



Product Features

- Integrated Monolithic GaAs Converter Package Module
- High Reliability
- Lower Manufacturing Cost
- Higher Productivity
- Very Low Noise Figure & Low Distortion
- Very Low Phase Noise (Ceramic Resonator used)
- Pb Free / RoHS Standard

Application

- Repeater
- Base Station



Package Type: HY-5A

Description

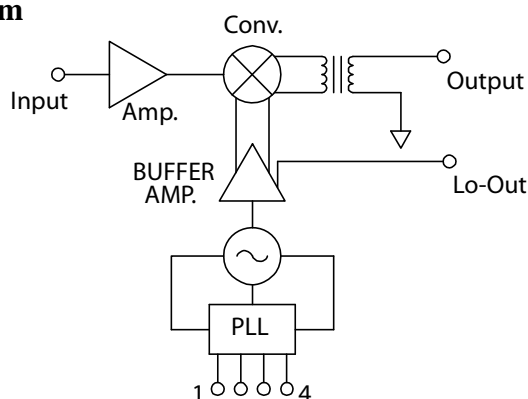
PCS Converter is a very compact size due to using simple matching circuit board including PLL circuits. Customers can apply this part to PCS systems.

Specifications

(Operating Temperature:-30°C~+80°C)

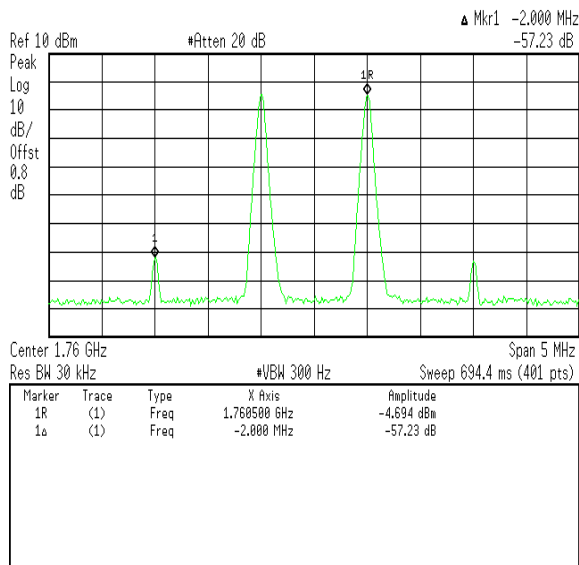
PARAMETER	RFUR19-50 (Rx-Up)	RFDR19-51 (Rx-Down)	RFDR19-55 (Tx-Down)	RFUR19-56 (Tx-Up)
Input Frequency Range (MHz)	70 (IF)	1750~1770 (RF)	1840~1860 (RF)	70 (IF)
Output Frequency Range (MHz)	1750~1770 (RF)	70 (IF)	70 (IF)	1840~1860 (RF)
LO Frequency Range (MHz)	1680~1700(lower)	1680~1700(lower)	1770~1790(lower)	1770~1790(lower)
Conversion Gain (dB)	5.5±1	5.5±1	6.0±1	6.5±1
Gain Flatness (Max.) (dB)	±0.5	±0.5	±0.5	±0.5
Noise Figure (Typ.)(dB)	8.0±0.5	6.5±0.5	6.5±0.5	6.5±0.5
OIP3 (Typ. dBm)	26	26	26	26
LO to RF Leakage (dBm)	-15	-15	-15	-15
LO to IF Leakage (dBm)	-15	-15	-15	-15
RF(IF) to IF(RF) Leakage (dBm)	-20	-20	-20	-20
LO Output Level (dBm)	4.5±1	4.5±1	4.5±1	4.5±1
LO Phase Noise (Typ.) Step Size : 200kHz	-70dBc/Hz @1KHz -95dBc/Hz @10KHz -120dBc/Hz @100KHz	-70dBc/Hz @1KHz -95dBc/Hz @10KHz -120dBc/Hz @100KHz	-70dBc/Hz @1KHz -95dBc/Hz @10KHz -120dBc/Hz @100KHz	-70dBc/Hz @1KHz -95dBc/Hz @10KHz -120dBc/Hz @100KHz
PLL Control (LMX2326)	3 wire	3 wire	3 wire	3 wire
Vcc/Idd	5V / 170mA	5V / 170mA	5V / 170mA	5V / 170mA

