PCS Converter (DR)

RFUR19-50 / RFDR19-51 RFDR19-55 / RFUR19-56

RFHIC

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

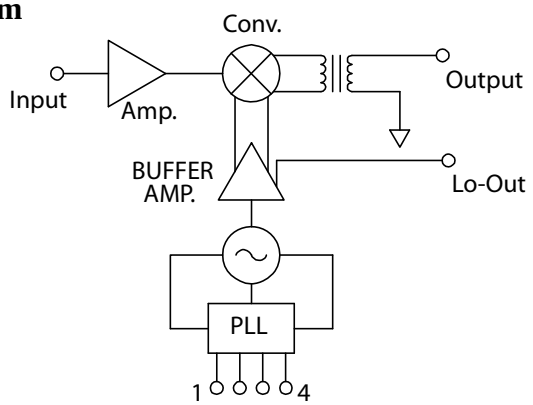
PCS Converter is a very compact size due to using simple matching circuit board including PLL circuits.
Customers can apply this part to PCS systems.

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



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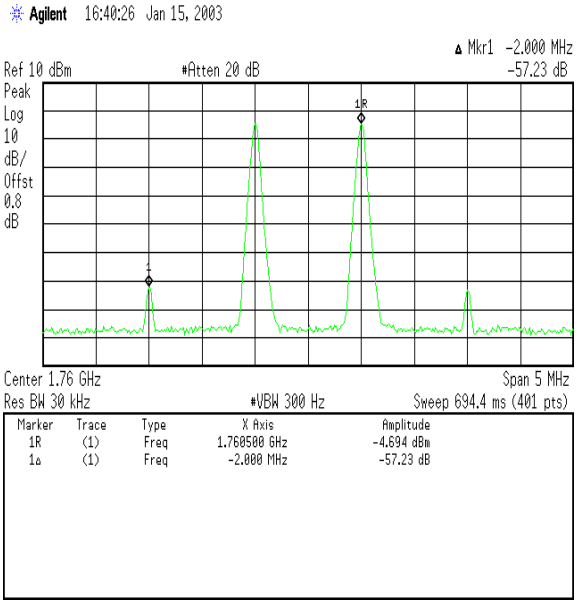
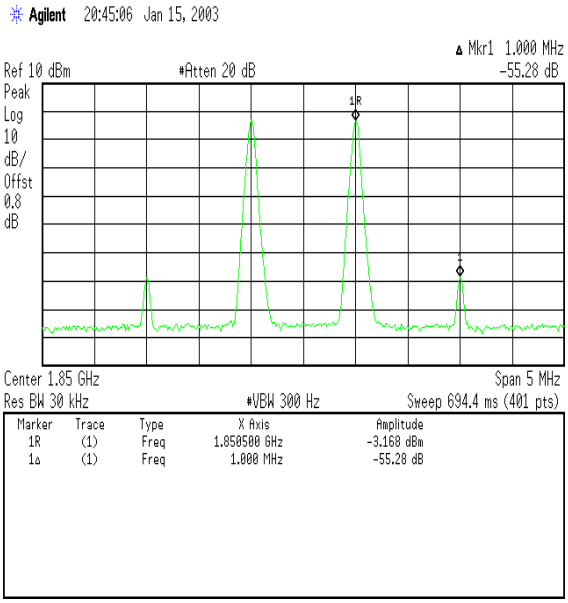
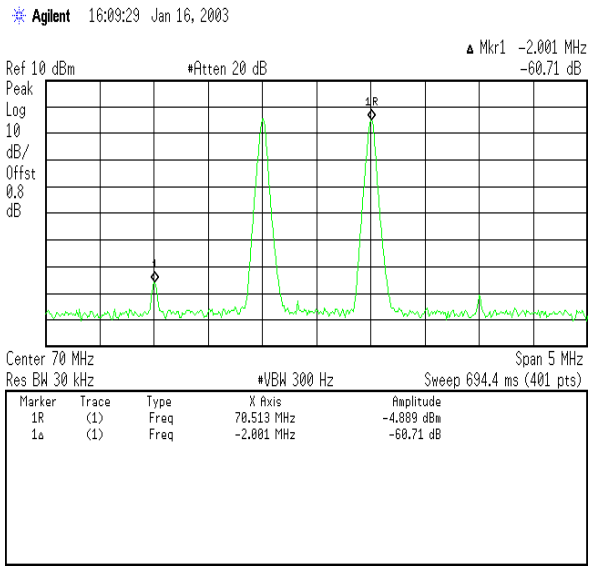
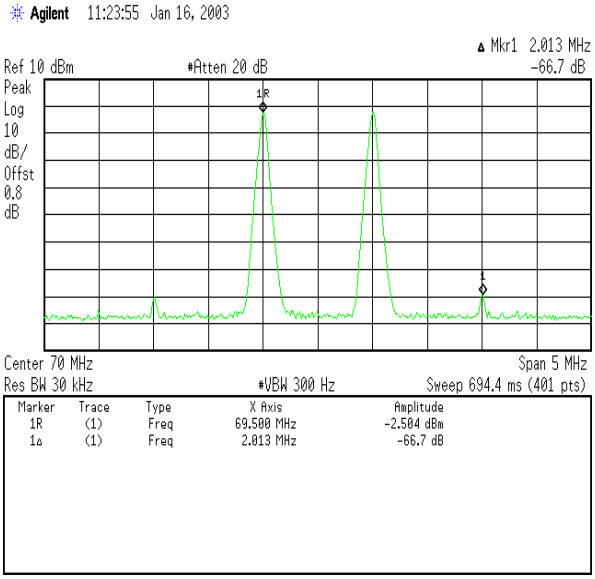
RFUR19-50, 56 OIP3 Test (Up Converter)



