



RACK MOUNT MSP1214P57A
1.2~1.4GHz
500 WATTS
L-BAND PULSED POWER AMPLIFIER SUBSYSTEM

Advantages:

- Operating Frequency :1.2~1.4GHz
- Power Gain:57dB Typical
- Psat:500W Typical
- Supply Voltage:+220VAC
- 50 Ohms Input and Output Matched

ELECTRICAL SPECIFICATIONS @ +220VAC, 25°C, 100µS, 10%, 50Ω

| Parameter | Symbol | Min | Typ | Max | Units |
|--|----------------------------|-----|------------|------|-------|
| Operating Frequency | BW | 1.2 | | 1.4 | GHz |
| RF Output Power @Pin=0dBm | P _{PK} | | 500 | | Watt |
| Duty Cycle | Duty Cycle | | 10 | 15 | % |
| Pulse Width | P _{WIDTH} | | | 100 | µS |
| PRI | PRI | 200 | | 1000 | µS |
| Harmonics @ Pout = 250W | H | | -20 | | dBc |
| Spurious Signals | Spur | | -55 | | dBc |
| Input Return Loss@ Pout =500W | S ₁₁ | | -10 | | dB |
| Rise /Fall time (Pulse Performance) (10-90%) | TRISE/ _{FALL/OFF} | | 50 | | ns |
| Power droop@ PW=10µS, DC=10% | Droop | | 1 | | dB |
| Input/Output Impedance | Impedance | | 50 | | dBc |
| Operating Voltage (Single-phase) | V _{AC} | 180 | 220 | 240 | Volt |
| Power Consumption@Pout =500W | P _D | | 500 | | Watt |
| Work Pattern@Standby | | | Quiet Mode | | |

MECHANICAL SPECIFICATIONS

| Parameter | Value | Notes |
|---|---|---------|
| Dimensions (W x H x D) – Bench Top/Rack Mount | 482.6 x 88.1 x 445 mm [19x3.5x17.5 inch] (2U) | Maximum |
| Weight | 15kg [33 lbs] | Maximum |
| RF Connectors Input | Type-N, Female | |
| RF Connectors Output | Type-N, Female | |
| Cooling | Built-in internal forced air-cooling system | |

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

| Parameter | Minimum | Typical | Maximum | Units | Notes |
|------------------------------------|---------|---------|---------|-------|---------|
| Operating Ambient Temperature | -20 | | 50 | °C | |
| Non-operating Temperature | -45 | | 85 | °C | Storage |
| Relative Humidity (non-condensing) | | | 95 | % | |



ABSOLUTE MAXIMUM RATING

| | |
|-------------------------------------|---|
| Input RF drive level without damage | +5 dBm (Max) |
| VSWR Protection@250W | 5:1 @ PA output power will degrade to a safe operation level, and system will still work. >3:1 @ protection will make system shutdown. |
| Thermal Overload | Power will Gracefully Degrade, when Ambient Temp >85°C |

AVAILABLE OPTIONS (Selected options refer to the factory)

| Name | Description | LCD |
|----------------|--|---|
| RS422 | Serial management of device /local operator access | D-Sub 9-Pin, Male |
| Status Monitor | LCD Controller | Digital Display, including FWD/REV Power indication (dBm or Watt scale), Standby mode, Fault indication |
| WAN | Serial management of device /local operator access | Internet access |

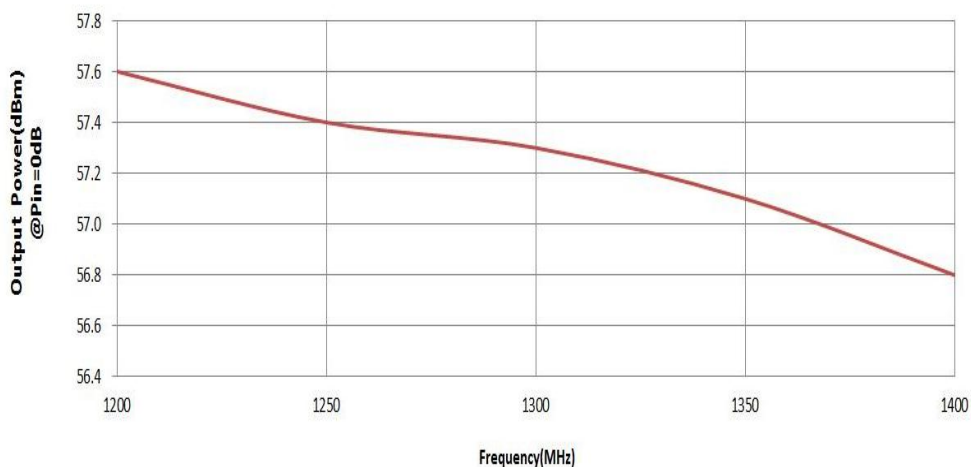
I/O CONNECTOR-Monitor Display or RS422

| Pin # | Description | Specifications |
|-------|-------------|--|
| 1 | ENABLE | Amplifier Enable: TTL Logic High (3.3V-5V) (Internally Pulled-Low) |
| 2 | TEMP SENSE | Analog voltage relative to temperature@0.5+10mV /°C |
| 3 | ALARM | Amplifier Alarm indicator: Normally TTL Low |
| 4 | Reserved | Reserved |
| 5 | RS422-T+ | Transmit data-TxD |
| 6 | RS422-T- | Transmit data-TxD |
| 7 | RS422-R+ | Transmit data-RxD |
| 8 | RS422-R- | Transmit data-RxD |
| 9 | GND | GND |

TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)

Output Power (Normal temp. +25 ± 3°C)

Psat(dBm) 100us pulse,width 10% duty



Note: Air-cooled heat dissipation.

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