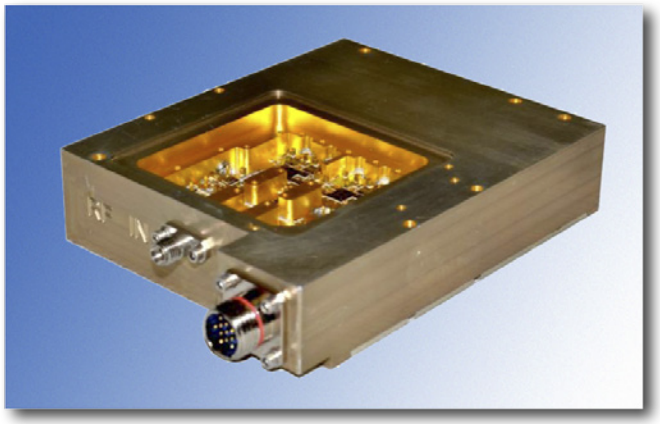
MSC2931P3540

10 Watt P1dB | 37.5 dB Gain | WR28 Output | 29.5 — 31.0 GHz Power Amplifier

General Description

The MSC2931P3540 is a power amplifier supplying a minimum of 10 W of output power, at P1dB, at a base plate temperature range of 25°C for use in Ka Band SATCOM uplink applications. The power amplifier operates from 29.5 to 31.0 GHz with a maximum gain of 38 dB from a single +5V supply over a base plate temperature range of -55 °C to +70 °C.

The unit is equipped with current limiting for input overdrive conditions, thermal shutdown protection and a transmit enable function which are monitored or controlled thru a pin connector. The RF connections are an input 2.92 mm female and an output WR-28 waveguide. The unit is hermetically sealed and is designed for airborne environments to RTCA DO-160E including vibration, altitude, humidity, shock, fungus and waterproofness.



Characteristics

Frequency Range	29.5 to 31.0 GHz
Output Power P1dB	40 dBm min. at base plate temp. of 25 °C
Gain	35 dB minimum, 40 dB maximum
Gain Flatness	< 3.0 dB pk-pk maximum over entire operating band at fixed temp.
Gain Variation over Temperature	3.5 dB pk-pk maximum at fixed frequency
Input VSWR	1.5:1 maximum
Output VSWR	1.5:1 maximum
Spurious	< -70 dBm
Harmonics	< -20 dBc at P1dB
Operating Voltage	5V
Current Consumption	19 A maximum at any combination of drive level, temperature, and frequency.
RF Input Connector	2.92 mm female
RF Output Connector	WR-28 waveguide
Monitoring and Control Connector	13 pin Circular
Size	5.1” x 3.6” x 1.0”
Weight	20 ounces maximum
Operating Temperature	-55 to +70 °C
Airborne Environmental Environment	RTCA DO-160E

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