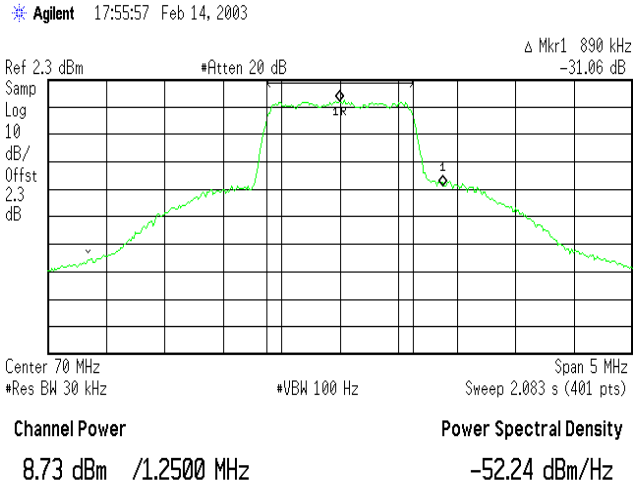


RFDR19-51, 55 OIP3 Test (Down Converter)

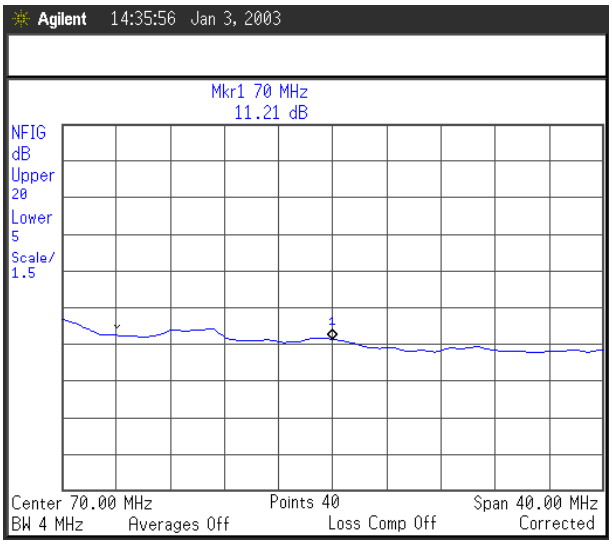




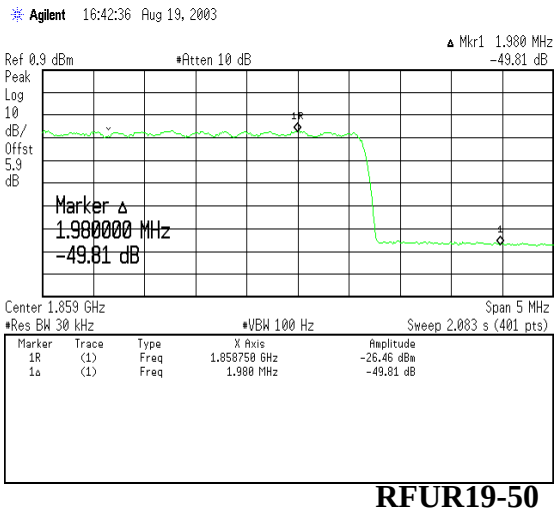
CDMA Test

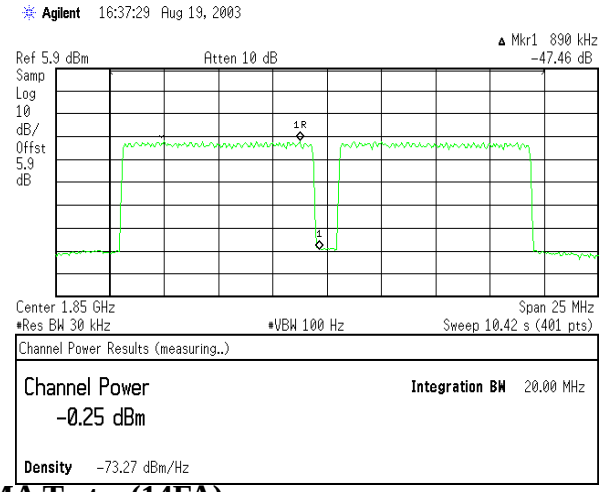


Noise Figure Test

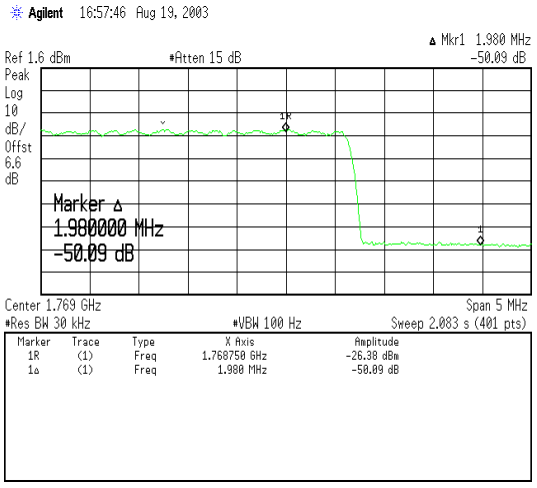


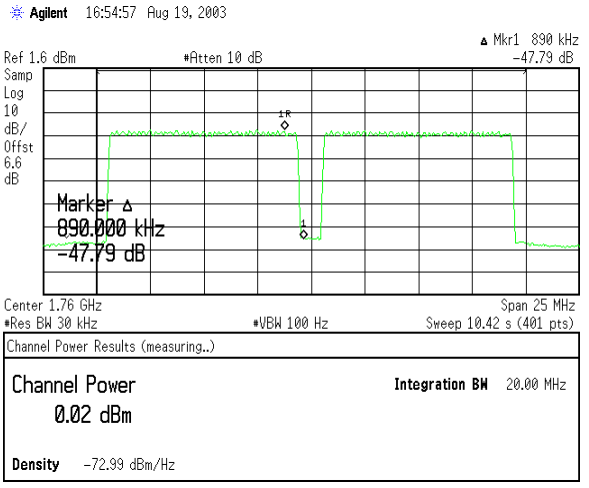
