

4 Watt Power Amplifier

2000-6000 MHz

Model QB-854

FEATURES

- High Output Power to 4 Watts
- Class AB Design
- Broadband Quadrature Configured
- Small Hermetic Housing
- Optional Heatsink



The QB-854 is a class AB amplifier operating over the 2 to 6 GHz frequency range. With a DC input voltage range of +23 to +28 VDC, the QB-854 provides 35 dB of small signal gain and output power of +36 dBm (typical) over the 2 to 6 GHz frequency band. Typical current drawn from a +24 VDC supply at +36 dBm output power is 900 mA. The QB-854 is packaged in a hermetically sealed housing and is configured with field replaceable SMA connectors as shown, or 0.015" gold-plated pins for a surface-mount launch. An optional heatsink is available when using the unit in a bench testing environment.

Parameter	Typical ⁽²⁾	Min. / Max.
Frequency Range	2000 to 6000 MHz	2000 to 6000 MHz
Saturated Output Power	4 watts (+36 dBm)	2.5 watts (+34 dBm) Min.
P _{sat} Gain	28 dB	-
Linear Gain	35 dB	33/37 dB Min./Max.
Gain Flatness	+/- 1.5 dB	+/- 2.0 dB
Gain Variation over Temp.	-	+/- 2.5 dB Max.
Input Return Loss	10 dB	9 dB Min.
Output Return Loss	12 dB	10 dB Min.
3rd Order Output IP	-	38 dBm Min. @ +25°C
Noise Figure	4.5 dB	5.5 dB Max
Reverse Isolation	48 dB	45 dB Min.
Spurious Signals	< -60 dBc	-
Supply Voltage	24 volts	23 to 28 volts
Current Draw (Quiescent)	350 mA	450 mA Max.
Housing Size	1.450" L x 1.00" W x 0.190" H	
RF Connectors	Gold Plated Pins or SMA Female	
Operating Case Temp. (Min./Max. Values)	-40°C to +85°C	

Maximum (No Damage) Ratings

Storage Temperature	-65°C to +175°C
Operating Temperature (Case)	-40°C to +85°C
DC Voltage @ 25°C	+32 VDC
Input Drive @ 25°C	+20 dBm

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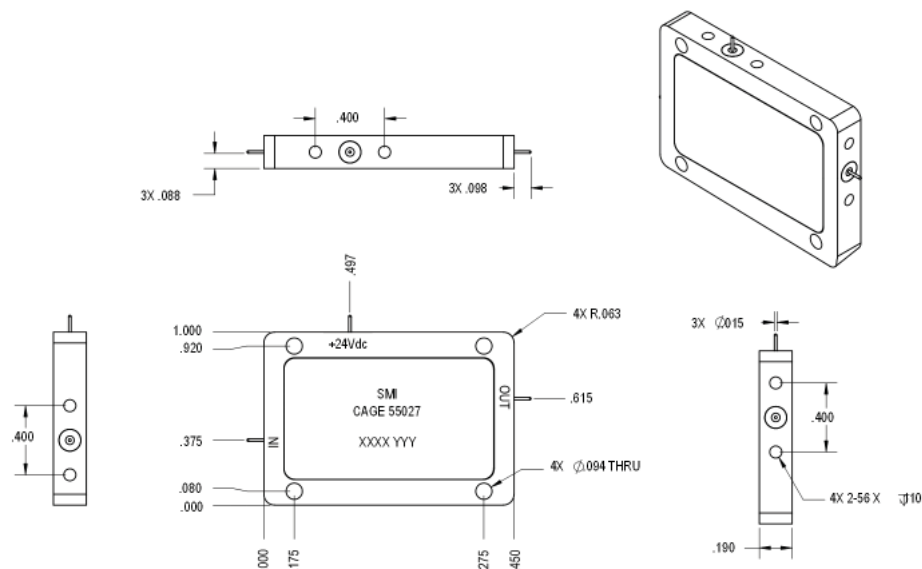
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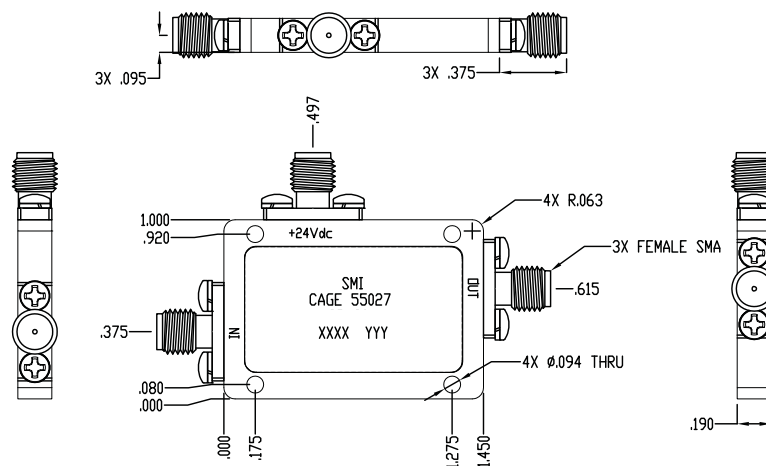
Protection and Options

- 1) Adequate heat transfer must be provided when operating this amplifier. An optional heatsink is available from Spectrum Microwave.
- 2) Typical performance is measured at 25 °C
- 3) Additional Package options: QB-854N (Amplifier in an SMA Connectorized Housing),
 QB-854N-01 (Amplifier in an SMA Connectorized Housing on a heatsink),
 450-00001-0001, optional heatsink only.

Outline Drawing⁽³⁾



Model QB-854



Model QB-854N