Functional Diagram

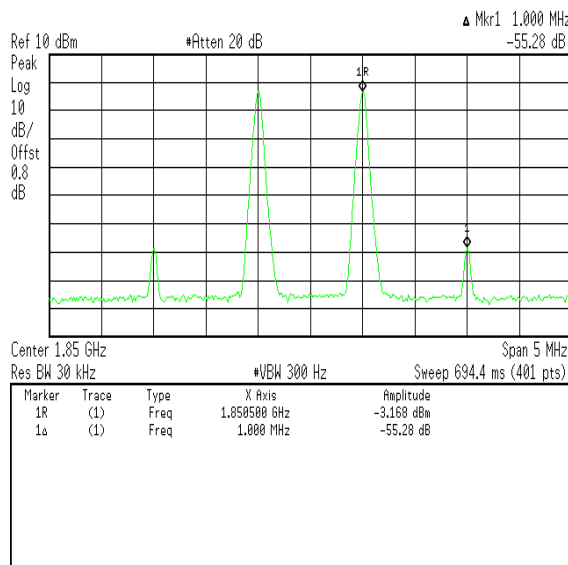


RFUR19-50, 56 OIP3 Test (Up Converter)

* Agilent 16:40:26 Jan 15, 2003

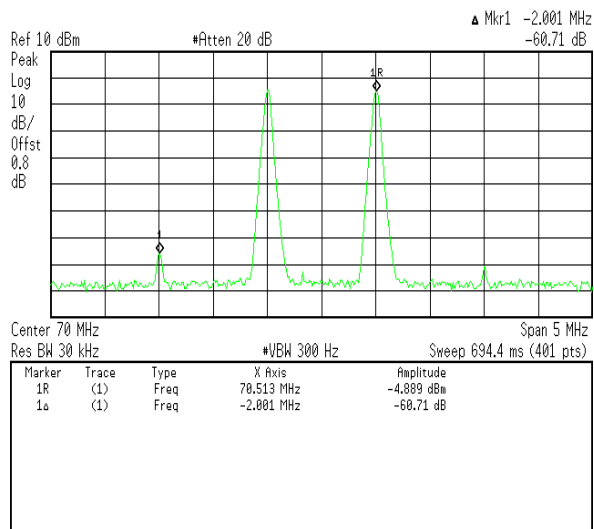


* Agilent 20:45:06 Jan 15, 2003

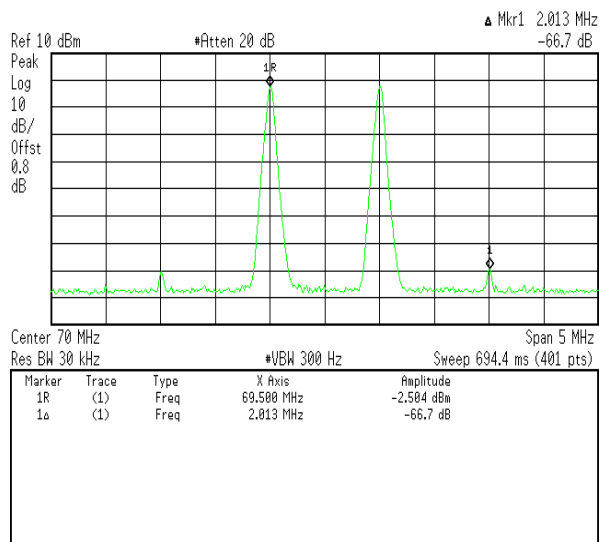


RFDR19-51, 55 OIP3 Test (Down Converter)

