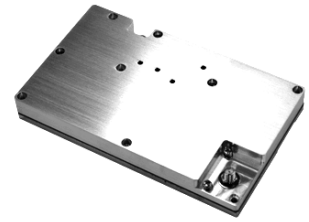


**Product Features**

- Doherty amplifier design
- GaN on SiC HEMT
- Small and light weight
- 50 Ohm Input/Output impedance matched
- Highly reliable and rugged design
- High efficiency, High Gain
- 25W typical P<sub>AVG</sub>

**Application**

- WCDMA & LTE DPD amplifier
- General purpose RF amplifier



**Description**

The RTP21025-10 is designed for RF system application frequencies from 2110MHz to 2170MHz, with high gain. This Pallet Amplifier uses GaN on SiC HEMT technology which performs high breakdown voltage, high linearity, high efficiency. The RTP21025-10 is DPD application amplifier.

**Electrical Specifications @ VDD=+28VDC, T=25°C, 50Ω**

PARAMETER	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	2110	-	2170	MHz
Output Power	P <sub>AVG</sub>	-	44		dBm
Output Power @ Psat G.C.P	P <sub>sat</sub>	-	51.5	-	dBm
Small Signal Gain	SSG	55	60	-	dB
Small Signal Gain Flatness	ΔG	-	± 1.0	± 2	dB
Gain Variation	ΔGt		± 3.0		dB
ACLR @ WCDMA 20MHz 4FA	ACLR	-23	-25		dBc
ACLR with DPD	ACLR		-53		dBc
Forward Coupling	FC	-32	-31	-30	dB
Operating Voltage	VDC		28	-	Volt
Efficiency @ Pout 25Watt(PAR 7.5dB)	E	-	38	-	%

\* Test Signal Condition : WCDMA 20MHz 4FA (PAR 7.5dB), Test DPD solution : Optichron DPD

**Environmental Characteristics**

PARAMETER	Symbol	Min	Typ	Max	Unit
Operating Temperature	T <sub>c</sub>	-30	-	+60	°C
Storage Temperature	T <sub>s</sub>	-40	-	+90	°C

**Mechanical Specifications**

PARAMETER	Value	Units	Limits
Dimensions ( L x W x H )	150 x 90 x 18.5	mm	Max
Weight	300	g	Typical
RF Connectors In/Out	SMA Female		
RF Connector Coupling	MCX Female		
DC Connectors / Controls	5569-08(8pin), 5267-03A(3pin)		
Cooling	External Heat sink + airflow		

### RF Interface Connectors

Pin #	DESCRIPTION	Specifications
1	<b>RF IN</b>	RF Input signal
2	<b>RF OUT</b>	RF Output signal
3	<b>RF FWD Port</b>	RF Forward Detection signal For Feed-back

### DC Connector

- 5569-08 (4.2mm PITCH, 8Pin)

