1	50.8	-46.3	-46.4	-49.1	-49.3
650MHz	42.5	44.9	2.4	3.2	50.2	-45.4	-45.7	-48.1	-48.6
750MHz	43.0	45.4	2.5	3.0	50.5	-45.7	-46.1	-48.4	-48.9
880MHz	43.1	45.4	2.5	3.0	50.3	-45.5	-46.0	-48.2	-48.8

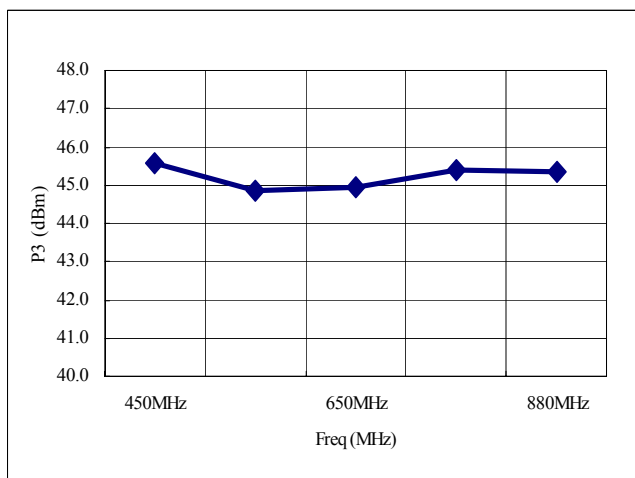
Gain



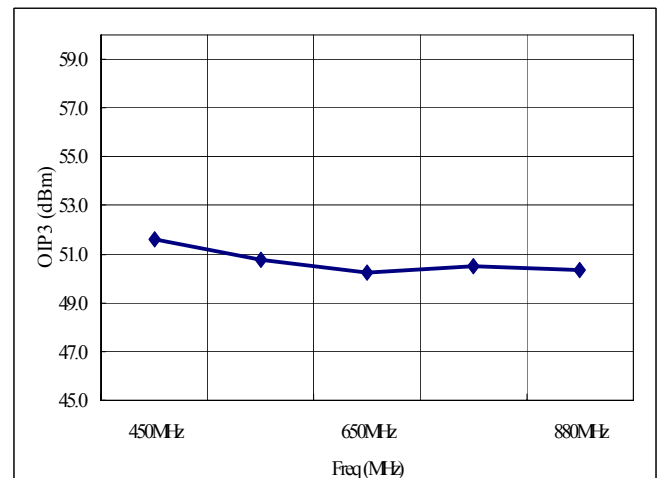
