

# INTEGRATED DUAL-CHANNEL BLOCK CONVERTER

## MODEL: SYS0216N01R

### FEATURES

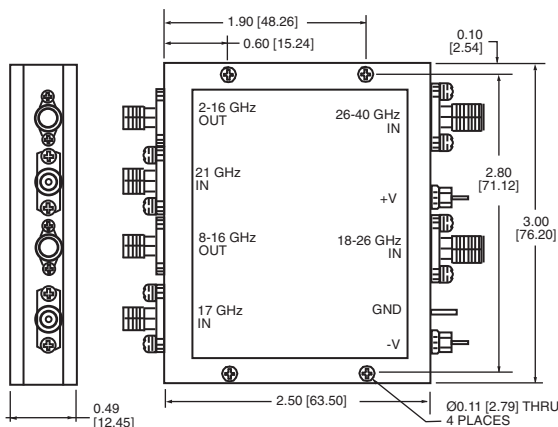
- 18–40 GHz frequency coverage  
integrated aluminum housing

The SYS0216N01R is an integrated dual-channel millimeter-wave block converter with internal filtering and LO multipliers. The unit is used to convert signals in the range of 18–40 GHz down to 2–16 GHz. The unit will also function as an upconverter. Internal LO filtering significantly reduces fundamental LO leakage. High side LO and RF filtering provides full band image rejection of 20 dB typical. The unit is integrated in a channelized aluminum housing for small size and high spurious isolation. An optional mounting plate with low-noise RF amplifiers is available to function as a low noise block converter.

### ELECTRICAL SPECIFICATIONS

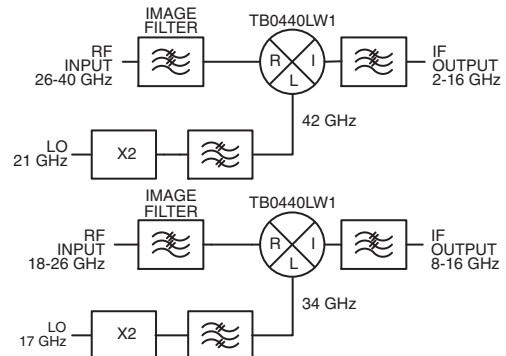
INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range	Band 1	GHz	18		26
	Band 2	GHz	26		40
RF VSWR	50 ohm reference	Ratio		2.8:1	
V+ bias current	@ +9 to +16 V	mA		450	
V- bias current	@ -9 to +16 V	mA		30	
LO frequency range	Band 1	GHz		17	
	Band 2	GHz		21	
LO power range		dBm	+10	+12	+14
LO VSWR				2.5:1	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss		dB		14	18
Image rejection		dB	12	20	
Input 1 dB compression point		dBm		+5	
Input third-order intercept point		dBm		+15	
Fundamental LO leakage at IF port	17 and 21 GHz	dBm		-85	-75
LO leakage at RF port	34 and 42 GHz	dBm		-30	-20
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
IF frequency range	Band 1	GHz	8		16
	Band 2	GHz	2		16
IF VSWR		Ratio		2:1	

