Heritage Receiver/Downconverter Line Up

Ka/Ku-band RCVR

Specification Table

PARAMETER		UNIT	SPECIFICATION	TYPICAL PERFORMANCE
Input Frequency		GHz	27.5 to 27.75	Same as left
Output Frequency		GHz	12.5 to 12.75	Same as left
Conversion Frequency		GHz	15	Same as left
Frequency Stability	any 15degC	ppm	+/− 0.1	< 0.04
	Over 15years	ppm	+/− 2	< 0.13
Gain		dB	61.5 min	62.5 nom
Gain Flatness	Any36MHz	dBp−p	0.4	0.07 nom
	250MHz	dBp−p	N/A	0.22 nom
Gain Slope		dB/MHz	0.01 max	0.003 nom
Gain Stability	@any15degC	dBp−p	0.5	< 0.03
NF	@QT Range	dB	2.6	1.99 @amb
C/3IM	@−65dBm 2 carriers input	dBc	−57.1	−62 nom
Inband Spurious		dBm	−75	< −78 (Noise Level)
AM/PM Conversion		deg/dB	0.2 max	< 0.09
Phase Shift	@ ～−60dBm input	deg	0.5 max	< 0.13
Group Delay	@Any36MHz	nsec	0.5 max	< 0.22
Power Consumption	Steady State	W	11.5 max	8.9 nom
	Transient	W	12.5 max	10.4 nom
Mass		g	1200	930
Temperature	Acceptance Temp	degC	−15 to +60	Same as left
	Qualification Temp	degC	−20 to +65	Same as left

Main Characteristics

- Ka/Ku-band RCVR consists of an RF Section, a Local Oscillator and a DC/DC Converter
- RF Section converts the 27GHz input signals to the downlink frequency of 12GHz using Local Oscillator frequency of 15GHz.
  27.5 to 27.75GHz → 12.5 to 12.75GHz
- Low Noise Figure: 2.0dB nom. @ +23degC / 2.6dB max. @+65dgC
- High Frequency Stability: less than +/-2.0ppm
- Light Weight: 0.93kg nom.
- Self gain compensation by using the Variable Gain Amp over temperature