Input Return Loss



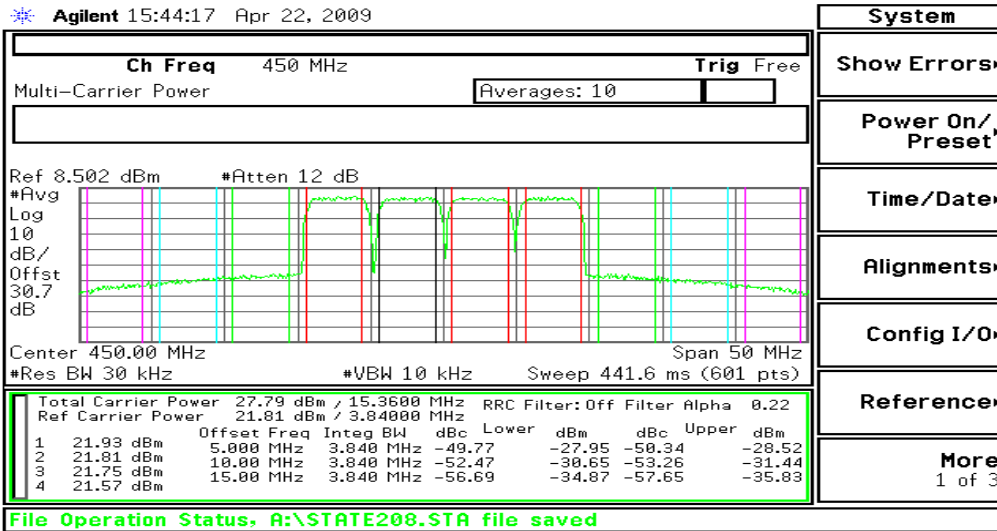
P3



OIP3



W-CDMA,64PCH,4FA ACLR



System

Show Errors>

Power On/
Preset>

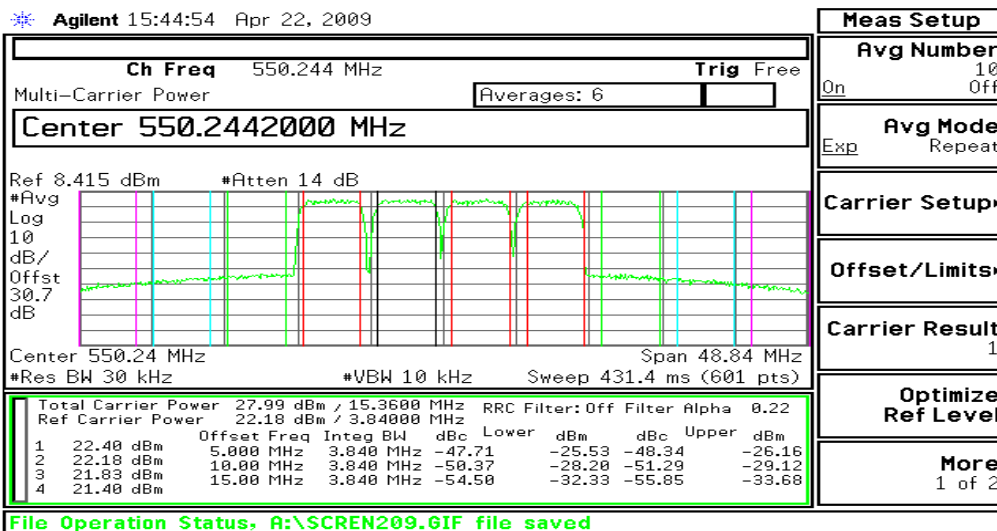
Time/Date>

Alignments>

Config I/O>

Reference>

More
1 of 3



Meas Setup

Avg Number 10
On Off

Avg Mode