* Agilent 16:09:29 Jan 16, 2003

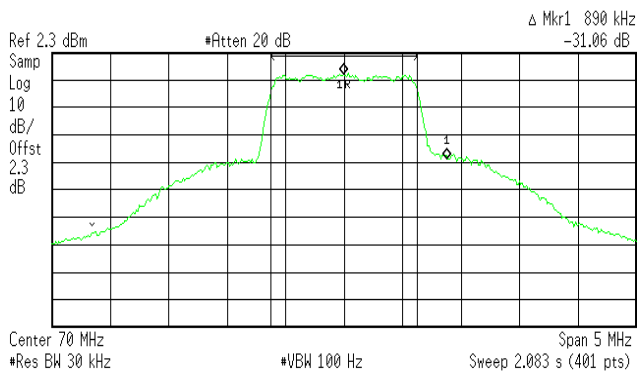


* Agilent 11:23:55 Jan 16, 2003



CDMA Test

Agilent 17:55:57 Feb 14, 2003



Channel Power

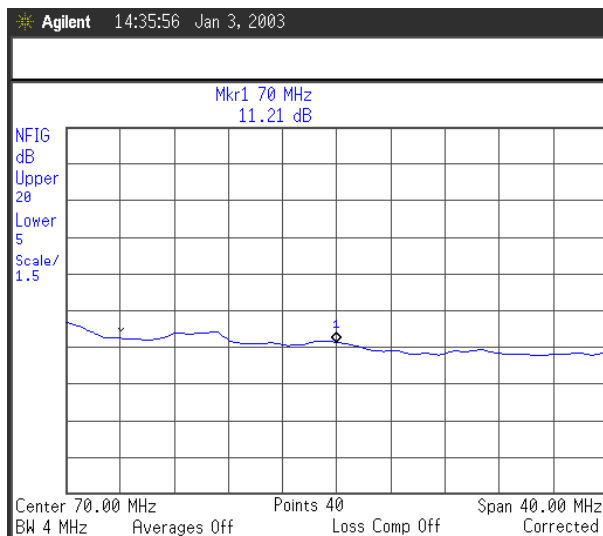
8.73 dBm /1.2500 MHz

Power Spectral Density

-52.24 dBm/Hz

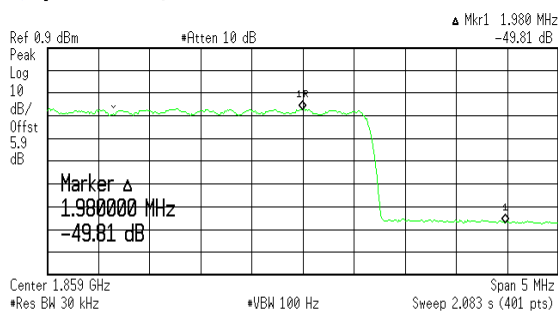
Noise Figure Test

Agilent 14:35:56 Jan 3, 2003



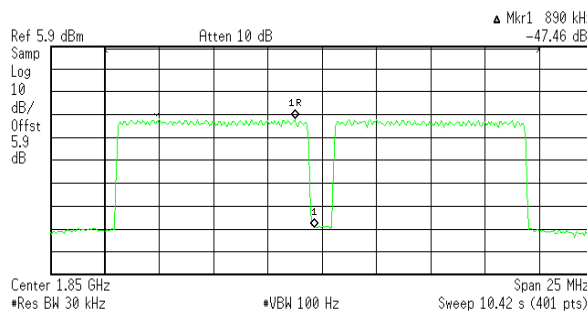
RFUR19-56 CDMA Test (14FA)

Agilent 16:42:36 Aug 19, 2003



Marker	Trace	Type	X Axis	Amplitude
1R	(1)	Freq	1.858750 GHz	-26.46 dBm
1a	(1)	Freq	1.980 MHz	-49.81 dB

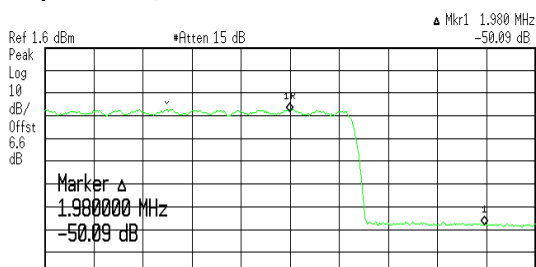
Agilent 16:37:29 Aug 19, 2003



Channel Power Results (measuring..)		Integration BW
Channel Power	-0.25 dBm	20.00 MHz
Density	-73.27 dBm/Hz	

