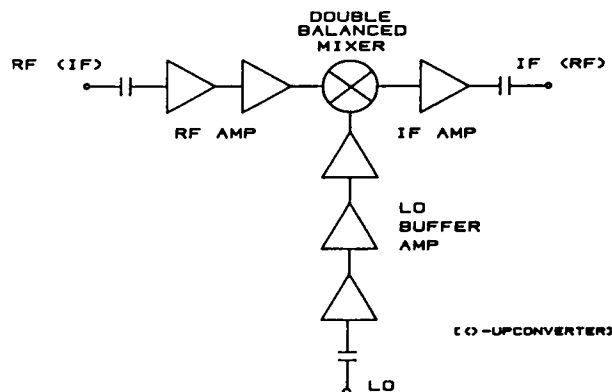


MODEL PM-CV0302-B/-D/-S

50-2500 MHz MONOLITHIC CONVERTER SUBSYSTEM

FEATURES

RF: 100 - 2500 MHz
LO: 50 - 3000 MHz
IF: 100 - 2000 MHz
OPERATES AS UPCONVERTER
OR DOWNCONVERTER
10 dB CONVERSION GAIN
SMALL SIZE
HIGH RELIABILITY



The Pacific Monolithics Model PM-CV0302-D is a GaAs monolithic wideband frequency converter complete with LO buffer, RF amplifiers, double-balanced mixer and IF amplifier. All the active components are integrated onto a single monolithic chip. This approach results in significant cost and size reductions compared to an equivalent thin-film MIC subsystem. Phase ripple is substantially reduced because of the short line lengths between the mixer and the active components. The RF port operates from 100 to 2500 MHz, and both high-side and low-side LO operation are possible.

The PM-CV0302 is a double-balanced converter, and may be used as either an up- or downconverter. All the ports are matched to 50 Ohms and are DC isolated. On-chip temperature compensation allows minimal performance variation over the -55°C to +85°C range. The device is insensitive to LO power variations. Potential applications include satellite and terrestrial communications receivers and transmitters, second converters for wideband receivers, radar systems, and data reception and transmission systems. All of Pacific Monolithics components offer high reliability, small circuit size and can easily interface with other system components.

