3400-3600MHz TDD Power Amplifier Module

Tone Spread Amplifiers are suitable for frequency bands ranging from 20MHz to 6GHz,the output power can be customized from 1 Watts to 200 Watts.

The amplifiers utilize the cutting edge Solid-State technologies, such as GaN , LDMOS, with multi-measures, such as advanced broadband RF matching networks and combining technologies(Doherty design),then provide exceptional performance with high gain, high efficiency, wide dynamic range, low distortions, and good linearity.

The amplifiers have a variety of applications including Aerospace, Military, Radar, Electronic Warfare, Communication system (Repeater/BDA, RF Jammer, IMSI catcher), SATCOM, EMI/RFI testing, Lab test and measurement, PIM testing and so on.

Tone Spread ISO9001:2015 quality management system assures consistent performance, high reliability and ruggedness.

Features

- Solid-state Class AB design
- High gain and high efficiency
- High input/output isolation
- Ultra-wide band
- Compact design and lightweight
- Built-in protection and monitoring circuits

Technical Specifications

Items	Specifications	
	Downlink	Uplink
Frequency Range	3400~3600MHz	3400~3600MHz
Output Power	46±1dBm	Without ALC
Max Gain	53±2dB	35±2dB
Gain Adjustment Range	≥25dB	--
Gain Adjustment Step	1dB	--
Gain Adjustment Error	≤±1dB@0~10dB ≤±1dB@11~20dB ≤±1.5dB@21~25dB	--
ALC	≥10dB	--
In-Band Ripple	≤3dB	≤3dB
Tx/Rx Isolation	≥55dB	
EVM	≤8%(PAPR 8dB)	--
Spurious Emission	9KHz-1GHz@≤-36dBm/30KHz	
	1GHz-12.75GHz@≤-30dBm/30KHz	
Noise Figure	--	≤4.5dB
Maximum Input Power	+10dBm	--
VSWR	≤1.4(Test with power applied **after turning off the DL PA**. Before the test, it is mandatory to check that the DL PA has been switched off; otherwise, the test instrument may be damaged.)	

Website https://www.tspd.com.tw

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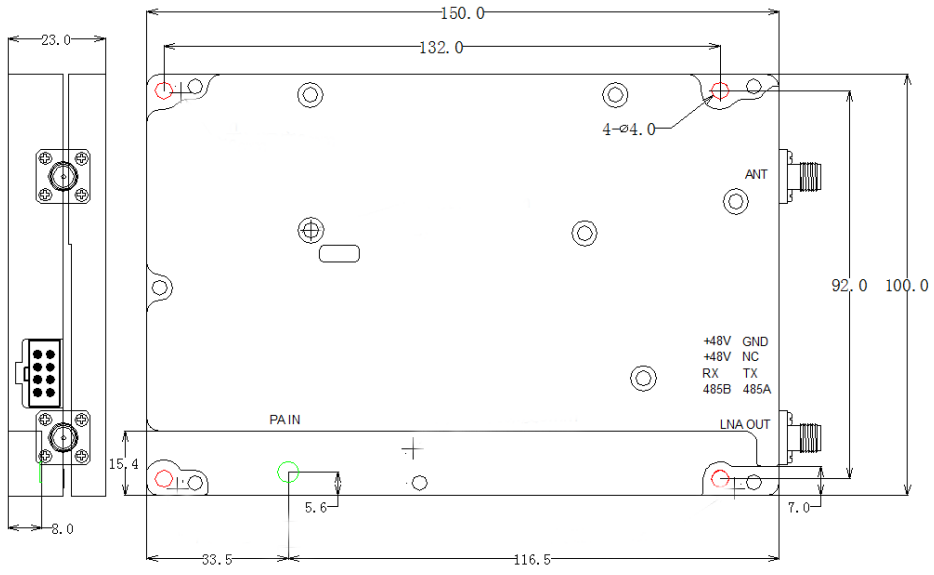
3400-3600MHz Power Amplifier Module

Model: TSTDD-N78-3.4~3.6G-40W-150100-48VGaN

Tone Spread
Solutions for Wireless Signal

Working Voltage	DC+48V
Working Current	≤4.0A
RF Connector	1*MCX-Female for PA IN, 3*SMA-Female
Interface for Tx/Rx Control Cable	CMOS3.3V RX: LNA (uplink) switch, turned on at CMOS 3.3V high level, turned off at low level. TX: Power amplifier (downlink) switch, turned on at CMOS 3.3V high level, turned off at low level.
Monitoring Function: Please refer to the outline dimension drawing for the connection diagram of the monitoring port.	**RS485 Interface Communication** 1. **Settings**: Switch, gain; 2. **Queries**: Module status (including power amplifier status, over-power alarm, over-temperature alarm), power amplifier temperature, power amplifier ATT value, detected forward power; 3. **Over-power Alarm**: An alarm shall be triggered when the power exceeds the maximum output power by **+2 dB**; 4. **Over-temperature Alarm**: The recommended threshold is **+85℃**. An alarm shall be triggered when the detected temperature exceeds +85℃, and the power amplifier shall be turned off simultaneously. The power amplifier shall be turned on again when the temperature drops to **+65℃**; 5. **Power Amplifier Temperature Detection**: The detection range shall **include but not be limited to -25℃～+85℃**, and the detection accuracy shall be **±3℃**; 6. **Forward Power Detection**: The detection range shall be **greater than 20 dB**, and the detection accuracy shall be **less than ±1 dB**.
Baud Rate	9600
Impedance	50Ω
Working Temperature	-40℃~+55℃
Over-temperature Protection	Over-temperature alarm and shutdown at +85℃; power amplifier turns on again at 65℃.
Dimension	150*100*23mm

Outline Drawing



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