

Solid State Power Amplifier

APC1.0-3.0-100-32V

100 Watts

Model APC1.0-3.0-100-32V is a gallium-nitride (GaN) solid state power amplifier designed to provide 100 W output power and operate from a +32V supply. This compact module utilizes high power advanced GaN on SiC transistors that provide excellent power density and high efficiency. Exceptional performance, long term reliability and high efficiency are achieved by employing advanced RF matching networks and combining techniques, machined housings and qualified components. APC Technologies ISO9001 Quality Management System assures consistent performance and the highest reliability.

- Solid-state Class AB linear design
- Small form factor and lightweight
- Built-in temperature monitoring
- Built-in high speed switching On/Off
- 50 ohm input/output impedance
- High reliability and ruggedness

Applications

- General Purpose
- Communication System

Electrical Specifications @ $V_{CC} = 32V$; $T_C = 25^\circ C$; $Z_S = Z_L = 50\Omega$

Parameter	Min	Typ	Max	Unit	Condition
Power Gain @ Pin 13dBm	35	37		dB	
Power Gain Flatness @ Pin 13dBm		± 1.0	± 2.0	dBpp	
Output Power @ Pin 13dBm	48	50		Watt	
Input Return Loss		-7		dB	
Supply Voltage	32			V	$V_{CC}(=V_{DS})$
Quiescent Current Consumption		2.3	2.7	A	
Current Consumption @ Pin 13dBm		6	8	A	CW 1-tone
On/Off Switching Time**		2	5	μS	ON: TTL "Low" (Enable)
					OFF: TTL "High" (50mA @ Disable)
Shut Down TTL Voltage ***	0	-	0.5	V	ON: TTL "Low" (Enable)
	2.5	5	5.5		OFF: TTL "High" (50mA @ Disable)

Note

- ** Gate On/Off :High speed switching
- *** Drain On/Off : 300ms delay

Solid State Power Amplifier

Mechanical Specifications

Parameter	Value	Unit
Dimension	135(L) x 75(W) x 21.6(H)	mm
RF Connectors	RF Input : Terminal Pin	-
	RF Output : Terminal Pin	-
DC & Control Signals Connector	Terminal Pin	-
Cooling	Adequate Heatsink Required (Not Supplied)	-

Absolute Maximum Ratings

Parameter	Specifications	Unit
Input RF Power	16	dBm
Supply Voltage	35	V
Load Mismatch Value	3 : 1 @ all load phase	-

* Input Signal Condition : CW 1-tone

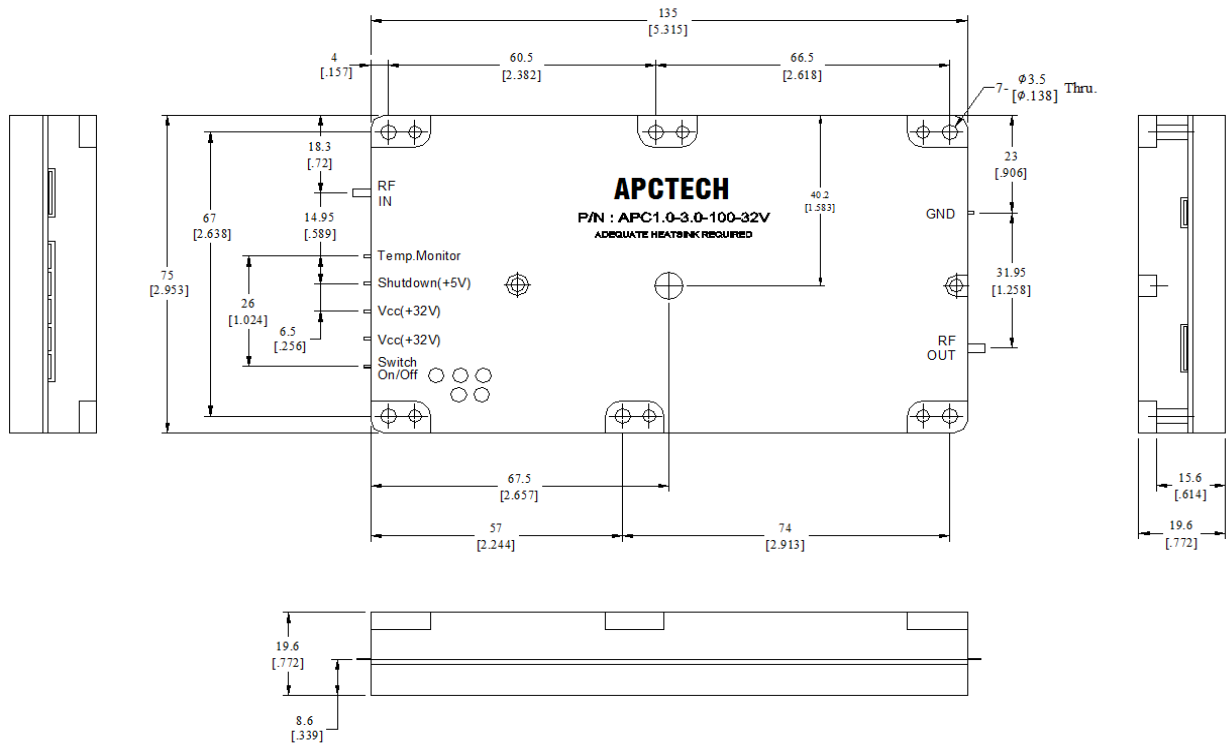
Environmental Characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	T _c	-10	-	80	°C
Storage Temperature	T _{stg}	-40	-	105	°C
Vibration	VI	MIL-STD-810G Method 514.6 ANNEX C			

Solid State Power Amplifier

Outline Drawing

Unit: mm[inch] | Tolerance: ± 0.2 [.008]





Solid State Power Amplifier

Product Ordering Information

Order Number	Description	Unit of Measure
APC1.0-3.0-100-32V	100W Solid State Power Amplifier	Each

DatasheetRevision Information

Part Number	Version	Release Date	Modification	Status
APC1.0-3.0-100-32V	1.0	2016.Feb.04		

Important Notice

Specifications are subject to change without notice. APC Technologies believes the information contained within this data sheet to be accurate and reliable. However, APC Technologies assumes no responsibility or liability whatsoever for any of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. Customers should obtain and verify the latest relevant information before placing orders for APC Technologies products. All operating parameters should be validated by customer's technical experts for each application. APC Technologies products are not designed, intended or authorized for use as components or amplifiers in applications intended for surgical implant into the body or to support or sustain life, in applications in which the failure of the APC Technologies product could result in personal injury or death or in applications for planning, construction, maintenance or direct operation of a nuclear facility.

For more information, please contact:

APC Technologies
770, Sector-9,
Gurgaon – 122001 (Haryana), INDIA
sales@apctechnologies.in
91.124.4008220