

AMFC(EC, SC, IC)-80W

GaAs + GaN Technology

THE WORLD'S SMALLEST OUTDOOR 80W C-Band High Temp +70C



FEATURES:

- Hyper-Light Package Design Only 5.5lbs (2.5kg)
- Extreme Stability, Reliability and Performance
- Built-in HPA Overdrive Circuit Protection
- Built-in Optimized Linearization
- State of the art Ultra Reject Filter
- Built-in RF Monitoring Port
- Extreme GaN Linearity and Efficiency
- Exceeds ALL IESS-308/309 Phase Noise Standards
- Field Replaceable IP68 Rated Fans
- Assembled and Rigorously Tested in the USA
- 3 Year Warranty



DESIGN OVERVIEW:

The "AM" series can come in 4 varieties, Standard "AMSC" (5.85- 6.425GHz), Extended "AMEC" (5.85 - 6.725GHz), "AMFC" (5.85 - 7.025 GHz) and INSAT "AMIC" C-Band (6.725 - 7.025GHz) frequencies. World's Smallest feedhorn & boom-arm mountable BUCs in the industry with state of the art filtering, weighing only at 5.5lbs (2.5kg) and handling output power of 60W (min). Its weatherproof and robust Hyper-Light package is constructed with the most advanced mechanical precision engineering in mind.

PERFORMANCE SPECIFICATIONS

| | |
|---|--|
| Operating RF Frequency | AMEC 5.85 - 6.725 GHz |
| | AMSC 5.85 - 6.425 GHz |
| | AMIC 6.725 - 7.025 GHz |
| | AMFC 5.85 - 7.025 GHz |
| Operating IF frequency | 950 - 1825 MHz |
| | 950 - 1525MHz 950- 1250MHz |
| Local Oscillator | 4.90 GHz 5.775 GHz |
| Rated Output Power PSAT | 80W 49.0 dBm |
| Linear Power SR @ -26dBc PLIN | 60W 47.8 dBm |
| IMD3 (two tones) 3dB Back Off | -25 dBc max. |
| | 2 signal 5MHz apart at P-LINEAR |
| Spectral Regrowth at PLINEAR (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2dB back-off from rated power) | -30 dBc |
| 10MHz External Ref. (Internal High Stability Optional) | 10MHz Ref. Level: 0dBm +/- 5dBm Internal Ref. Stability +/- 0.1 ppm |

COMPLIANCE INFORMATION

| | | |
|----------------------|-----------------|-------------------|
| MIL - STD - 188/164C | MIL - STD - 461 | ROHS, REACH, WEEE |
| MIL - STD - 810E | DO - 160 G | |

SPURIOUS & PHASE NOISE

| | | |
|---|-------------------------------------|------------|
| In-Band/Out-band Spurious | -60dBc max. | |
| Group Delay | Ripple 1 nsec point to point max. | |
| AM/PM Conversion | 1.0°/dB max. at 3 dB output backoff | |
| Noise Power Density (TX) | -85dBm/Hz | |
| Noise Power Density (RX) | -145dBm/Hz | |
| Phase Noise (Up Converter) (Ext. Ref.) | -55 dBc/Hz @ 10 Hz | -115dBc/Hz |
| | -65 dBc/Hz @ 100 Hz | -135dBc/Hz |
| | -75 dBc/Hz @ 1 kHz | -150dBc/Hz |
| | -85 dBc/Hz @ 10 kHz | -155dBc/Hz |
| | -95 dBc/Hz @ 100 kHz | -160dBc/Hz |

PROTECTION

| | | |
|-------------------------|-------------|---------|
| VOLTAGE | OVERTEMP | VSWR |
| SMART ALARMS IN THE M&C | MICROPHONIC | CURRENT |

POWER CONSUMPTION

| | |
|---------------------------|------|
| 80W 49.0 dBm PSAT | 325W |
| 60W 47.8 dBm P-LIN | 280W |

ENVIROMENT SPECIFICATIONS

| | |
|--------------------------------|------------------------------|
| Environmental MIL-STD | Compliant with MIL-STD810E |
| Vibration MIL-STD | MIL-STD810F, Method 514.5 |
| Operating Temperature Range | - 40° C to + 70°C |
| Storage Temperature Range | - 60°C to + 85°C |
| Fan Rating / Field Replaceable | IP 68, Long Life Fans |
| Humidity | 100% Condensing, IP67 Rated |
| Shock | 20 g peak, 11 msec, 1/2 sine |
| Altitude | 21,500ft, 6,500m |

M&C INTERFACE

| | |
|-----------------------------|--|
| Advanced Monitor & Control | Ethernet Web Page Based, SNMP, RS232/485, FSK (opt.) |
| ALARMS | PLL LOCK, HPA, VSWR, MUTE, TX |
| Stealth PLin Operation Mode | LED Shut-Off Silenced fans |

MECHANICAL SPECIFICATIONS

| | |
|---|--|
| Dimensions (DC Powered, Without connectors) | 7.4" x 5.1" x 4.8" (188 x 130 x 122 mm) |
| Weight (DC Powered) | 5.5lbs (2.5kg) |

PART NUMBERING SYSTEM

AM - C-BAND MODEL SERIES
FC - Full C-Band 5.85 - 7.025 GHz
EC - Standard C-Band 5.85- 6.425GHz
SC - Extended Ku-Band 5.85 - 6.725GHz
IC - INSAT 6.725 - 7.025GHz
60 | 80 | - Rated Power in Watts
N | F - 50 Ohm or 75 Ohm IF Input Connector Type
M - Full M&C Option RS232/485, SNMP, Ethernet
A - VAC +80-250 Power Supply built-in
R - 10 MHz Ref. Auto Sense | Internal Reference
K - FSK Option
U - Universal Mounting Bracket
J - Weatherproof DC/RJ45 Cable Dongle
C xxxx - Custom RAL Color Code
L - Custom Language
P - Custom Part number
B - Custom Label
G - Custom Logo
T- Redundancy Ready
H - High Gain (+79dB - 82dB)
W - Weatherproof Pelican Style Case
O - Other Custom Option
X- Custom Cable



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INPUT|OUTPUT INTERFACE

| | |
|---|--|
| IF Connector | N-type (50 Ohm) F-type (75 Ohm) |
| Universal Prime Power via 4pin Power Connector | +36-76 VDC |
| Aphenol PT02E-12-4S, Current protection | |
| Output VSWR | 1.3:1 |
| Output Interface | CPR137G Sealed & Grooved |
| Input VSWR | 1.5:1 |
| 10MHz External Ref. (Internal High Stability +/- 0.1ppm Option Available) | 10MHz Ref. Level: 0dBm +/- 5dBm Internal Ref. Stability +/- 0.1 ppm |

GAIN

| | |
|--------------------------------|--|
| Gain (Temperature Compensated) | 67dB(min) 72 dB(typ.) |
| TX Gain Flatness | ± 0.75 dB max. over 40 MHz |
| TX Gain variation 50MHZ | ± 0.5 dB |
| TX Gain variation 500MHZ | ± 1.5 dB |
| Gain Attenuation | 31.5dB in 0.5dB Steps, 0.1dB available |