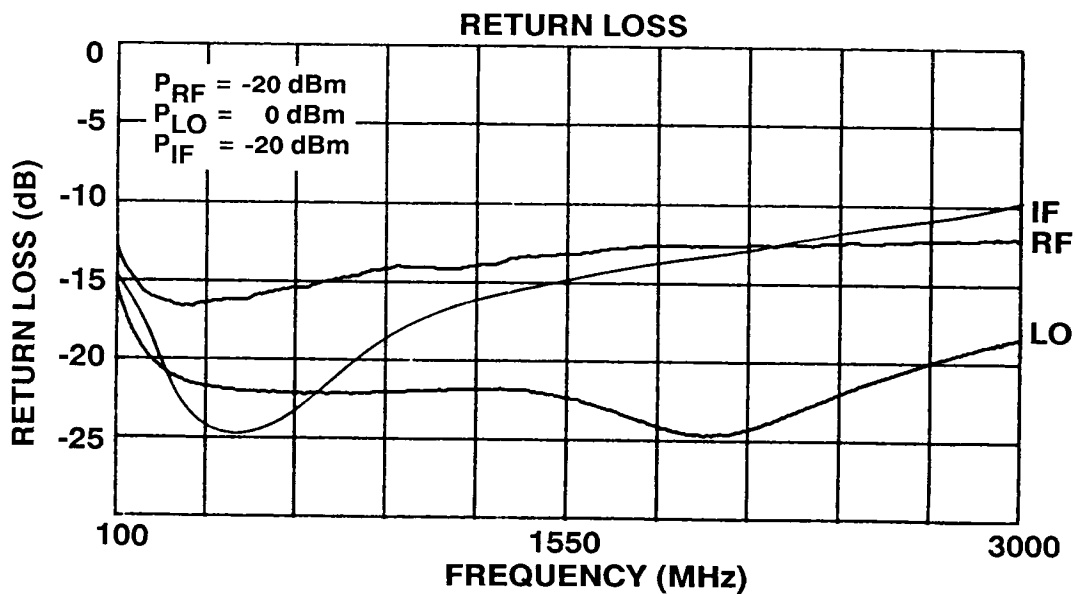
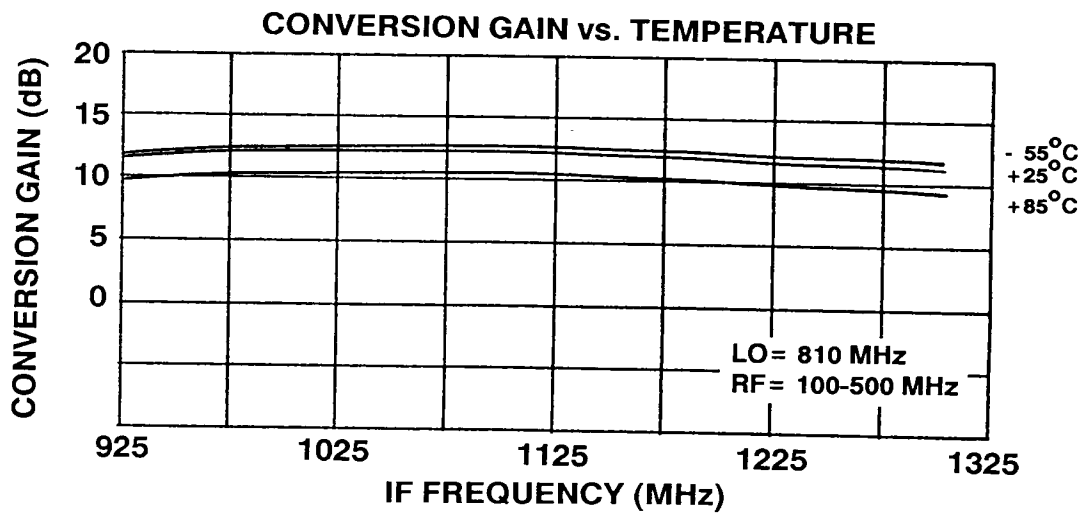
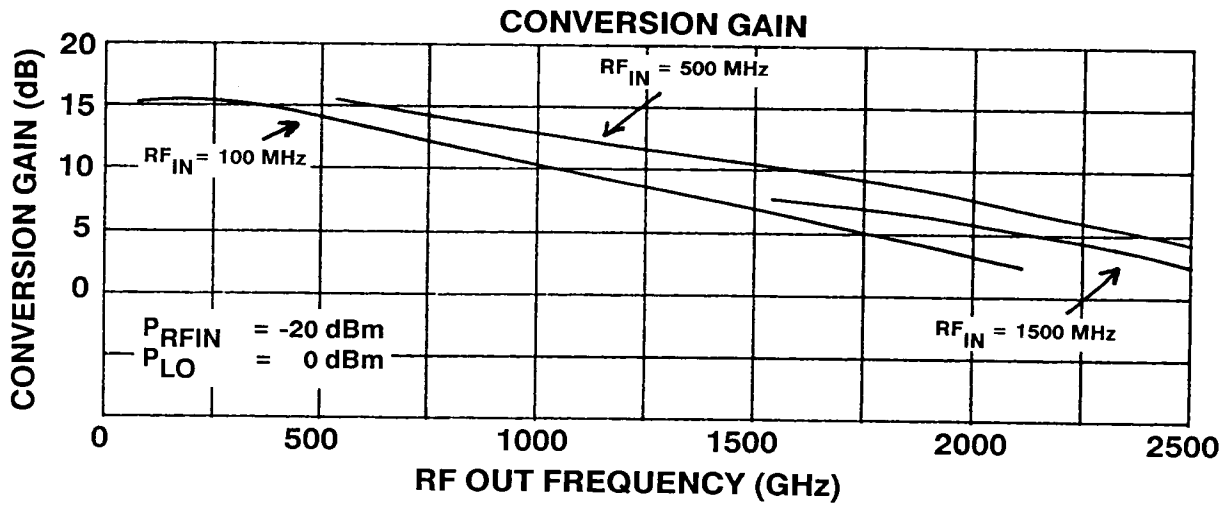
MIL-STD 883 screening available