### OUTLINE DRAWING

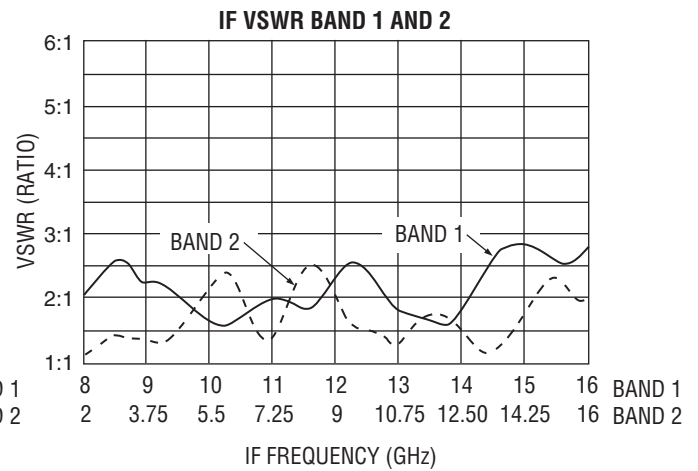
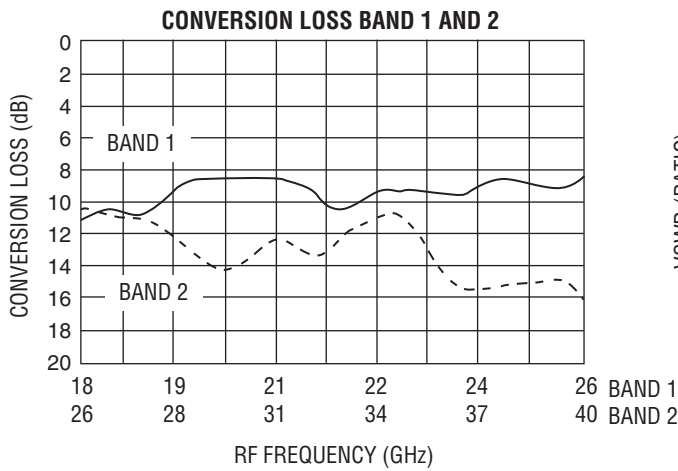
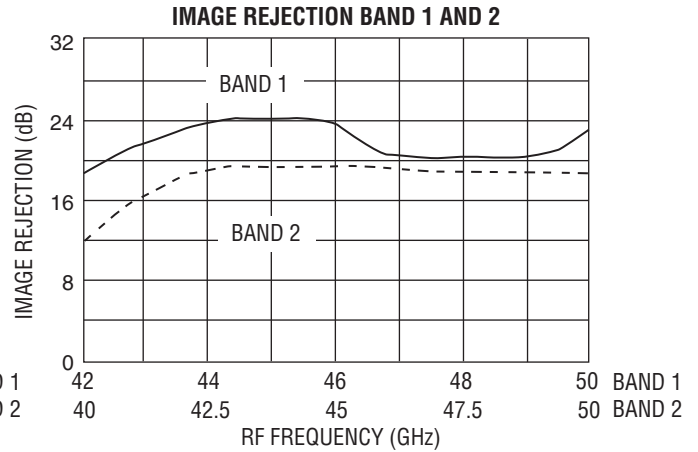
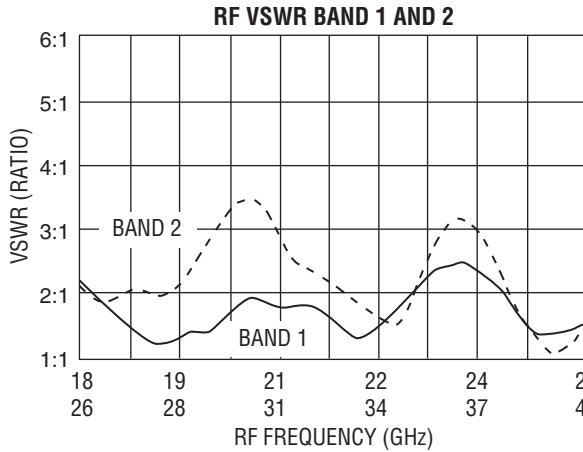


NOTE: All dimensions shown in brackets [ ] are in millimeters.

### BLOCK DIAGRAM



# SYS0216N01R TYPICAL TEST DATA

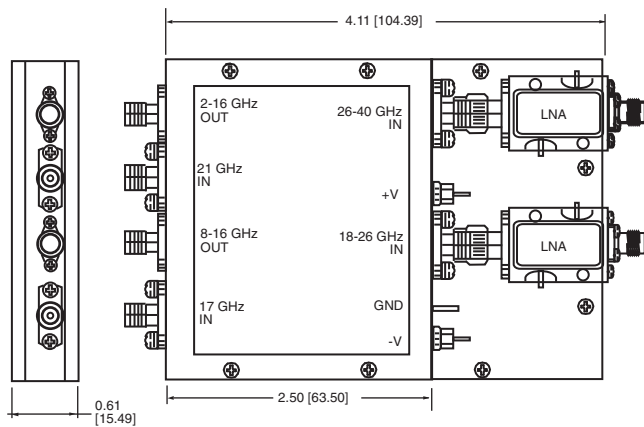


## MAXIMUM RATINGS

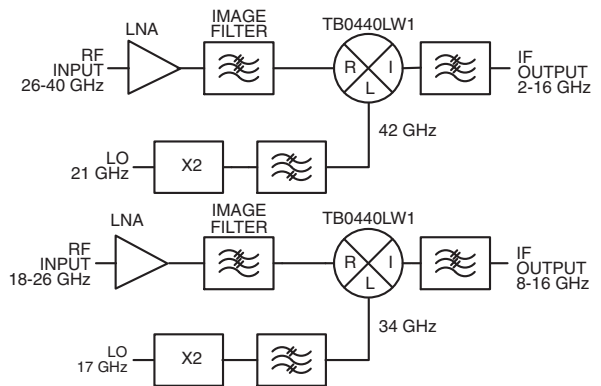
- Specification temperature ..... +25°C
- Operating temperature ..... -40 to +65°C
- Storage temperature..... -65 to +95°C

NOTE: Test data supplied at 25°C;  
conversion gain, image rejection, noise figure  
and output 1 dB compression point.

## OPTIONAL LNB OUTLINE DRAWING\*



## OPTIONAL LNB BLOCK DIAGRAM\*



\* Contact MITEQ for LNB option ordering information and specifications.

NOTE: All dimensions shown in brackets [ ] are in millimeters.