

C Band 10W Non-Inverting Transmitter

Model 30-1001-187

2006/10/27

ELECTRICAL SPECIFICATIONS

Rev.D

	Item	Specification	Remarks
-1	Output Frequency	5.85 to 6.425GHz	
-2	Input Frequency	950 to 1525MHz.	
-3	Conversion type	Fixed L.O.	
-4	Local Frequency	4.9GHz	
-5	Frequency Sense	Positive	
-6	Local Frequency Stability	Same as external reference oscillator	
-7	Output Power @ P1dB	+40dBm typical	
-8	Linear Gain	60dB to 70dB	
-9	Gain Flatness over Frequency	5dBp-p max. over 575MHz 2dBp-p max. over 54MHz	
-10	Gain Variation over Temperature @ Fixed Frequency	5dBp-p max	
-11	IM3	-30dBc typical. -26dBc max. 2 Carriers, each carrier +32dBm	
-12	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	
-13	Local Phase Noise	-66 dBc / Hz max. @100 Hz -75 dBc / Hz max. @ 1kHz -83 dBc / Hz max. @ 10kHz -96 dBc / Hz max. @100kHz -100 dBc / Hz max. @ 1MHz	
-14	Spurious	[In Band] (5.85 to 6.425GHz) -50dBc max (IF ON) @ Pout=+40dBm -20dBm max (IF OFF) [In Receive Band] (3.4 to 4.2GHz) -70dBc max (IF ON) @ Pout=+40dBm -95dBm max (Mute On) [Out of Band] (IF ON) @ Pout=+40dBm -49 dBm max. from 1 to 3.4 GHz -43 dBm max. from 4.2 to 5.47 GHz -23 dBm max. from 5.7 to 5.85 GHz -23 dBm max. from 6.65 to 6.8 GHz -43 dBm max. from 7.025 to 10.7 GHz -37 dBm max. from 10.7 to 21.2 GHz -31 dBm max. all others	

ELECTRICAL SPECIFICATIONS (cont)

-15	Harmonics	-20 dB max.	
-16	Group Delay	10ns max. over any 10MHz	
-17	Receive Band Noise Power	-156dBm/Hz max. @ 3.4 to 4.2GHz	
-18	Setting Time	200 ms max.	
-19	AM/PM Distortion	4deg/dB max.	
-20	Input Impedance	50 Ω nom.	
-21	Input VSWR	2:1 max @ 950 to 1525MHz, 10MHz	
-22	Output VSWR	2:1 max.	
-23	Output Load VSWR for Non Damage	Infinite:1	
-24	DC Power Requirement	+36 to +48Vdc, 75W max.	
-25	Mute: Shut off the HPA in case of Local unlocked. Carrier on/off suppression	60dBc min.	
-26	Maximum Input Level	0 dBm will cause no damage, 1 minute max	
-27	Duty Cycle	0-100%	

MECHANICAL SPECIFICATIONS

	Item	Specification	Remarks
-1	Input Interface	[10MHz/IF] N-type female (50 Ω) F-type female (75 Ω) : optional [DC] MS-connector	
-2	Output Interface	Waveguide, CPR-137G, waterproof Mated with matching Flange and O-ring.	
-3	Dimension and Housing Weight	300 mm x 250 mm x 150 mm max. 5kg max.	
-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 weatherproofing 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	

Packaging

	Item	Specification	Remarks
-1	Screws & Washers	9 (10-32 x 5/8") socket cap screws with 9 flat washers and 9 split washers	
-2	Gasket	1 rectangular silicone rubber weather seal for CPR137G waveguide flange	
-3	Film	1 polyimide film for weather seal for CPR137G waveguide flange	