PERFORMANCE SPECIFICATIONS

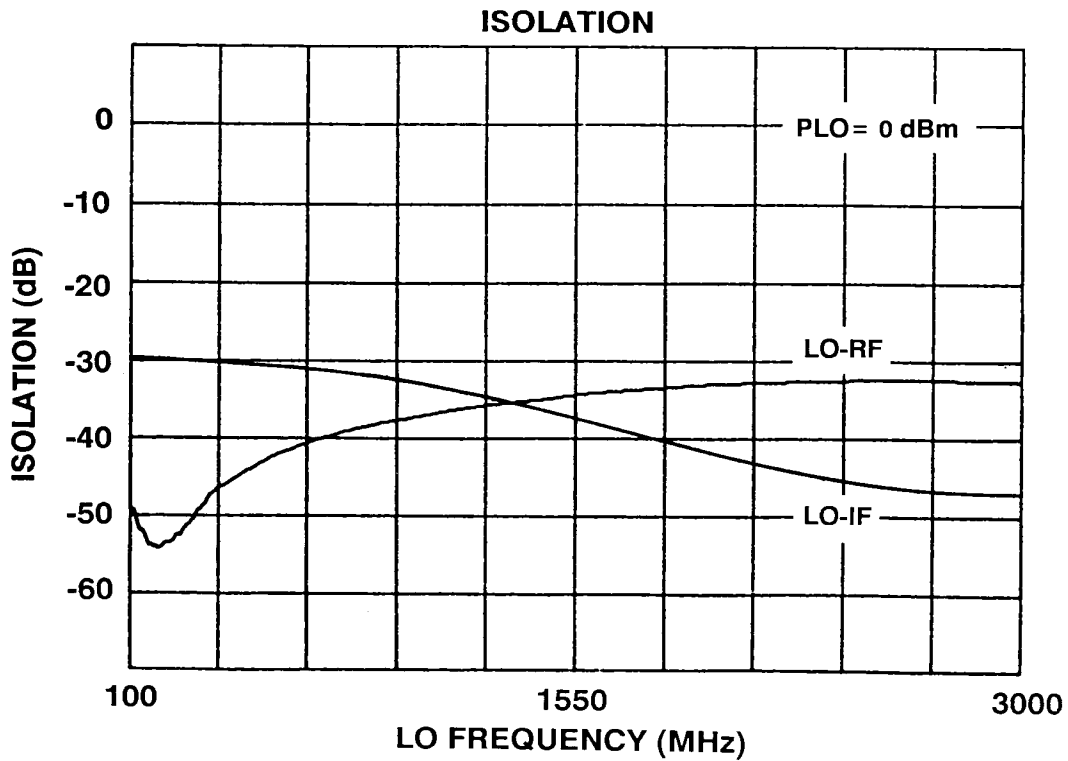
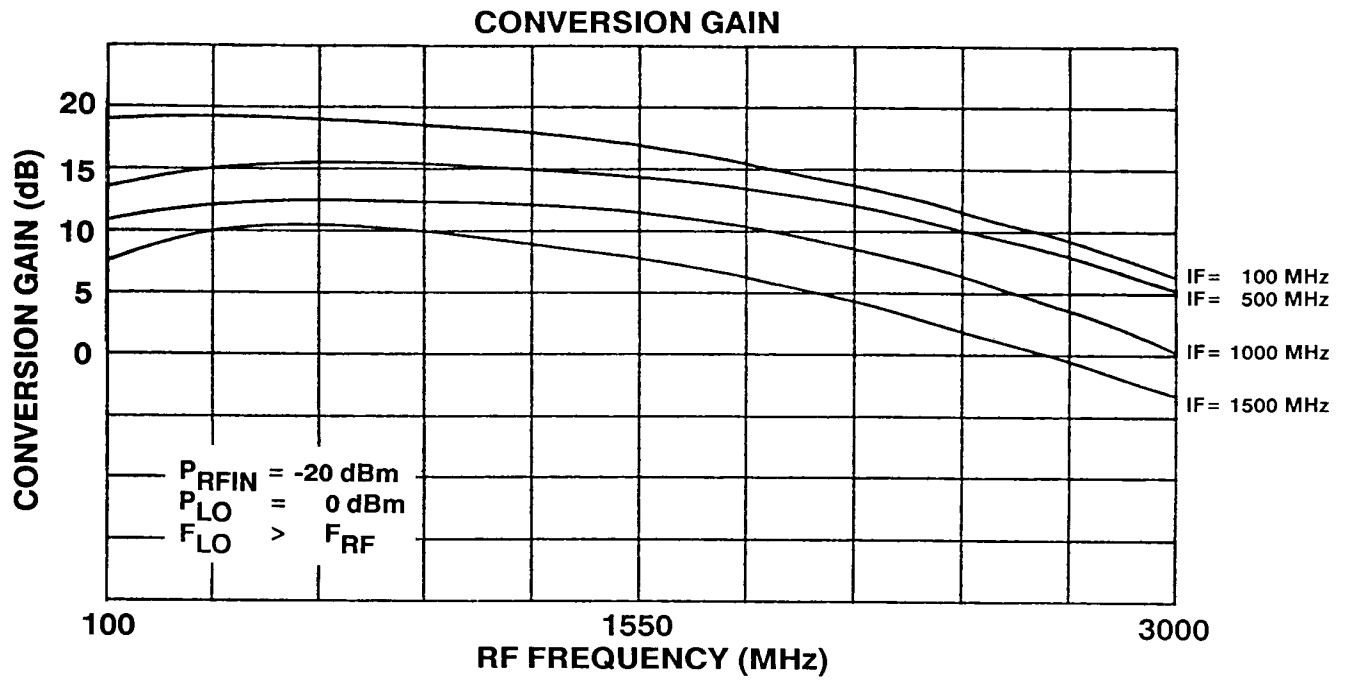
PARAMETER	AS UPCONVERTER		AS DOWNCONVERTER		UNITS
	GUARANTEED	TYPICAL	GUARANTEED	TYPICAL	
RF _{in}	100 - 800	100 - 1500	100 - 2300	100 - 3000	MHz
LO Frequency	50 - 1200	50 - 1500	100 - 2800	100 - 3500	MHz
RF _{out}	100 - 1800	100 - 2500			MHz
IF Frequency			100 - 1200	100 - 1500	MHz
Conversion Gain	5 (min)	10	5 (min)	10	dB
Noise Figure	12 (max)	10	12 (max)	10	dB
LO Power	-5 to +5	-5 to +5	-5 to +5	-5 to +5	dBm
Output Power (1 dB compression)	0	+3	+6	+11	dBm
DC Current					
at +8V	90 (max)	75	90 (max)	75	mA
at -5V	10 (max)	1.0	10 (max)	1.0	mA
Isolation					
LO to RF	25	30	25	30	dB
LO to IF	25	30	25	30	dB
VSWR					
RF _{in}	2:1	1.6:1	2:1	1.6:1	
RF _{out}	2:1	1.5:1	2:1	1.5:1	
LO	2:1	1.2:1	2:1	1.2:1	

