

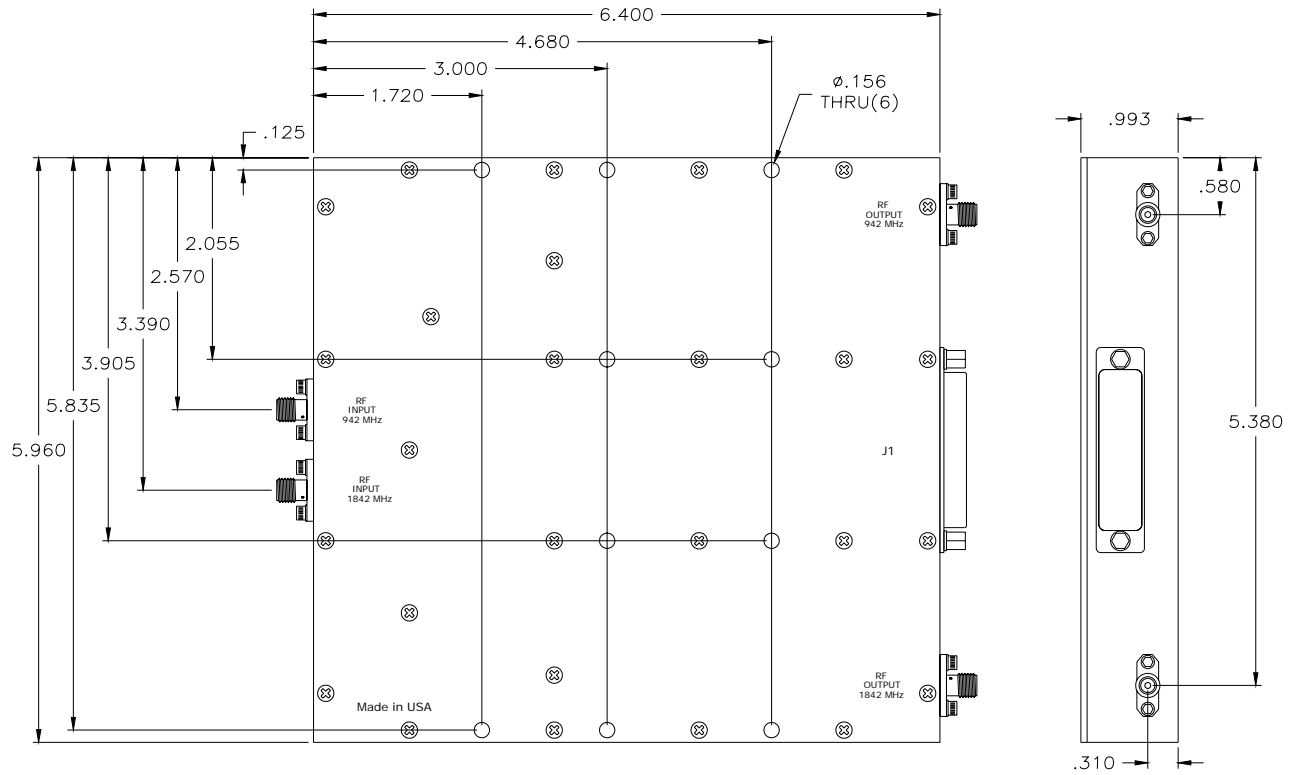
The **SM0820-45LD** is a solid state LDMOS amplifier designed primarily for ECM applications. This amplifier provides two operating bands from 925-960 MHz and 1805-1880 MHz, provides 50 dB of gain per band,  $\pm 0.5$  dB gain flatness over each band, and +45 dBm (min.) of output power per band at the 1 dB compression point. The amplifier operates off a single 28V supply, and uses the latest surface mount technologies to provide numerous features, while maintaining a very small size.

### Features

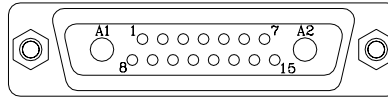
- Forward/Reverse Power Detection
- TTL on/off Control
- High Speed Switching with fall and rise times under 2  $\mu$ sec.
- Thermal Protection with Auto Reset
- Thermal Monitoring
- Mismatch Protected
- High Speed Switching

Parameter	Specification
Frequency Range	Low Band: 50MHz from 900-1000 MHz High Band: 70 MHz from 1800-2000 MHz
Pout (P1dB)	+ 45 dBm (min. per band) + 48 dBm (typ. per band)
Linear Gain	50 dB $\pm$ 1.0 dB
Gain Flatness over Full Band	$\pm 0.5$ dB
Input/Output Return Loss	-0 dB / -0 dB
DC Input Voltage	+28 Volts
DC Input Current	10 Amps (Both outputs @ P1dB power out)
Mechanical Dimensions	6.7x6.0x1.0 inches
RF Connectors	SMA Female
Operating Temperature	0°C to +55°C
Operating Humidity	95% Non-condensing
Operating Altitude	Up to 10,000 feet above Sea Level

**DIMENSIONS IN INCHES**



Pin	Description	Values
RF Input (Both Bands)	Input Connectors (SMA Female)	- 4 dBm, typical
RF OUT (Both Bands)	Output Connectors (SMA Female)	+ 45 dBm @ P1dB (Per Band)
J1	DC / Monitor Connector (15W2)	See table below



<b>Connector J1</b>		
<b>DC, CNTL and Alarms</b>	<b><u>Function</u></b>	<b><u>Description</u></b>
A1	GND (-)	Chassis Ground
A2	Supply Voltage	+28 VDC +24 VDC (P1dB will drop ~ 1dB)
Pin 1	Temperature Monitor	Ex. +1.28V = +28°C, +1.63V = +63°C
Pin 2	Logic On/Off	0 V = Off > +2 V = On
Pin 3	Forward Power Detection 2 GHz	+5.0 V @ Pout = +45 dBm
Pin 4	Reflected Power Detection 2 GHz	+5.0 V @ Pout = +45 dBm (open circuited)
Pin 5	Reflected Power Detection 900 MHz	+5.0 V @ Pout = +45 dBm (open circuited)
Pin 6	Forward Power Detection 900 MHz	+5.0 V @ Pout = +45 dBm
Pin 7	GND	Monitor Ground (no current)
Pin 8	N/C	NA
Pin 9	N/C	NA
Pin 10	N/C	NA
Pin 11	N/C	NA
Pin 12	N/C	NA
Pin 13	N/C	NA
Pin 14	N/C	NA
Pin 15	N/C	NA

*Specifications subject to change without notice.*