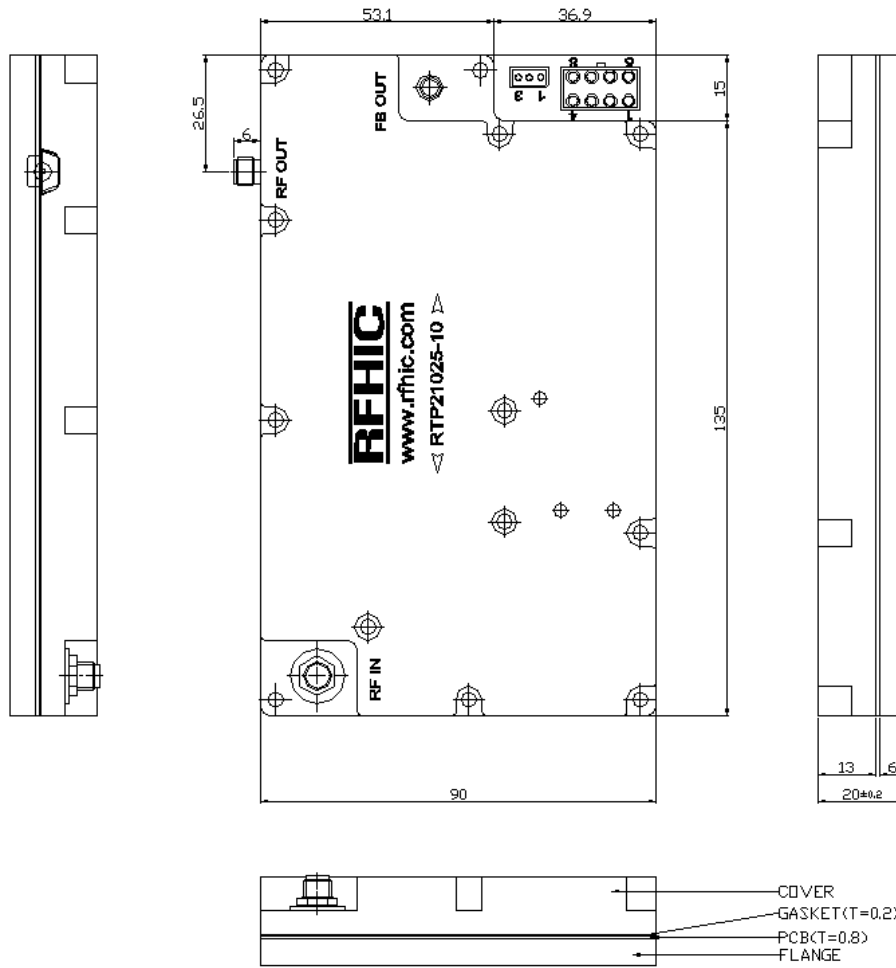
Pin #	DESCRIPTION	Specifications
1,2,3	<b>Drive, Main Amp +Vdd</b>	+28Vdc
4	<b>Gain Block Amp +Vgg</b>	+5.6V
5,6,7,8	<b>GND</b>	Ground

- 5267-03A (2.5mm PITCH, 3Pin)

Pin #	DESCRIPTION	Specifications
1	<b>GND</b>	Ground
2	<b>Enable</b>	Low Enable
3	<b>Temp. Monitor</b>	Reporting Temperature data [0.75V/25°C(10mV/°C)]

\* RF connector and DC connector custom design available.

