**Transformers** 



## **Transformers**

**VB-1RR** 

Bringing Science To Sound

Data Sheet

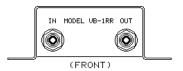
Jensen

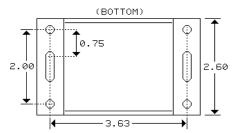
## VIDEO ISOLATION TRANSFORMER FOR 75 Ω COMPOSITE OR COMPONENT VIDEO SIGNALS

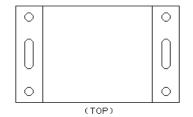
- Very high ground isolation: 120 dB CMRR typ at 60 Hz
- Wide bandwidth: -3 dB at 10 Hz and 20 MHz
- High input to output withstand voltage: 350 V RMS min at 60 Hz
- Precision impedance: typical VSWR under 1.22 up to 20 MHz
- Low insertion loss: 0.72 dB typical

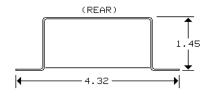
When inserted into standard 75  $\Omega$  video cabling, this transformer based isolator eliminates video "hum bars", as well as the often associated audio hum or buzz in multimedia entertainment systems, by breaking the so-called "ground loop." Mounting holes allow easy horizontal or vertical mounting to standard rack rails.



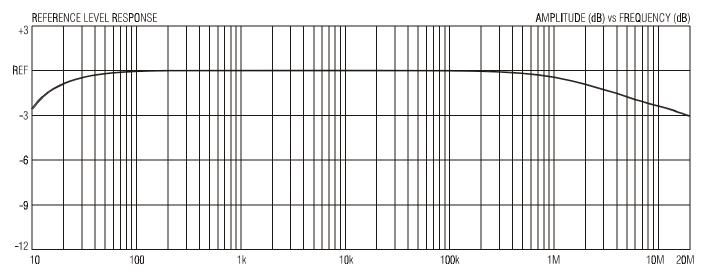


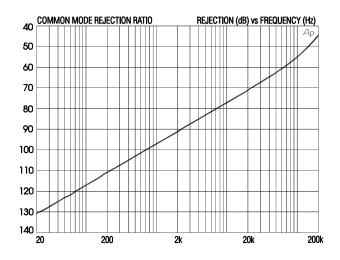


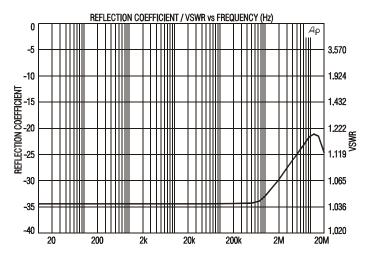




ALL DIMENSIONS IN INCHES

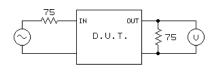




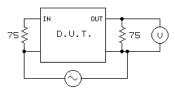


## **ISO-MAX**<sup>®</sup> VB-1RR SPECIFICATIONS (source $Z = load Z = 75 \Omega$ , signal level = 1 V pk-pk unless noted)

PARAMETER	CONDITIONS	MINIMUM	TYPICAL	MAXIMUM
Insertion loss	10 kHz, test circuit 1	-0.50 dB	-0.72 dB	-1.00 dB
Differential gain, 3.58 MHz	FCC/NTC-7 composite, Tektronix VM700A test set, pk-pk		< 0.02 %	0.05 %
Differential phase, 3.58 MHz	FCC/NTC-7 composite, Tektronix VM700A test set, pk-pk		< 0.02°	0.05°
Luminance non-linearity	FCC/NTC-7 composite, Tektronix VM700A test set, pk-pk		< 0.1 %	0.2 %
Bandwidth	LF -3 dB re 10 kHz, test circuit 1		10 Hz	12 Hz
	HF -3 dB re 10 kHz, test circuit 1	15 MHz	20 MHz	
Input VSWR	1 kHz to 8 MHz, HP 3577A Analyzer & 35676A R/T test kit		1.20	1.30
	3.58 MHz, HP 3577A Analyzer & 35676A R/T test kit		1.10	1.20
Common-mode rejection ratio (CMRR)	60 Hz, test circuit 2	100 dB	120 dB	
Allowable DC bias at input	(none allowed at output, which has 2.6 $\Omega$ DC resistance)	-1 V	±0	+16 V
Capacitance	input to output, 1 kHz		1.94 nF	
	input or output to case, 1 kHz		35 pF	
Temperature range	operation or storage	0° C		70° C
Input to Output Voltage Difference (see IMPORTANT NOTE below)	input to output shield or either shield to chassis, 60 Hz			24 V RMS 34 V peak



TEST CIRCUIT 1



TEST CIRCUIT 2

**All minimum and maximum specifications are guaranteed.** Unless noted otherwise, all specifications apply at 25°C. Specifications subject to change without notice. All information herein is believed to be accurate and reliable, however no responsibility is assumed for its use nor for any infringements of patents which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Jensen Transformers, Inc.

IMPORTANT NOTE: THIS PRODUCT IS NOT INTENDED FOR USE IN CIRCUMSTANCES WHERE THE DC OR PEAK AC VOLTAGE BETWEEN INPUT AND OUTPUT CONNECTIONS EXCEEDS 34 VOLTS OR WHERE ITS FAILURE COULD CAUSE INJURY OR DEATH.