Exp Repeat

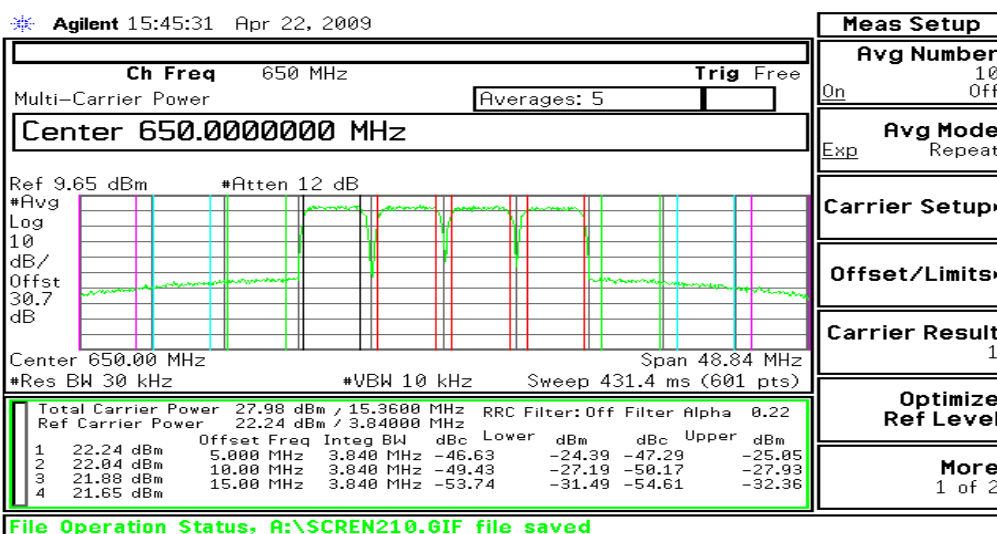
Carrier Setup>

Offset/Limits>

Carrier Result 1

Optimize Ref Level

More
1 of 2



Meas Setup

Avg Number 10
On Off

Avg Mode
Exp Repeat

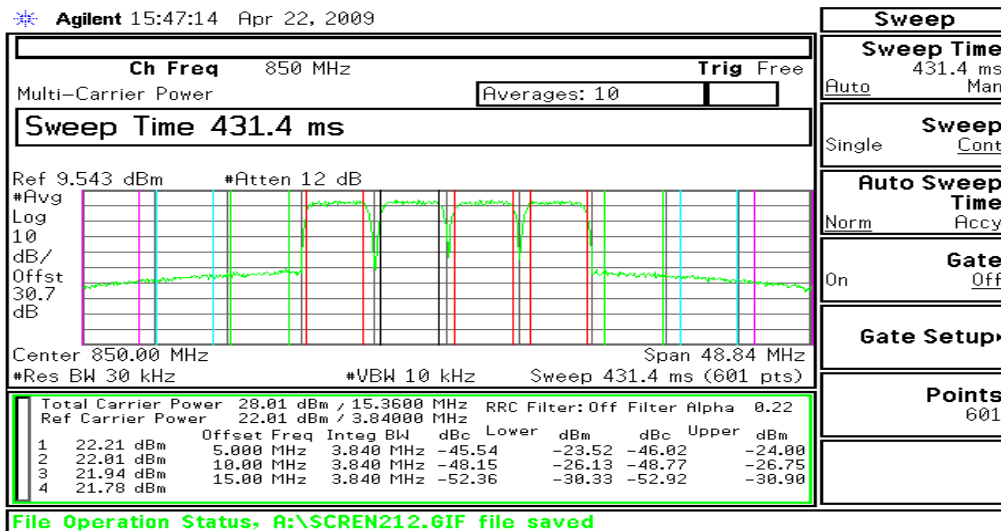
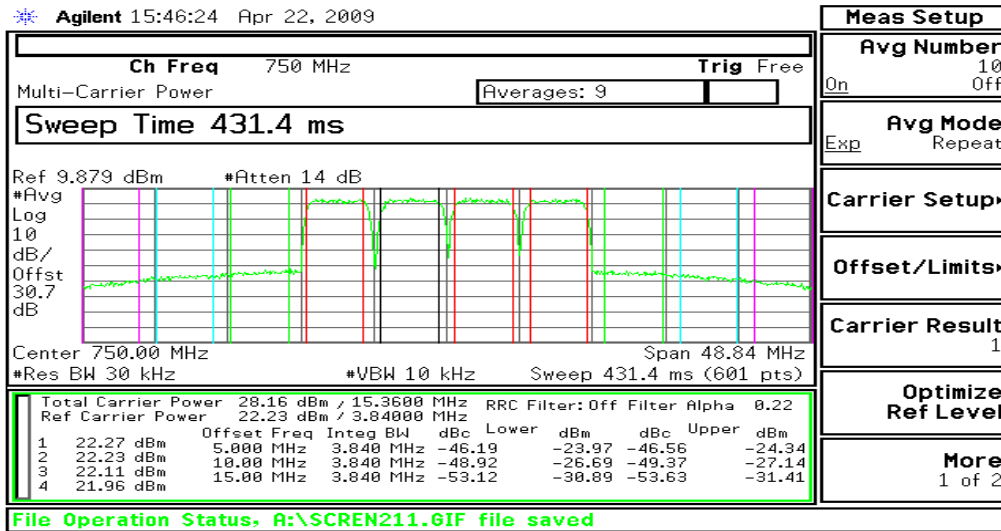
Carrier Setup>

