

LTE 5-2 4W Integrated Power Amplifier Specification

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1、Radio frequency technical specification

Item	Specification	Remarks
Frequency range (MHz)	TDD:B41/B40/B39; FDD:B1/B3 Automatic mode (off mode): complete disconnection of the RF link Save on power loss	Five out of two
Amplifier section		
Maximum output power (dBm)	36 ± 1.5	Center frequency as standard
Maximum gain (dB)	B3,B39: 42 ± 1 ; B1,B40: 44 ± 1 ; B41: 46 ± 1	Center frequency as the default (customizable)
Adjustable Pre-attenuation (dB)	≥ 2	You can reserve 5
Gain adjustment range (dB)	≥ 20	Center frequency as standard
Gain adjustment step error (dB)	≤ 1.0	Center frequency as standard
In-band fluctuation (peak-to-peak) (dB)	≤ 2.5	
stray emission	9kHz ~ 1GHz ≤ -36 dBm	RBW= 100kHz
	1GHz ~ 12.75GHz ≤ -30 dBm	RBW = 1 MHz (excluding the SEM test frequency band)
ACLR (dBc)	BW	≤ -35
	2BW	≤ -50
EVM(%)	≤ 8	
CCDF(0.01%)	≥ 8 dB	Full power ETM3.1
Input and output VSWR	≤ 1.6	power up
low noise section		
Maximum output power (dBm)	-10 ± 1	Center frequency as standard
Gain (dB)	20 ± 2	Center frequency as standard

In-band fluctuation (peak-to-peak) (dB)	≤3.0		
ACLR (dBc)	BW	≤-45	With a bandwidth of 20M
	2BW	≤-50	
EVM(%)	≤3		
Input and output standing wave ratio	≤1.6		power up
Noise factor	≤4.5		
Common part			
Transceiver isolation	≥80dB @ uplink downlink isolation		Downlink and uplink port isolation, meaning the uplink output port is isolated when the downlink is operating at full power.
Switching time (μs)	≤2		TDD part
Band switching time (S)	≤1		
Gain temperature drift	≤2 (full temperature)		
Service voltage (V)	10-18V (typical 12V)		
power dissipation (W)	≤80		full power
Working temperature (°C)	-40 - +55		

2. External Interfaces

1) Interface Requirements

Power supply interface	3PIN 3.96VH straight socket	
Radio Frequency interface	PA IN_A, PA IN_B, LNA OUT_A, LNA OUT_B: MCX plug-in connector LNA IN_B1, LNA IN_B3, ANT: SMA plug-in connector	
IO Interface	Two groups of 2 × 4 pins with a 2.0 pitch, each connected to two digital boards Group 1 (with 485) Pin 1: 485A+;	

	<p>Pin 2: 485B-;</p> <p>Pin 3: GND;</p> <p>Pin 4: TX_ON(TDD),NC(FDD);</p> <p>Pin 5: RX_ON (TDD),NC(FDD);</p> <p>Pin 6: GPIO3, power amplifier switch combination;</p> <p>Pin 7: GPIO1, power amplifier switch combination;</p> <p>Pin 8: GPIO2, power amplifier switch combination;</p> <p>Link selection description: PIN6 PIN7 PIN8 combination:</p> <p>000: All off</p> <p>001: 2.1G(B1)</p> <p>010: 1.8G(B3)</p> <p>011: NC</p> <p>100: NC</p> <p>101: 1.9G(B39)</p> <p>110: 2.3G(B40)</p> <p>111: 2.6G(B38)</p> <p>Group 2</p> <p>Pin 1: NC;</p> <p>Pin 2: NC;</p> <p>Pin 3: GND;</p> <p>Pin 4: TX_ON(TDD), NC(FDD);</p> <p>Pin 5: RX_ON (TDD) , NC(FDD);</p> <p>Pin 6: GPIO3, power amplifier switch combination;</p> <p>Pin 7: GPIO1, power amplifier switch combination;</p> <p>Pin 8: GPIO2, power amplifier switch combination;</p> <p>Link selection description: PIN6 PIN7 PIN8 combination:</p> <p>000: All off</p> <p>001: 2.1G(B1)</p> <p>010: 1.8G(B3)</p> <p>011: NC</p> <p>100: NC</p> <p>101: 1.9G(B39)</p> <p>110: 2.3G(B40)</p> <p>111: 2.6G(B38)</p>	
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3. Dimensions and structural diagram:

Test item	Specification	Remarks
Module appearance	Aluminum color	
Module size (mm)	210*100*24	
Install fixed pitch size	M4	

