

Ku Band 8W Non-Inverting Transmitter

Model 50-0801-188

2006/10/27

ELECTRICAL SPECIFICATIONS

Rev.B

	Item	Specification	Remarks
-1	Output Frequency	14.0 to 14.5GHz	
-2	Input Frequency	950 to 1450MHz.	
-3	Conversion type	Fixed L.O.	
-4	Local Frequency	13.05GHz	
-5	Frequency Sense	Positive	
-6	Output Power @ 1dB Gain Compression Point	+39dBm min	
-7	Linear Gain	59dB to 69dB	
-8	Gain Flatness over Frequency @ +25C	5dBp-p max. over 500MHz 2dBp-p max. over 54MHz	
-9	Gain Variation over Temperature @ Fixed Frequency	5dBp-p max	
-10	IM3	-30dBc typical. -26dBc max. 2Carriers,each carriers +31dBm	
-11	Requirement for External Reference	[Frequency] 10MHz (sine-wave) [Input Power] -5 to +5dBm @ input port [Phase Noise] -135 dBc / Hz @ 100 Hz -140 dBc / Hz @ 1 kHz -150 dBc / Hz @ 10 kHz -150 dBc / Hz @ 100kHz	
-12	Local Phase Noise	-60 dBc / Hz max. @100 Hz -70 dBc / Hz max. @ 1kHz -80 dBc / Hz max. @ 10kHz -90 dBc / Hz max. @100kHz -100 dBc / Hz max. @ 1MHz	
-13	Spurious	[In Band]: -23dBm max. (13.85 to 14.65GHz) @ Pout=+39dBm [In Receive Band]: -75dBm max. (10.95 to 12.75GHz) [Out of Band]: -50dBc max. @ Pout=+39dBm	
-14	Harmonics	-10dBm max @ Pout=+39dBm	
-15	Group Delay	10ns max. over any 10MHz	
-16	Receive Band Noise Power	-156dBm/Hz max. @ 14.0 to 14.5GHz	
-17	Setting Time	200 ms max.	

ELECTRICAL SPECIFICATIONS (cont)

-18	AM/PM Distortion	4 deg/dB max.	
-19	Input Impedance	50 Ω nom.	
-20	Input VSWR	2:1 max @ 950 to 1450MHz, 10MHz	
-21	Output VSWR	2:1 max.	
-22	Output Load VSWR for Non Damage	Infinite:1	
-23	DC Power Requirement	+36 to +48Vdc, 120W max.	
-24	Mute: Shut off the HPA in case of Local unlocked. Carrier on/off suppression	60dBc min.	

MECHANICAL SPECIFICATIONS

	Item	Specification	Remarks
-1	Input Interface	[10MHz/IF] N-type female (50 Ω) [DC] MS-connector	
-2	Output Interface	Waveguide, WR-75, waterproof @ Mated with matching Flange and O-ring.	
-3	Dimension and Housing Weight	252 (mm) x 185 (mm) x 161.5 (mm) max. 6.2 kg	
-4	Paint/Color	White	
-5	Label	SPC Label	

ENVIRONMENTAL SPECIFICATIONS

	Item	Specification	Remarks
-1	Temperature Range	Operating: -40 to +55°C Storage: -40 to +75°C	
-2	Thermal Gradient	-40°C/Hour	
-3	Weather Protection	The Transmitter shall comply with IP65 weather-proofing standard as defined in EN60529. Flood from feedhorn to inside of waveguide will be excluded.	
-4	Humidity	Up to 100%	
-5	Altitude	Operating: Up to 10,000 feet Non-Operating for transportation: From sea level to 40,000 feet	