

AMFC(EC, SC, IC)-60W

GaAs + GaN Technology

THE WORLD'S SMALLEST OUTDOOR 60W 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 - 6.725GHz AMSC 5.85 - 6.425GHz AMIC 6.725 - 7.025GHz 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	60W 47.8 dBm
Linear Power SR @ -26dBc PLIN	48W 46.8 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

60W 47.8 dBm PSAT	260W
48W 46.8 dBm P-LIN	220W

ENVIRONMENT 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

