

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.		DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED					
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES.							
ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
X		ENG. RELEASE	29 MAY 72		NAT.	LB	

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
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**SPECIFICATIONS \***

Characteristics	Min	Max	Test Conditions
SSB Conversion Loss		6.5 dB	$f_L$ & $f_R$ 0.2 to 50 MHz $f_I$ DC to 50 MHz
SSB Conversion Loss		8.0 dB	$f_L$ & $f_R$ 50 to 200 MHz $f_I$ DC to 200 MHz
SSB Conversion Loss		8.5 dB	$f_L$ & $f_R$ 0.05 to 0.2 MHz $f_I$ DC to 0.4 MHz
SSB Noise Figure		6.5 dB	$f_L$ & $f_R$ 1 to 50 MHz $f_I$ 0.4 to 50 MHz
SSB Noise Figure		8.0 dB	$f_L$ & $f_R$ 50 to 200 MHz $f_I$ 0.4 to 200 MHz
Isolation			
$f_L$ at R	45 }		$f_L$ 0.05 to 30 MHz
$f_L$ at I	40 }		
$f_L$ at R	35 }		$f_L$ 30 to 200 MHz
$f_L$ at I	30 }		

\*The following specifications apply to the mixer used in a 50 ohm system with a  $f_L$  source of +7 dBm available.

**ENVIRONMENTAL**

Model M6D will meet its specifications over  $-54^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$  ( $-20^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$  for  $f_L$  and  $f_R$  signals below 0.1 MHz). It will meet the humidity requirements of MIL-STD-810B, Method 507, Procedure IV (the M6D is hermetically sealed). This unit will meet all of its specifications after exposure to any or all of the following tests per MIL-STD-202D:

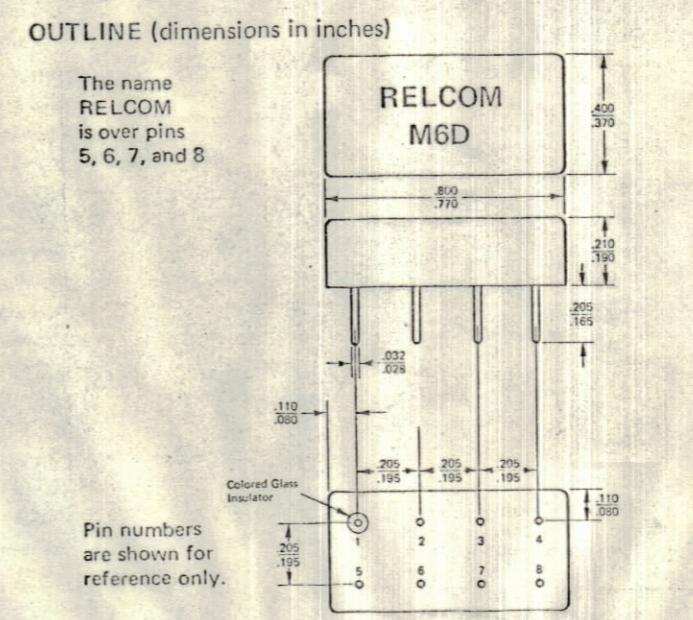
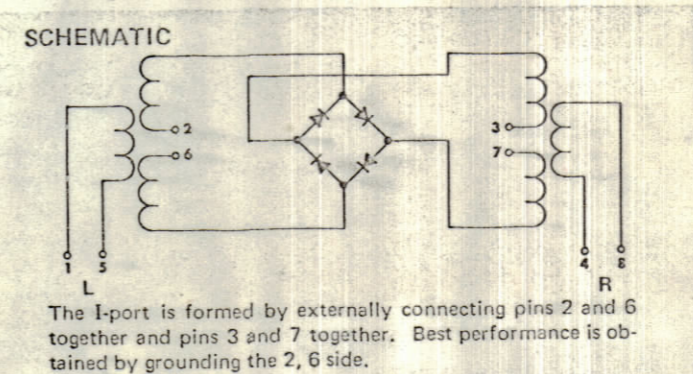
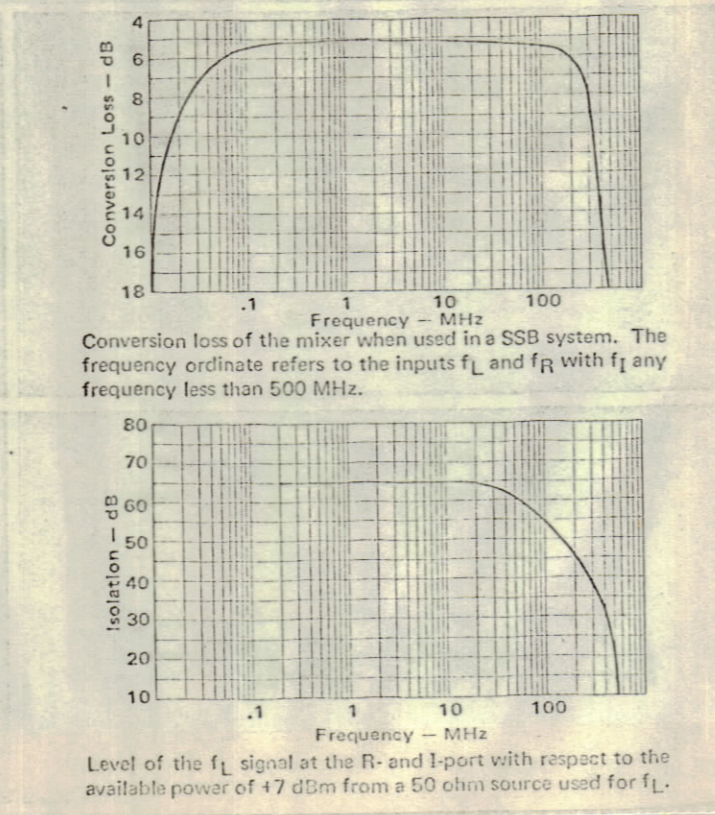
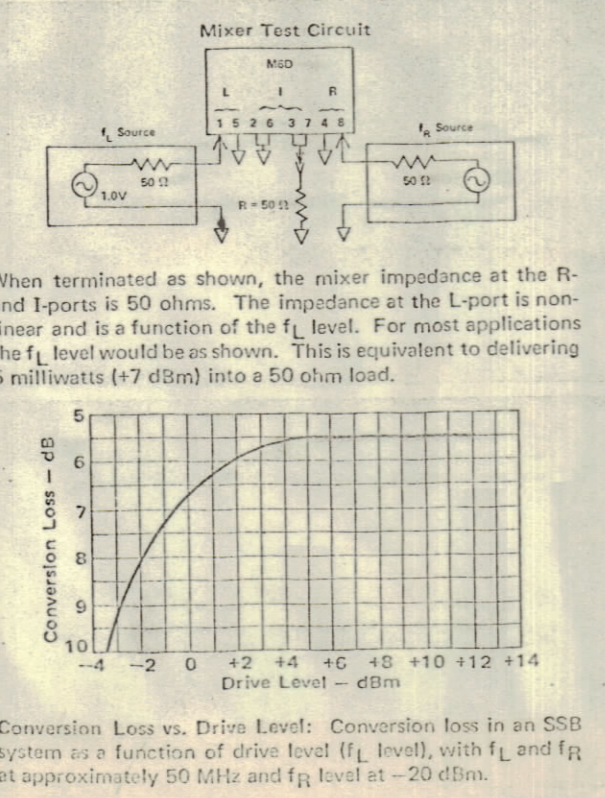
Exposure	Method	Test Condition
Thermal Shock	107C	B
Altitude	105C	G
H. F. Vibration	204B	D
Mechanical Shock	213A	C
Random Vibration (15 minute per axis)	214A	II F
Solderability	208B	
Terminal Strength	211A	C
Resistance to Soldering Heat	210	B

The M6D will meet the environmental requirements of MIL-E-16400F, Class 1 and MIL-E-5400G, Class 2.

**ABSOLUTE MAXIMUM RATINGS**

Operating and Storage Temperature:  $-65^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$   
 Maximum Peak Input Power: 50 milliwatts  
 Maximum Peak Input Current: 50 milliamps  
 Maximum Pin Temperature:  $260^{\circ}\text{C}$  for 10 sec.

**TYPICAL PERFORMANCE AT 25°C**



WEIGHT 5.0 grams

NW10016 X

STANDARD DRAWING

TOLERANCES		SCALE: N.T.S.
ALL OTHERS	DEC. DIM. $\pm$ .05 FRAC. DIM. $\pm$ $\frac{1}{64}$ ANGULAR DIM. $\pm$ $0^{\circ}30'$	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

MODEL	PROJECT NO.	ASSY. NO.	DATE
			29 MAY 72

STOCK SIZE		TMC (Canada) LIMITED OTTAWA ONTARIO	
MATERIAL	WEIGHT PER PC.	MIXER, DOUBLE BALANCED	
TYPE & TEMPER		THOMAS	
HEAT TREAT. SPEC.		L. BROWN	
FINISH & SPEC. NO.		NW10016 X	