Offset/Limits>

Carrier Result 1

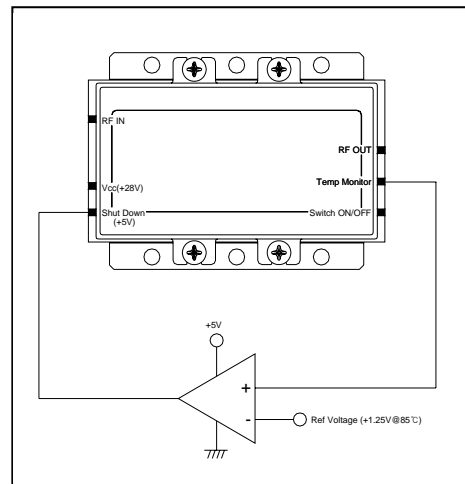
Optimize Ref Level

More
1 of 2

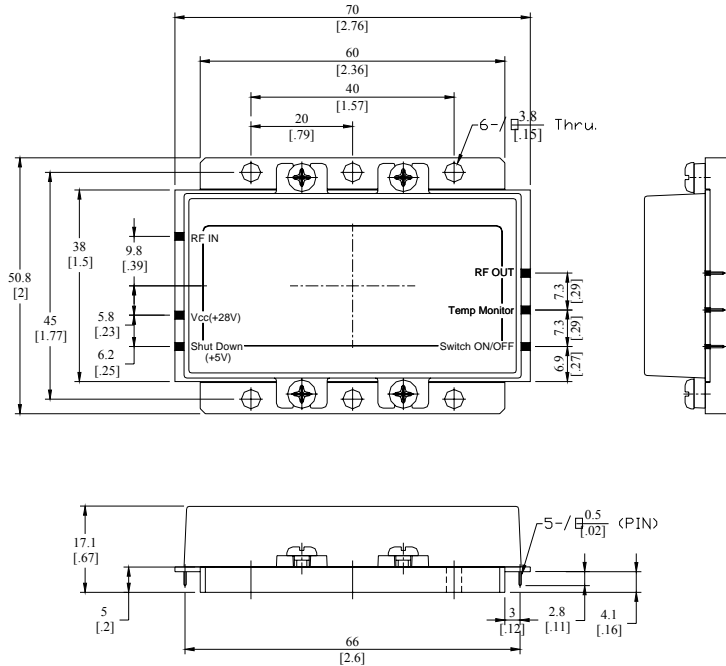


Precautions

- This product is designed to be used for broadband amplification. Heat generation is higher when there is no RF signal in the device. Therefore, the worst case scenario is when there is no RF signal, and the thermal management must be calculated accordingly.
- Case temperature must maintain below 80C.
- Right side drawing notes how to use a temperature monitoring function to protect against over heating.



Package Dimensions (Type: DP-75)

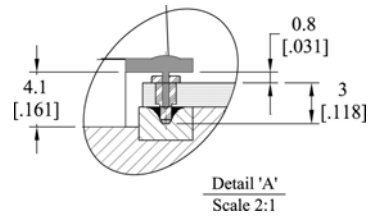
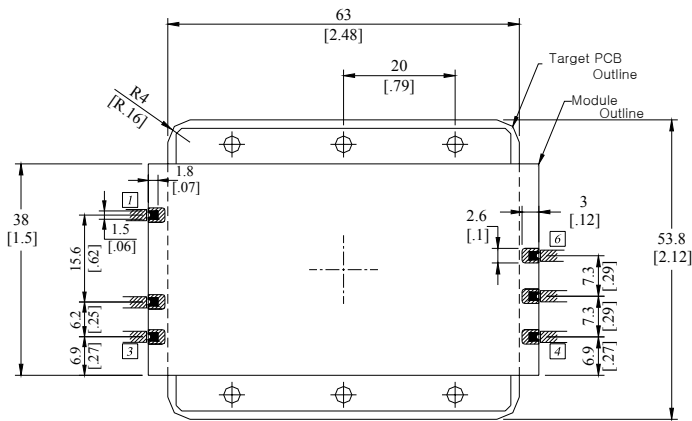


Unit : $\frac{\text{mm}}{\text{[inch]}}$	Tolerance : $\pm \frac{0.2}{.008}$
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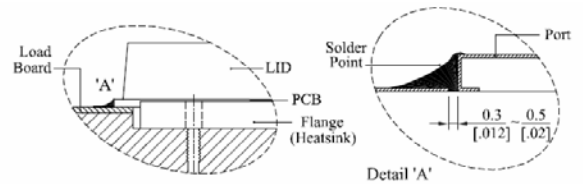
Pin No.	Function
1	RF In
2	V _{CC} (+28V)
3	Shut down(+5V)
4	Switch ON/OFF
5	Temp Monitor (0.75V@25°C, Scale:10mV/°C, Accuracy:±3°C)
6	RF Out

Terminal Pin	Acethink
	ASK206091, AA
Terminal Pin socket	Acethink
	ASK20556, AA-1

Footprint for easy maintenance



Another Usage



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