All specifications measured in "-D" package at 25°C.

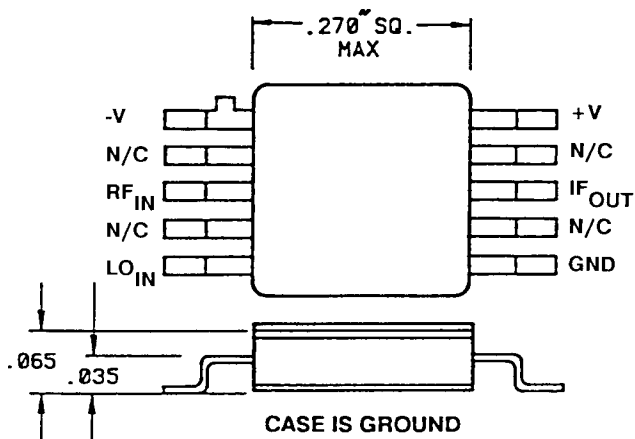
AS UPCONVERTER



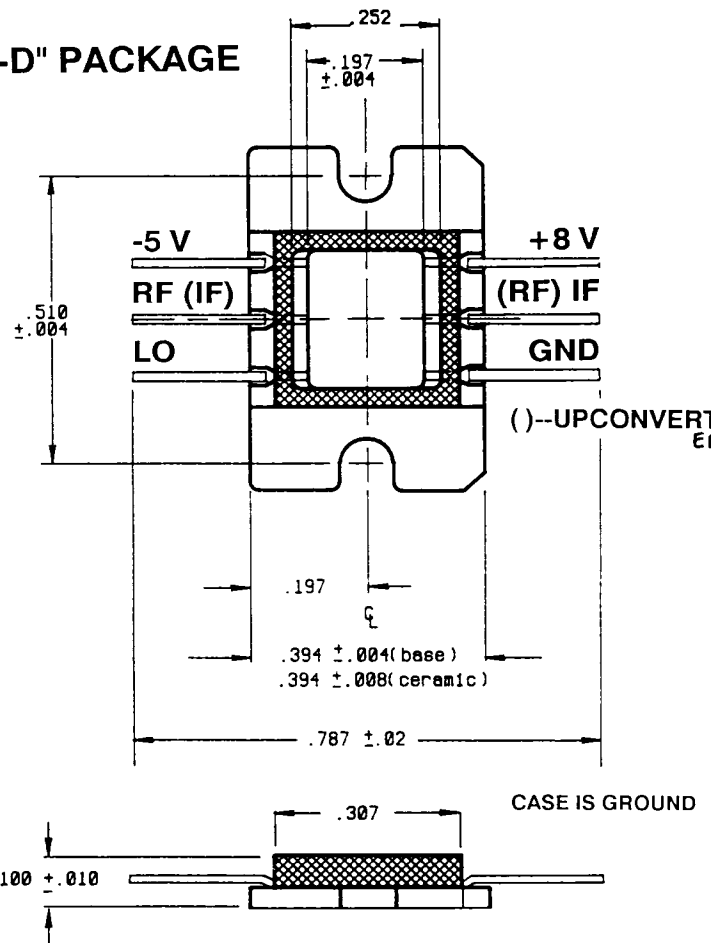
AS DOWNCONVERTER



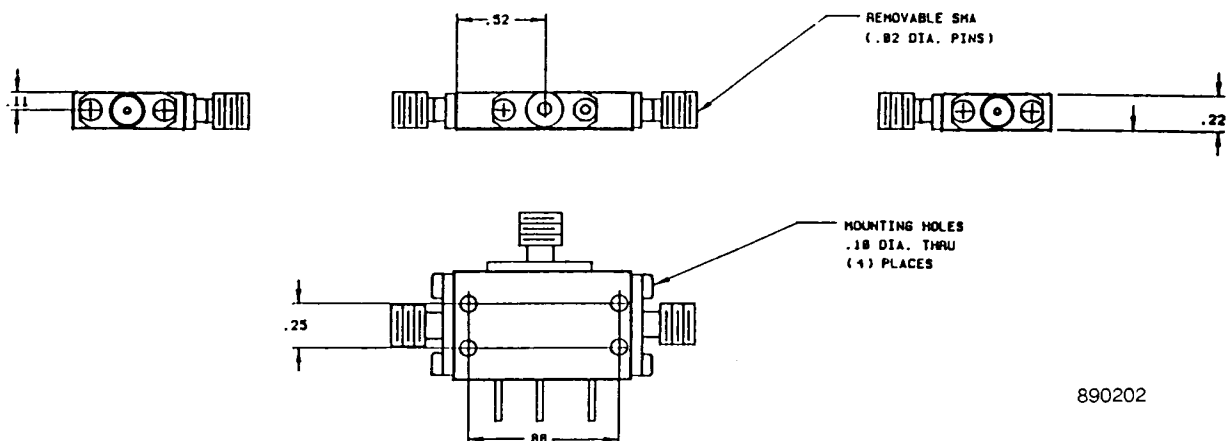
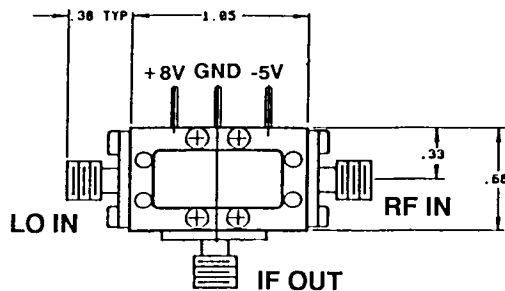
"-B" PACKAGE



"-D" PACKAGE



"-S" PACKAGE (PMpac™)



890202

PACIFIC MONOLITHICS

013277 X - λ

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