



The **ACSR-X family** of SSPAs is designed for the most challenging X-band **professional & military** satellite communication systems (ground, SOTP, SOTM, maritime, etc.). Latest technology is applied to obtain the best power efficiency, phase noise, gain stability and linear power according to **MIL-STD-188-164C**. The ACSR-X family is a **high reliability** solution designed for **harsh environmental conditions**, with every single production unit **fully tested** in an environmental chamber and delivered with a complete factory acceptance test report.

TRANSMITTER SPECIFICATIONS

Input/Output frequency	7.90 to 8.40 GHz
Input/Output X-band VSWR (50 Ω)	< 1.3:1
Max. input level without damage	+10 dBm
Psat (typ)	56.0 dBm
Plin (min)	53.0 dBm
Gain @ Plin	70 dB min
Gain flatness	±2.0 dB over whole BW ±0.3 dB over 40 MHz
Gain stability (24 hours)	±0.25 dB @ const. temp.
Gain variation over temperature	±1.0 dB
Attenuation adjustment range	30 dB min with 0.1 dB steps
Output noise power density	< -70 dBm/Hz (7.90-8.40 GHz) < -145 dBm/Hz (7.25-7.75 GHz)
Output noise power density (Muted)	< -120 dBm/Hz (7.90-8.40 GHz)
Power detection accuracy	±1.0 dB (Psat to Psat - 20 dB)
AM/PM conversion @ Plin	< 2.5 °/dB
Phase noise	< IESS-308/309 - 10 dB
Group delay	< 1 nsec p-p over any 40 MHz
Spurious @ Plin	< -65 dBc
Harmonics @ Plin	< -60 dBc
Residual AM Noise (0 - 10 kHz)	< -50 dBc
(10 - 500 kHz)	< -20 * (1.5 + log F _{kHz}) dBc
(500 - 1000 kHz)	< -84 dBc
SR @ Plin	< -30 dBc (MIL-STD-188-164C)
TOI @ Plin	< -25 dBc (MIL-STD-188-164C)
Output sample	-40 dBc ± 2 dB

POWER SUPPLY

AC input voltage	94-264 V _{AC} (47-63 Hz)
Consumption	1600 W typ @ Plin 2000 W typ @ Psat

MECHANICAL SPECIFICATIONS

Size (LxWxH) 19" 4U rack	600 x 483 x 178 mm 23.6 x 19.0 x 7.0 in
Weight	30.0 kg 66.1 lbs
Finish	RAL 9003 (White)
Cooling system	Forced air integrated

ENVIRONMENTAL SPECIFICATIONS

Storage temperature	-40 °C to +85 °C
Operating temperature	0 °C to +50 °C
Relative humidity	up to 100%
Storage altitude	up to 15000 m
Operating altitude	up to 3000 m
Vibration	MIL-STD-810E Method 514.4

INTERFACES

TX input (X-Band)	Type N (F) 50 Ω
TX output (X-Band)	WR112 flat (CPRF 112)
TX output sample port	Type N (F) 50 Ω
M&C (RS232/485)	5-747905-2
M&C (HW Mute)	5-747904-2
M&C (Ethernet/SNMPv2)	RJF21G
Power supply	ACA3102E16-10PBA232

All mating connectors provided

OPTIONS

X-band output	X-band input	Standard freq. option
7.90 to 8.40 GHz	7.90 to 8.40 GHz	ACSR-X400W-E1-V1