

X-BAND HUB-MOUNT SSPB (Solid State Power Block-Up Converter) UP TO 400W

SSPB-4000X[®] series



TECHNICAL SPECIFICATIONS	300W	400W
Electrical Characteristics		
Output power (P _{SAT})	+55 dBm	+56 dBm
Output power (P _{1dB}) min	+54 dBm	+55 dBm
Conversion gain @ max gain setting	75 dB	76 dB
L-Band input frequency	950 - 1450 MHz	
RF Output frequency	7.9 – 8.4 GHz	
Max input power without damage	+10 dBm	
Gain flatness	± 2.0 dB max full band, 0.3 dB/10 MHz	
Gain variation temperature	3.0 dB p-p max -30°C to +55°C	
Gain adjustment range	20 dB	
Input return loss	18 dB, min	
Output return loss	20 dB, min	
Noise Power Density	-70dBm/Hz in TX band, -110 dBm/Hz in RX band	
Spurious at rated power	-60 dBc, max	
Harmonics at rated power	-75 dBc, max	
AM/PM conversion	2.5°/dB typical (at P _{1dB})	
Third order IMD (2 tones)	-24 dBc, max at 3 dB back-off from P _{1dB}	
Local Oscillator frequency (LO)	6.950 GHz	
LO leakage	-20 dBm	
Phase noise*	-60 dBc/Hz at 10Hz -73 dBc/Hz at 1000Hz	-93 dBc/Hz at 100 kHz
	-65 dBc/Hz at 100Hz -83 dBc/Hz at 10 kHz	-110 dBc/Hz at 1 MHz
Group Delay (Over any 40 MHz):	Linear 0.02 ns /MHz, max	
	Parabolic 0.003 ns/MHz ² , max	
	Ripple 1 nsec p-p, max	
External reference		
Reference frequency	10 MHz	
Reference frequency phase noise	-115 dBc/Hz at 10 Hz	-150 dBc/Hz at 10 kHz
	-135 dBc/Hz at 100 Hz	-160 dBc/Hz at 100 kHz
	-148 dBc/Hz at 1000 Hz	
Reference frequency level	0 dBm ± 5 dB	
(For 1:1 redundant operation, internal 10MHz reference is recommended)		
Power Requirements		
AC input voltage	220 VAC (47-63 Hz)	
Power consumption (nominal)	2750W	3500W
Mechanical Characteristics		
Dimensions (L x W x H)	35.00" x 19.50" x 14.95" (88.90 x 49.53 x 37.97 cm)	
Weight	60 kg (132 lbs)	
Interfaces:	RF input Type N (F)	Redundancy MS3112E16-26P RF output CPR-112G
	Relay port MS3112E12-10P	RS-232 MS3112E10-6P
	AC Line MS3102E20-19P	RS-485 MS3112E10-6P
Environmental Conditions		
Temperature:	Operating -30°C to +55°C; <i>Option 1: -40°C to +55°C; Option 2: -50°C to +50°C</i>	
	Storage -55°C to +85°C	
Humidity	100%, condensing (2" rain/hour)	
Altitude	10,000' AMSL, de-rated 2°C/1,000' from AMSL	

* Based on internal 10MHz Reference.



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