



Part Number DM-HF-1K-111-RM

Solid State Broadband High Power Amplifier

Rev. 1
12/18/2015

- Solid-state Class AB linear design
- Instantaneous ultra broadband
- Suitable for CW, AM, and FM
- 50 ohm input/output impedance
- High reliability and ruggedness
- Built-in control, monitoring and protection circuits
- LDMOS technology

ELECTRICAL SPECIFICATIONS

V_{dc} = 48V, over temperature and environmental conditions, as specified

| Parameter | Symbol | Units | Min | Typ | Max |
|--------------------------------------|----------------------|-------|------|------|-------|
| Operating frequency | BW | MHz | 1 | | 30 |
| Linear Output power | P _{1dB} | W | | 1200 | |
| Saturated output power | P _{sat} | W | 1500 | | |
| Input power for 1500W | P _{in} | dBm | -12 | -10 | -8 |
| Power flatness, closed loop | ΔP _{CL} | dB | | | ±0.25 |
| Maximum input power without damage | P _{In, max} | dBm | 10 | | |
| Input return loss | IRL | dB | | | 10 |
| Noise figure | NF | dB | | | 15 |
| 2 nd harmonics | 2 nd | dBc | | | -30 |
| 3 rd harmonics | 3 rd | dBc | | | -15 |
| Spurious | Spur | dBc | | | -70 |
| Operating voltage | V _{DC} | V | 46 | 48 | 50 |
| Current consumption | I _{DC} | A | | | 90 |
| PA enable / Disable time (open loop) | T _{On/Off} | uSec | | | 50 |

PA PROTECTION / RUGGEDNESS

The PA includes protection circuits for:

- Under / over temperature
- Under / over voltage
- Reverse polarity
- Over current (electronically monitored and internally fused)
- High VSWR (open/short)



Delta Microwave

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Delta Microwave's Quality Management System has been assessed by NSF-ISR and found to be in conformance with AS9100:2009, Rev. C. Delta Microwave reserves the right to change specifications without notice. Please verify specification revision upon order placement.



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ENVIRONMENTAL SPECIFICATIONS

| Parameter | Symbol | Min | Typ | Max | Unit |
|---|---------|-----|-----|--------|------|
| Operating ambient Temperature | Tc | -10 | | +55 | °C |
| Storage Temperature | Tstg | -40 | | +85 | °C |
| Relative humidity (non-condensing) | RH | | | 95 | % |
| Altitude (MIL-STD-810F Method 500.4) | ALT | | | 10,000 | Feet |
| Shock / Vibration (MIL-STD-810F Method 514.5) Category 20 | SH / VI | | | | |

MECHANICAL SPECIFICATIONS

| Parameter | Value | Units | Limits |
|----------------------------|--|-------|--------|
| Dimensions | 19 X 12.25 (7U) X 24 | Inch | Max |
| Weight | 60 | kg | Max |
| RF Connectors | TNC Female, N-Type Female | | |
| DC / Control Connector | D38999 | | |
| Cooling | Forced air cooling (front to back) | | |
| LCD (optional) | Touch screen digital display: FWD/RFL indication, modes, fault type indication | | |
| Communication | RS 422 - 9600 bps asynchronous | | |
| Ground stud | Rear panel | | |
| Rack slide | Jonathan slides (150QDA-26-P) provisions | | |
| Chassis protection | Alodine (chemical conversion coating) | | |
| Remote interface connector | D38999/20WE35SC | | |
| DC power connector | D38999/20WJ24PN | | |



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