

CUSTOMER: NA

NOTE: 33-36 GHz Upconverter

MODEL NO: 980A-34.5/381S

SERIAL NO: N/A

ITEM NO	SPECIFICATION	TEST DATA
1	IF Input Frequency	8.5 - 11.5 GHz
2	IF Input Power	-100 dBm (Min) - 0 dBm (Max)
3	IF Input VSWR	2.5:1 Max
4	IF Input Connector	SMA Female
5	LO Input Frequency	24.1-24.825 GHz
6	LO Amplitude	0 dBm (Max)
7	LO VSWR	1.5:1 (Max)
8	RF Output Frequency	33 - 36 GHz
9	RF Output Gain High Power (HiP) Path	33 dB
10	RF Output Gain Low Power (LoP) Path	19 dB
11	RF Output Gain low Noise Power (LNP) Path	9 dB
12	RF Output Gain Flatness	±1.0 dB
13	RF Output HiP Path P1dB	30 dBm
14	RF Output LoP Path P1dB	12 dBm
15	RF Output LNP Path P1dB	6 dBm
16	Noise Figure	15.5 dB

TESTED BY: N/A

DATE: 2021-03-16



ITEM NO	SPECIFICATION	TEST DATA
17	Phase Tracking Chnl/Chnl	-20° (Min), 20° (Typ)
18	Phase Tracking Unit/Unit	-20° (Min), 20° (Typ)
19	Phase Tracking HiP/LoP/LNP	-90° (Min), 90° (Typ)
20	Signal Related Spurs within 33-36 GHz	-60 dBc
21	Signal Related Spurs outside 33-36 GHz	-45 dBc
22	Non-Signal Related Spurs within 33-36 GHz	-70 dBc
23	Harmonics	-50 dBc
24	VSWR	1.5:1 (Max)
25	Isolation	30 dB (Min)
26	Attenuation on Each Power Path (step size = 1 dB)	0-24 dB
27	On/Off Switching Time	1 Microsecond (Max)
28	Connector	WR-28 Waveguide
29	Test Output Frequency	8.5-11.5 GHz
30	Test Output P1dB	8 dBm
31	Test Output VSWR	1.5:1
32	Test Output Gain	8-14 dB

33	Test Output Connector	SMA-Female
Connector: WR-28 Waveguide connection to phase matched OMT (OMT to connect to an antenna horn (MIWV 258A-6/35/.250/383) using a circular waveguide connection with a pipe diameter of .250 inches and a flange designation of UG-383/U.)		
34	Control Temp Sensor	Analog 1mV/Deg C 2 wire I2C
2 Mounting Holes on top and bottom to mount to a bracket		
35	Control Switching Speed	1 uS (Max) - Goal 100 ns
Upconverter control: common Male D-Sub connectors such as DSub-25 and DSub-9 connectors		
36	Power Output	28W
Upconverter to have Power Output Channels with two corresponding output channels, intended to be the horizontal and vertical channels going into the OMT.		
37	Operating Temperature	0 C to 40 C
The Upconverter to have a coupled test point after the mixer stage of both channels that is mixed back down to the IF frequency (8.5-11.5).		
The Upconverter to output the test point of one channel at a time and have a switch to choose between each channel.		
38	Weight with Heat Sink	8 lbs Max
The Upconverter control to use Differential Pair or TTL to control power path, digital attenuation, and channel test point (Differential Pair preferred)		
39	Dimensions including OMT and Heat Sink	10x4x6 inches Max
The Upconverter to have a test point for the control lines (this is preferable to all power/control lines going into the OMT)		