

The HD20323 is suitable for broadband & band specific linear applications. This amplifier is utilizing advanced GaAsFET power devices that achieve high gain, wide dynamic range, low distortions and excellent linearity. Exceptional performance, long term reliability, and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, built in high efficiency sequence regulator, EMI/RFI filters, machined housing, and qualified components.



- Solid-state class A linear design
- Instantaneous ultra broadband
- Excellent Phase Linearity and Group Delay Characteristics
- Small and lightweight
- Suitable for all modulations CW/FM/PM/AM/Pulse/Digital
- 50 Ohm Input/Output impedance
- High reliability and ruggedness

**ELECTRICAL SPECIFICATIONS @ T=25°C, VDD=+13VDC, 50 System**

| Parameter                    | Symbol           | Min  | Typ | Max  | Unit  |
|------------------------------|------------------|------|-----|------|-------|
| Operating Frequency          | BW               | 2000 |     | 4000 | MHz   |
| Power Output CW              | P <sub>Sat</sub> | 8    | 10  |      | Watts |
| Power Output @ 1dB G.C.P     | P <sub>1dB</sub> | 6    | 10  |      | Watts |
| Power Gain @ 1dB G.C.P       | G <sub>1dB</sub> | 40   |     |      | dB    |
| Input Power for Rated Output | P <sub>in</sub>  |      | 0   |      | dBm   |
| Small Signal Gain Flatness   | G                |      |     | ±1.5 | dB    |
| Input/Output VSWR @ 50       | S11/S22          |      |     | 2:1  | -     |
| Third Order Intercept Point  | IP3              |      | +48 |      | dBm   |
| Harmonics @ 1dB G.C.P        | H                |      | -20 |      | dBc   |
| Noise Figure                 | NF               |      |     | 10   | dB    |
| Spurious Signals             | Spur             |      | -60 |      | dBc   |
| Operating Voltage            | VDD              | 12   | 13  | 15   | VAC   |
| Current Consumption          | I <sub>dd</sub>  |      | 3   | 4    | Watts |

**MECHANICAL SPECIFICATIONS**

| Parameter                  | Value                            | Units | Limits |
|----------------------------|----------------------------------|-------|--------|
| Dimensions                 | 6.8 x 2.63 x 0.75                | Inch  | Max    |
| Weight                     | 1.5                              | lb.   | Max    |
| RF Connectors Input/Output | SMA female                       |       |        |
| Cooling                    | External heatsink and forced air |       |        |

**ENVIRONMENTAL CHARACTERISTICS**

| Parameter                          | Symbol           | Min    | Typ      | Max | Unit |
|------------------------------------|------------------|--------|----------|-----|------|
| Operating Temperature              | T <sub>c</sub>   | 0      |          | +50 | °C   |
| Non-operating Temperature          | T <sub>stg</sub> | -40    |          | +85 | °C   |
| Relative humidity w/o condensation | RH               | 95     |          |     | %    |
| Altitude                           | ALT              | 10,000 | 30,000   |     | Feet |
| Shock & Vibration                  | SH / VI          |        | Airborne |     |      |

**PROTECTIONS**

|                  |                 |  |                                       |  |     |
|------------------|-----------------|--|---------------------------------------|--|-----|
| Input Overdrive  | P <sub>od</sub> |  | +10 dBm                               |  | Max |
| Load VSWR        |                 |  | Infinite @ all load phase & amplitude |  | Nom |
| Thermal Overload | T <sub>od</sub> |  | 85°C shutdown                         |  | Max |

OUTLINE DRAWING

