

**APCT-1.00-3.00-200-34V**
**1000 – 3000 MHz / 200 Watts**

Model APCT-1.00-3.00-200-34V is a gallium-nitride (GaN) solid state broadband high power amplifier designed to provide 200 W output power across its full operating bandwidth and operate from a +34V supply. This compact module utilizes high power advanced GaN on SiC transistors that provide excellent power density, high efficiency and wide dynamic range. Exceptional performance, long term reliability and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, machined housings and qualified components. UWB TECH ISO9001 Quality Management System assures consistent performance and the highest reliability.

**FEATURES**

- Class AB GaN linear
- Instantaneous wide bandwidth
- Small form factor and lightweight
- Built-in temperature monitoring
- Built-in shut down
- 50Ω input/output impedance
- High reliability and ruggedness

**APPLICATIONS**

- General Purpose
- Communication System
- Electronic Warfare
- Test and Measurement

**Electrical Specifications**

 [ Test Condition:  $V_{CC} = 34V$ ;  $T_C = 45^\circ C$ ;  $Z_S = Z_L = 50\Omega$  ]

Parameter	Unit	Min	Typ	Max	Notes
Operating Frequency	MHz	1000	-	3000	-
Power Gain @ Pin 0dBm	dB	51	53	-	1000 ~ 3000 MHz
Power Gain Flatness @ Pin 0dBm	dB <sub>pp</sub>	-	±1.0	±2.5	1000 ~ 3000 MHz
Output Power @ Pin 0dBm	dBm	51	53	-	1000 ~ 3000 MHz
Input Return Loss	dB	-	-10	-5	-
Supply Voltage	V	34	-	-	$V_{CC} (=V_{ds})$
Quiescent Current Consumption	A	-	3.6	5.5	-
Current Consumption @ Pin 0dBm	A	-	20.0	25.0	CW 1-tone
Shut Down TTL Voltage ***	V	0	-	0.5	On : TTL "Low" (Enable)
		2.5	5	5.5	Off : TTL "High" (100mA @ Disable)

Note

\*\*\* Drain On/Off : 500ms delay

**Absolute Maximum Ratings**

Parameter	Specification	Unit
Input RF Power	3	dBm
Supply Voltage	36	V
Load Mismatch Value	3 : 1 @ all load phase	-

\* Input Signal Condition : CW 1-tone

**Environmental Characteristics**

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	T <sub>case</sub>	-20	-	80	°C
Operating Ambient Temperature	T <sub>amb</sub>	-40	-	60	°C
Storage Temperature	T <sub>stg</sub>	-50	-	110	°C
Vibration	VI	MIL-STD-810G Method 514.6 ANNEX C			

**Mechanical Specifications**

Parameter	Specification	Unit
Dimension	195 x 131 x 30	mm
RF Connectors	RF Input : SMA Female	-
	RF Output : N-Type Female	-
Interface Connector	C7W2/D-SUB/Male type	-
Cooling	Adequate Heatsink Required (Not Supplied)	-

**Interface Connector Pin Description**

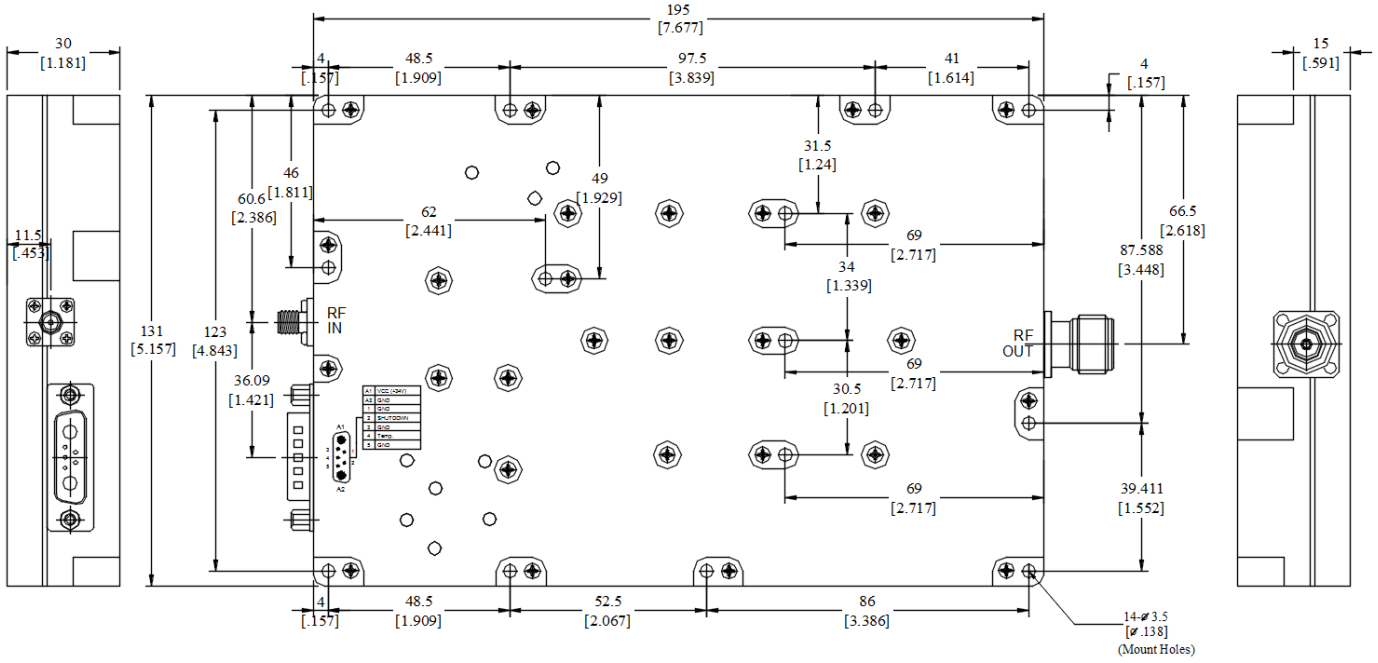
Pin	Description	Specification
A1	V <sub>cc</sub>	+34VDC
A2	GND	Ground
1	GND	Ground
2	Shut Down	Enable : TTL "Low", Disable : TTL "High" (Low : 0~0.5V, High : 2.5~5V) Disable Status : 50mA current consumption
3	GND	Ground
4	Temp Monitor	Reference voltage : 750mV @ 25°C, Scale : 10mV/°C
5	GND	Ground

\* Interface Connector Information 3007W2PAT75N20X(CONEC)

\* Recommended Screw Torque : 8.0kgf.cm±1 using SEMS M3 20mm Bolt

## Outline Drawing

Unit: mm[inch] | Tolerance:  $\pm 0.2$ [.008]



**Product Ordering Information**

<b>Order Number</b>	<b>Description</b>
APCT-0.60-2.70-200-34V	600-2700MHz 200W 34V SMA/N-type Connector type GaN Solid State Broadband High Power Amplifier
3007SCM99A10X	Interface Connector, 1pcs each
132C10049X	Interface Connector, 2pcs each

\* We recommend the customer to buy above Interface Connectors in the market. They are Interface Connectors to be fitted into Page 2 Interface Connector, 3007W2PAT75N20X(CONEC). Customer needs to put 2pcs 132C10049X into 1pcs 3007SCM99A10X, and then solder cables or wires per required length.

**Datasheet Revision Information**

<b>Part Number</b>	<b>Version</b>	<b>Modification</b>	<b>Status</b>
APCT-1.00-3.00-200-34V	1.0	-	In production

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