

**P/N:AMT-SPA-20180-32****1- Introduction**

This power amplifier is a module that be integrated in an impact case. It has ability to be controlled and send its status by a serial port (RS422). This module has full protection against over VSWR, over temperature, and reverse input voltage and etc.

2- Specifications

Row	parameter	value			Unit
		Min	Typ	Max	
1	Frequency range	2		18	GHz
2	Output power P1dB	39	40		dBm
3	Output power Saturation	45			dBm
4	Small signal gain		50		dB
5	Small signal gain ripple			±5	dB
6	Input return loss			-10	dB
7	Harmonics @P1dB			-12	dBc
8	Spurious signals			-60	dBc
9	Operating voltage		48		V DC
10	Operating current @40dBm		4		A
11	Operating current @45dBm		6		A
12	Input/output RF Impedance		50		Ω

3- Mechanical specification

Row	parameter	value
1	Dimension (WxDxH)	200x180x160mm
2	Weight	5 Kg maximum
3	RF connector input	SMA, Female
4	RF connector output	Type-N, Female
5	Power Supply Connector	PT02E-8-4P (Amphenol Industrial)
6	Control Connector	PT02E-10-6P (Amphenol Industrial)
7	Cooling	Forced air

4- Environmental characteristics

Row	parameter	value
1	Operating temperature	-20~+55℃
2	Non- operating temperature	-40~+75℃
3	Relative Humidity	0-95%

5- Protections

Row	parameter	value
1	Input overdrive	Diode limiter protection 1dB compression +15dBm
2	Reverse RF power	$1 \leq \text{VSWR} < 3$: normal operation (active output) $4 \leq \text{VSWR} < \infty$: shut down
3	Temperature	$T > 85^{\circ}\text{C}$: shut down
4	Short and open of RF Output	Shutdown
5	Over current	Shutdown
6	Over/Under voltage	Shutdown

6- Communication interfaces

Row	parameter	value
1	RS-422	Serial management of Module
2	Interface Protocol	Reference "RS422 protocol"
3	Module Output Data	Forward & Reverse Power, Temp, Current, Voltage
4	Module Input Data	Standby, Reset, alarm level

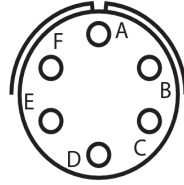
7- IO definitions

Power receptacle, PT02E-8-4P (Type of plug is PT06E-8-4S)



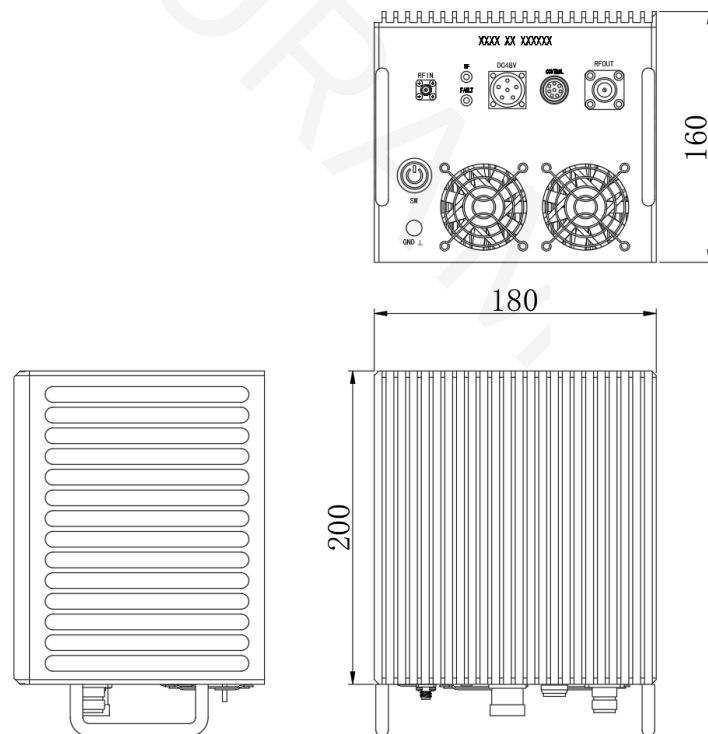
Pin NO.	Definitions	Descriptions
A/B	+48V	Power supply
C/D	GND	Ground, return of power supply
C	RS422_TX+	RS422 transmit +
D	RS422_TX-	RS422 transmit -
E	GND	GND
F	RF_EN	RF Enable, TTL High: RF Enable Low or NC: RF Disable

Control receptacle, PT02E-10-6P (Type of plug is PT06E-10-6S)



Pin NO.	Definitions	Descriptions
A	RS422_RX+	RS422 receiver +
B	RS422_RX-	RS422 receiver -
C	RS422_TX+	RS422 transmit +
D	RS422_TX-	RS422 transmit -
E	GND	GND
F	RF_EN	RF Enable, TTL High: RF Enable Low or NC: RF Disable

8- Dimensions (3D model will be provided for confirming before production)



Unit: mm, Tolerances: $\pm 0.2\text{mm}$