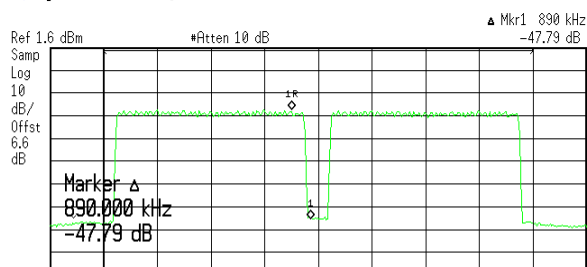
RFUR19-50 CDMA Test (14FA)

Agilent 16:57:46 Aug 19, 2003



Marker	Trace	Type	X Axis	Amplitude
1R	(1)	Freq	1.768750 GHz	-26.38 dBm
1a	(1)	Freq	1.980 MHz	-50.09 dB

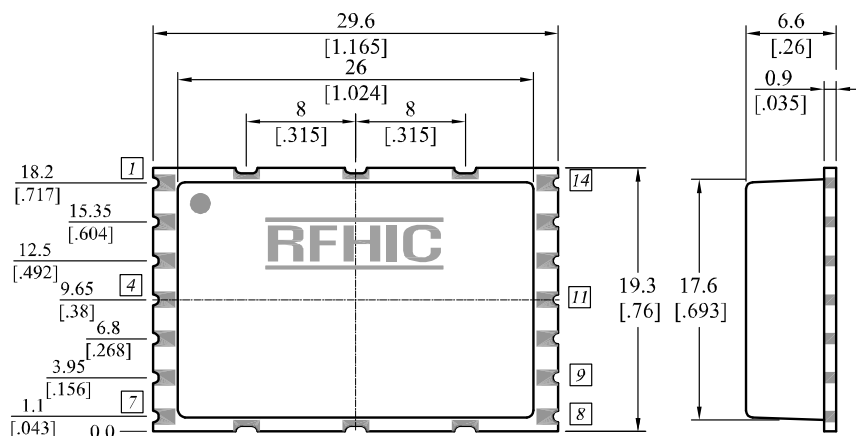
Agilent 16:54:57 Aug 19, 2003



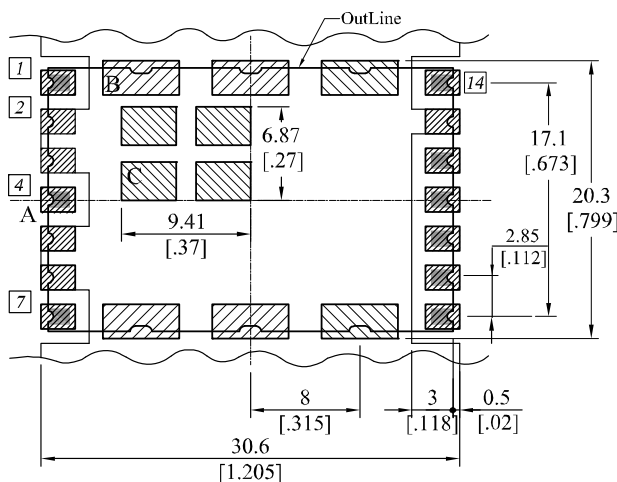
Channel Power Results (measuring..)		Integration BW
Channel Power	0.02 dBm	20.00 MHz
Density	-72.99 dBm/Hz	

Pacakage Dimensions (Type: HY-5A)

Unit : $\frac{\text{mm}}{\text{[inch]}}$	Tolerance : $\pm \frac{0.2}{.008}$
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Recommended Pattern



Pin No.	Function	Pin No.	Function
1	Input	14	Output
2	Ground	13	Ground
3	Ground	12	Lo_Out
4	Vcc+5V	11	Fo/LD
5	Ground	10	LE
6	Ground	9	Data
7	Ref in	8	Clock

Pattern Size WxL		
	mm	inch
A	2.5 x 1.8	.098 x .071
B	5.6 x 2.5	.22 x .098
C	4 x 2.8	.157 x .11

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