

Product Specification

UMTS 2110-2170-45 UMTS Power Amplifier 2110-2170 MHz 45 Watts

Functions

Number	Description
1	ALC Point Control and Read
2	ALC on/Off Control and Read
3	PA Mute On/Off Control and Read
4	Digital Attenuator Control
5	Operating Temperature Monitor and Alarm
6	Output Power Monitor
7	Reverse Power Monitor and Alarm
8	DC Current Monitor and Alarm
9	Protected Against High Reflected Power

Environmental Specifications

Parameter	Specification
Max Base Plate Operating Temp.	0° to +85° C Shutdown @ 90° C
Relative Humidity	5% ~ 96 %
Atmospheric Pressure	70 kPa ~ 106 kPa
Cooling	Not provided, User Supplied

Electrical Specifications

Parameter	Specification
Frequency	2110 – 2170 MHz
Signal Type	UMTS, PAR 9.7 dB @ 0.01%
Nominal Output Power	45 W
Nominal Gain	44 dB
ACLR	$\leq -45\text{dBc}$
EVM (Max)	$< 8\%$ @ Specified Output Power
Gain w/ ALC off +/- 1db	44 ± 1.2 dB [Room Temperature/ Value of attenuator 8.5 dB] 44 ± 1.8 dB [Low and High Temperature/ Value of attenuator 8.5 dB]
Input Return Loss	18 dB
Output Return Loss	18 dB
Tx ALC control range vs. Tx input level change, Min	16 dB [Nominal Input +/- 8 dB]
ALC Set Range	16 dB [46.5 ~ 31.5 dBm]
ALC Set Step	0.5 dB
ALC Control Accuracy	± 1 dB
Attenuator Set Range [ALC Off]	31 dB
Attenuator Set Step [ALC Off]	0.25 dB
Max Input Level, No Damage and Degradation	+5 dBm
Noise Figure [ALC Off]	≤ 21 dB
DC Power	+28V
Efficiency	$\geq 25\%$ @ 45 W
Output Load Mismatch Tolerance	Isolator Protected
Power Consumption when Muted	< 5 W
Forward Power Monitor	Range: 30 dB, 50 dBm ~ 21 dBm Resolution: 0.1 dBm Accuracy: ± 2 dB
Reverse Power Monitor	Range: 30 dB, 50 dBm ~ 21 dBm Resolution: 0.1 dBm Accuracy: ± 2 dB
DC Current Monitor	Range: 0 - 15 A Resolution: 0.1 A Accuracy: $\pm 5\%$

Temperature Monitor	Range: -40° C ~ +105° C Resolution: 1° C Accuracy: ±3° C
RF Connectors	SMA Female
Power Connector	M3 Screw Terminal
Control Connector	4 Position 2.5 mm Pitch Header Mates With JST XHP-4
Dimensions	See Attached Drawing (Dimensions are in mm)

Control Pins

Pin Number	Description
1	GND
2	RS484_A
3	RS485_B
4	NC

Outline Drawing

