



C-BAND SOLID STATE POWER AMPLIFIERS



FEATURES

- C -Band Frequency
- Output Power: 5 W, 10 W, 20 W
- High Gain > 53 dB
- High Linearity
- Low Noise Figure
- Unconditionally Stable

PACKAGING

- Hermetically Sealed
- Input/Output SMA Connectors
- Coaxial or Waveguide Interface
- OMT or Bracket Mount
- Low Profile
- Weather proof Outdoor Enclosure

APPLICATIONS

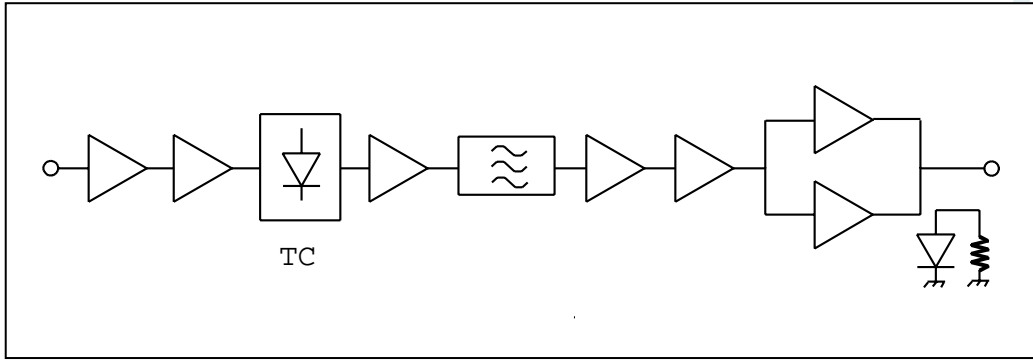
- Private Data Network
- Voice Communications
- Transaction Data Interchange

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OUTLINE DIAGRAM



CHARACTERISTICS

MODEL MC2393, MC2404, MC2405

MODEL	MC2405	MC2404	MC2393
Frequency	5.850 – 6.425 GHz	5.850 – 6.425 GHz	5.850 – 6.425 GHz
Small Signal Gain	59 dB typ. at 25 °C	56 dB typ. at 25 °C	53 dB typ. at 25 °C
Gain Variation			
Full Band	<2.0 dBp -p/575 MHz at P1dB	<3.0 dBp -p/575 MHz at P1dB	<3.0 dBp -p/575 MHz at P1dB
Per 2MHz	<0.1 dBp -p/2 MHz	<0.1 dBp -p/2 MHz	<0.1 dBp -p/2 MHz
Per 40 MHz	<0.4 dBp -p/40 MHz	<0.4 dBp -p/40 MHz	<0.4 dBp -p/40 MHz
Gain vs Temp.	<2 dB change over -40°C to 75°C at any single freq. (temp. measured at baseplate)	<2 dB change over -40°C to 75°C at any single freq. (temp. measured at baseplate)	<2 dB change over -40°C to 75°C at any single freq. (temp. measured at baseplate)
Gain - 7.3 GHz	< 5 dB	< 5 dB	< 5 dB
P1dB	>20 W (+43.0 dBm) at +75 °C baseplate + 10 dBm	>10 W (+40.0 dBm) at +75 °C baseplate + 10 dBm	>5 W (+37.0 dBm) at +75 °C baseplate + 10 dBm
Max Input Power	> +51 dBm measured for two +37 dBm carriers at +25 °C	> +48 dBm measured for two +34 dBm carriers at +25 °C	> +45 dBm measured for two +31 dBm carriers at +25 °C
3 rd Order Intercept Point			
Voltage	+12 to +13 VDC	+12 to +13 VDC	+12 to +13 VDC
Current (typ.)	12 A at +25 °C	< 7.0 A at +25 °C	< 5.0 A at +25 °C
Connector	Solder terminal feedthru capacitor with ground terminal or lug.	Solder terminal feedthru capacitor with ground terminal or lug.	Solder terminal feedthru capacitor with ground terminal or lug.
DC In.Ripple	Meets all specs with up to 100 mV p-p at 50 - 1200 kHz ac input ripple	Meets all specs with up to 100 mV p-p at 50 - 1200 kHz ac input ripple	Meets all specs with up to 100 mV p-p at 50 - 1200 kHz ac input ripple
Input Return Loss	15 dBm min	15 dBm min	15 dBm min
Output Return Loss	15 dBm min	15 dBm min	18 dBm min
Inp. Connector	SMA-Female (N-Type Optional)	SMA-Female (N-Type Optional)	SMA-Female (N-Type Optional)
Output Connector	SMA-Female (N-Type Optional)	SMA-Female (N-Type Optional)	SMA-Female (N-Type Optional)
RF Detector	-40 dBc ± 1.0 dB	-40 dBc ± 1.0 dB	-40 dBc ± 1.0 dB
DC Indicator	2.0 – 2.3 V	2.0 – 2.3 V	2.0 – 2.3 V
Noise Figure	10 dB max	10 dB max	10 dB max
Spurious	<ul style="list-style-type: none"> -70 dBc 5.8-6.4 GHz at P1dB -3dB -70 dBc at 10.95 -12.75 GHz -70 dBc at 3.7 -4.2 GHz 	<ul style="list-style-type: none"> -70 dBc 5.8-6.4 GHz at P1dB -3dB -70 dBc at 10.95 -12.75 GHz -70 dBc at 3.7 -4.2 GHz 	<ul style="list-style-type: none"> -70 dBc 5.8-6.4 GHz at P1dB -3dB -70 dBc at 10.95 -12.75 GHz -70 dBc at 3.7 -4.2 GHz
Harmonics	-50 dBc	-50 dBc	-50 dBc
Stability	Unconditionally stable into any load/source condition	Unconditionally stable into any load/source condition	Unconditionally stable into any load/source condition
AM/PM Conversion	< 3 ^o /dB at P1dB	< 3 ^o /dB at P1dB	< 2 ^o /dB at P1dB
Temperature			
Operating	-40°C to +65°C baseplate	-40°C to +65°C baseplate	-40°C to +65°C baseplate
Storage	-54°C to +85°C	-54°C to +85°C	-54°C to +85°C
Humidity	5 to 95% (housing is laser sealed)	5 to 95% (housing is laser sealed)	5 to 95% (housing is laser sealed)
Shock/Vibration	No permanent damage after 2 ft drop onto a 2" plywood surface on concrete	No permanent damage after 2 ft drop onto a 2" plywood surface on concrete	No permanent damage after 2 ft drop onto a 2" plywood surface on concrete
MTBF	> 50 000 hrs	> 50 000 hrs	> 50 000 hrs

Specifications are subject to change without notification. Consult Nanowave Technologies, Inc. for specific applications/requirements.