RFUR19-56 CDMA Test (14FA)





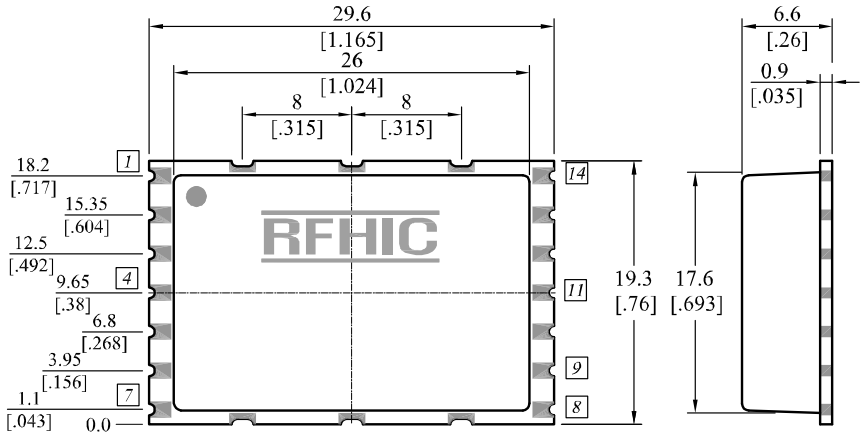
RFUR19-50 CDMA Test (14FA)



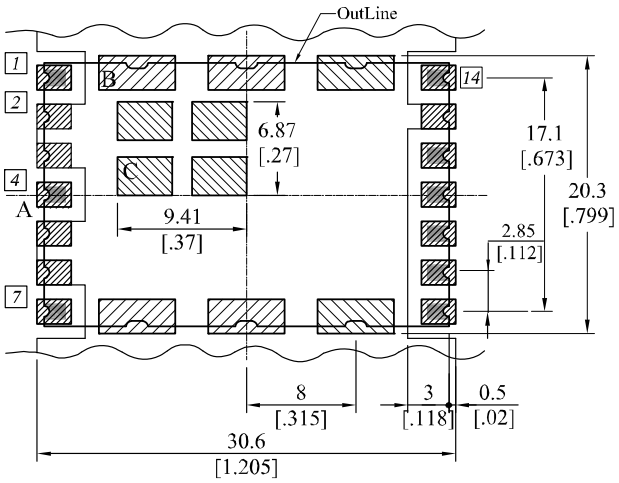


Pacakage Dimensions (Type: HY-5A)

Unit : mm [inch]	Tolerance : ± 0.2 .008



Recommended Pattern



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

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