**Outline Drawing**

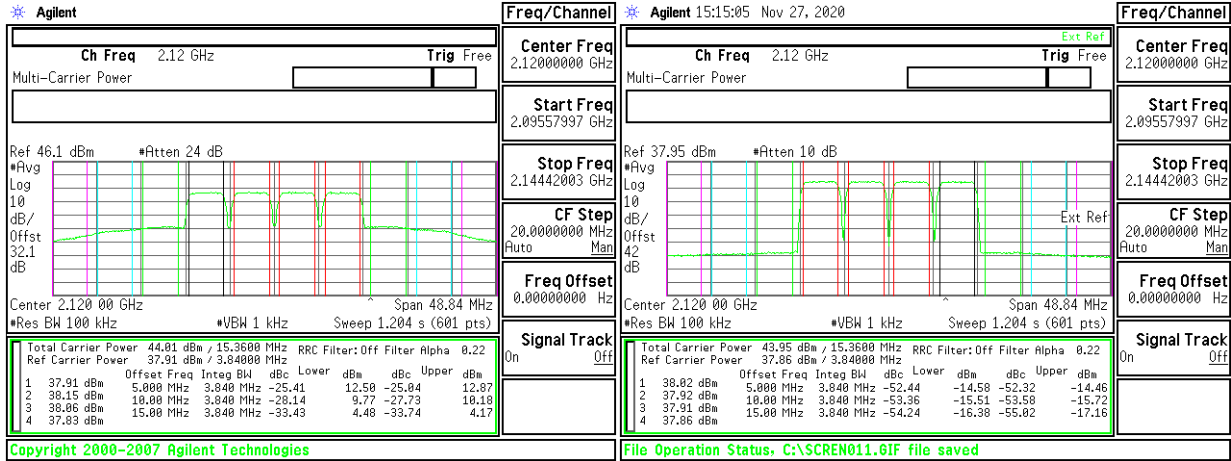


**Typical Output Spectrum @ WCDMA 20MHz 4FA (PAR 7.5dB) : Pout =25W(44dBm)**

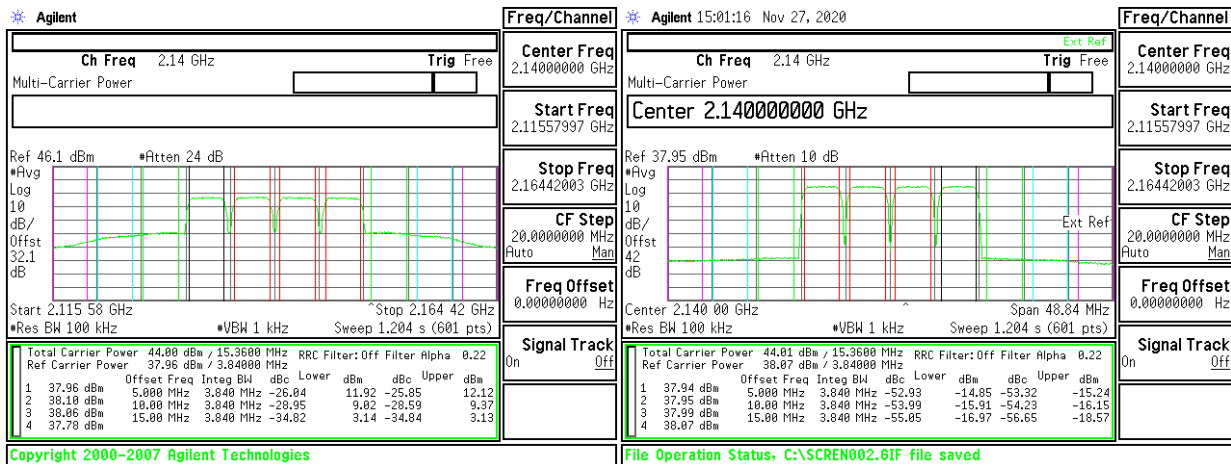
**- Without DPD -**

**- With DPD -**

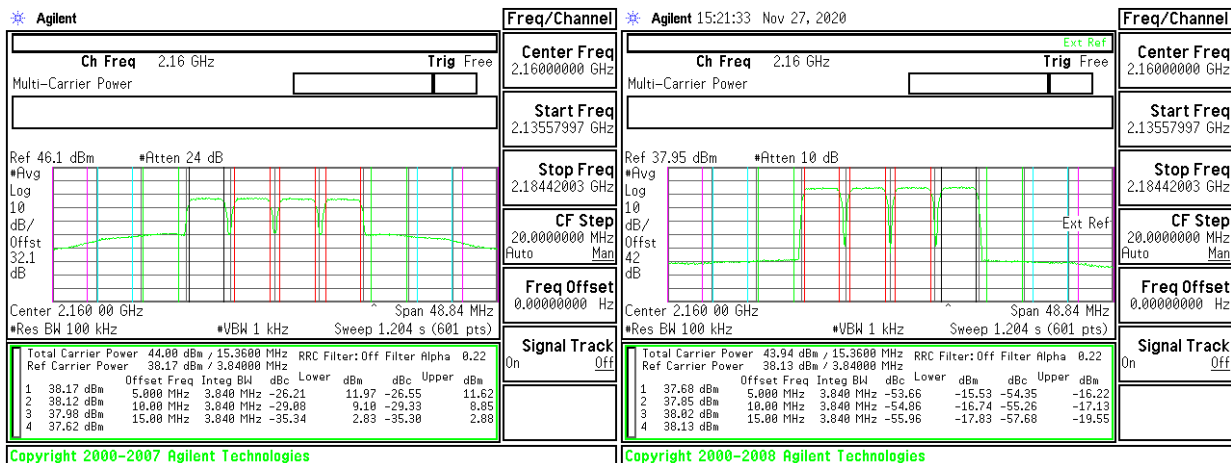
**Frequency 2.12GHz**



**Frequency 2.14GHz**



**Frequency 2.16GHz**



**Network Analyzer**



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