

**SATCOM RECEIVER**

# Down-Converter

## Down-Converter DC3800



### TYPICAL SPECIFICATIONS

**[Frequency]**

|                         |                 |
|-------------------------|-----------------|
| <b>Input frequency</b>  | 3400 - 4200 MHz |
| <b>Output frequency</b> | 950 - 1750 MHz  |
| <b>LO frequency</b>     | 5150MHz         |
| <b>Frequency sense</b>  | Inversion       |
| <b>LO stability</b>     | ± 1kHz max.     |

**[RF input characteristics]**

|                           |                         |
|---------------------------|-------------------------|
| <b>RF input connector</b> | N-type female (50 Ohms) |
| <b>Input return loss</b>  | 18dB min                |

**[IF output characteristics]**

|                            |   |
|----------------------------|---|
| <b>P1dB</b>                | +10dBm min (+15dBm typ)   |
| <b>Spurious</b>            |   |
| <b>In-band</b>             | -55dBc max @ 0dBm output  |
| <b>Out-band</b>            | -60dBm max  |
| <b>IF output connector</b> | SMA-female (50 Ohms)  |
| <b>Phase noise (SSB)</b>   | -70dBc/Hz max @100Hz<br>-80dBc/Hz max @1kHz<br>-90dBc/Hz max @10kHz<br>-100dBc/Hz max @100kHz |
| <b>Output return loss</b>  | 15dB typ  |

**[Transfer characteristics]**

|                        |  |
|------------------------|--|
| <b>Noise figure</b>    | 16dB max @max gain                                     |
| <b>Gain</b>            | 10dB to 30dB   |
| <b>Gain control</b>    | Δ20dB, 1dB step  |
| <b>Gain flatness</b>   | ±1.0dB max over full band<br>±0.5dB max over any 40MHz |
| <b>Gain stability</b>  | ±1.0dB max @0°C to 50°C                                |
| <b>Image rejection</b> | -75dB min  |

**[Power]**

|                    |              |
|--------------------|--------------|
| <b>Voltage</b>     | 90 - 250 VAC |
| <b>Frequency</b>   | 47 - 63 Hz   |
| <b>Dissipation</b> | 40Watts      |

**[Mechanical & Environmental]**

|                       |                             |
|-----------------------|-----------------------------|
| <b>Physical size</b>  | 1RU, 19 inch rack mountable |
| <b>Operating temp</b> | -20 to 50 °C                |
| <b>Storage temp</b>   | -50 to 70 °C                |

**[Front/Rear panel]**

|                                    |  |
|------------------------------------|--|
| <b>Front panel indicator (LED)</b> | Power on status<br>LO lock status  |
| <b>Gain control &amp; monitor</b>  | Gain control through Up and Down buttons on the front panel.<br><br>Gain display on the front panel. |
| <b>Rear panel interface</b>        | AC Power Input<br>RF input<br>IF output  |

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### OUTLINE DRAWING

