

M2060BP35 2000 – 6000 MHz / 35 Watts

The M2060BP35 is suitable for multi-octave bandwidth high power CW, modulated, and pulse applications. This amplifier utilizes high power GaN devices that provide wide frequency response and dynamic range, high gain, high efficiency, and good linearity. Exceptional performance, long-term reliability, and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, built in high quality power supply, EMI/RFI filters, machined housing, and qualified components. Sungsan's ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.

- Solid-state Class AB design
- Instantaneous ultra broadband
- Suitable for CW, AM, and FM
- 50 ohm input/output impedance
- High reliability and ruggedness

ELECTRICAL SPECIFICATIONS @ +28 VDC, 25°C, 50 Ω System

| Parameter | Symbol | Min | Typ | Max | Unit |
|---|-----------------------------------|------|-----------|------|------|
| Operating Frequency | BW | 2000 | | 6000 | MHz |
| Power Output CW | P _{SAT} | 35 | 40 | | Watt |
| Output Power @ 1 dB Gain Compression Point | P _{1dB} | | 10 | | Watt |
| Small Signal Gain | G _{1dB} | | 55 | | dB |
| Input Power for Rated P _{OUT} | P _{IN} | | 0 | | dBm |
| Gain Flatness @ Rated P _{OUT} | ΔG | | ±1.0 | ±1.5 | dB |
| Gain Adjustment Range | VVA | 25 | | | dB |
| Input Return Loss | S ₁₁ | | | -10 | dB |
| Noise Figure @ max gain | NF | | | 10 | dB |
| Third Order Intercept Point 2-Tones @ 33 dBm/Tone, Δ = 100 KHz | IP3 | | +46 | | dBm |
| Harmonics @ rated P1 dB Gain Compr. Point | 2 nd / 3 rd | | -20 / -20 | | dBc |
| Spurious Signals | Spur | | | -60 | dBc |
| Operating Voltage | V _{DC} | 27 | 28 | 29 | Volt |
| Current Consumption @ 35 W | I _{DD} | | 7.5 | 10 | Amp |
| Quiescent Current | I _{DQ} | | | 6.0 | Amp |
| Switching Speed (10% to 90%) | T _{SW} | | | 5.0 | uSec |

ENVIRONMENTAL CHARACTERISTICS

| Parameter | Symbol | Min | Typ | Max | Unit | Limits |
|--------------------------------------|------------------|---|--------|-----|------|--------|
| Operating Case Temperature | T _c | -20 | | +70 | °C | |
| Storage Temperature | T _{stg} | -40 | | +85 | °C | |
| Relative humidity (non-condensing) | RH | | | 95 | % | |
| Altitude (MIL-STD-810F Method 500.4) | ALT | | 30,000 | | Feet | |
| Vibration | VI | MIL-STD-810F Method 514.5 Proc I random sinusoidal Category 4 or 9 or 13 | | | | |
| Shock | SH | MIL-STD-810F Method 516.4 Proc I Operational : Acceleration (A) of 20.0 g ±1.5 g with Duration of 11.0 ms ±1.0 ms shock pulse. Non-Operational : Impact shocks of 25 g ±3.0 g with Duration of 11.0 ms ±1.0 ms shock pulse. | | | | |

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LIMITS

| Parameter | Value | Limits |
|-------------------------------------|---|--------|
| Input RF drive level without damage | +10dBm | Max |
| Load VSWR @ Pout = 35W | $\infty:1$ @ all load phase & amplitude | |
| Thermal Overload | Graceful degradation | Max |

MECHANICAL SPECIFICATIONS

| Parameter | Value | Units | Limits |
|----------------------|-------------------|-------|--------|
| Dimensions | 6.9 X 3.6 X 1.1 | Inch | Max |
| Weight | 2.0 | lb | Max |
| RF Connectors In/Out | SMA Female | | |
| DC / Shutdown | D-Sub, 9Pin, Male | | |
| Cooling | External Heatsink | | |

DC CONNECTOR- D-Sub, 9Pin, Male

| Pin # | Description | Specifications |
|-------|-----------------|--|
| 1 | N/C | Reserved |
| 2 | Current Monitor | Analog voltage relative to I _{DD} @ 50mV/100mA |
| 3 | Temp Monitor | Analog voltage relative to Module's Temperature @ 10mV/°C + 500mV |
| 4 | VVA | Controlled via Analog 0~5 V _{DC} |
| 5 | Shutdown | Enable: TTL "Low" (Logic 0) or Open Disable: TTL "High" (Logic 1) |
| 6,7 | VDD | +28V _{DC} ±1VDC |
| 8,9 | GND | Ground |

Outline Drawing

