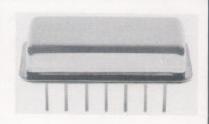


VS-22 High Isolation RF Switch 5-500 MHz SP2T



DESCRIPTION

VS-22 is a miniature high performance RF hybrid PIN diode switch with internal CMOS driver and internal 50 ohm terminations.

This switch exhibits high on/off isolation between ports, low insertion loss, and low power consumption. The sturdy construction and sealed package will withstand harsh environmental conditions.

TTL compatible Welded package

LIMITED WARRANTY

Vari-L Company, Inc. warrants its products against defects in parts and workmanship for a period of one year.

GUARANTEED MINIMUM PERFORMANCE DATA

Overall Frequency Range:

5-500 MHz

Frequency Bands in MHz:

Innertian Lass (dD)	5-100	100-500
Insertion Loss (dB) Isolation (dB)	0.8 62	1.0 50
VSWR (on)	1.25	1.30

NOTE: Good case and lead ground contact is essential for optimum performance of this unit.

Absolute Maximum Ratings:

Operating Temperature - 54°C to + 100°C:

Total RF input power 1W @ +25°C.
Maximum DC supply voltage: +18V
Switching (control) voltage: not to
exceed DC supply voltage

Normal Operating Ratings:

RF input power +10 dbm DC supply current 11 mA @ 5V Switching (control) voltage: +5V

ENVIRONMENTAL CONDITIONS

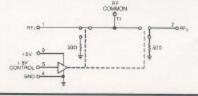
Guaranteed Environmental Performance:

All units are designed to meet their specifications over -54°C to $+100^{\circ}\text{C}$ and after exposure to any or all of the following tests per MIL-STD-202E.

and the second second	Test		
Exposure	Method	Condition	
Thermal Shock	107D	В	
Altitude	105C	G	
H.F. Vibration	204C	D	
Mechanical Shock	213B	C	
Random Vibration (15 minutes per axis)	214	11F	
Solderability	208C		
Terminal Strength Resistance to	211A	С	
Soldering Heat	210A	В	

These hermetically sealed units meet the requirements of method 5008 of MIL-STD-883B seal leak test procedures (5 x 10⁻⁷ atm-cc/sec limit).

FUNCTIONAL SCHEMATIC



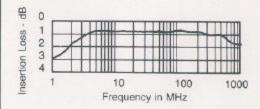
TYPICAL PERFORMANCE

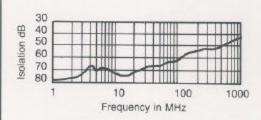
Impedance: 50 ohms

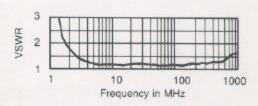
3rd Order Intercept Point: +35 dBm min.

(on condition)

Switching speed (50% of control signal to 90% RF for turn on, 10% RF for turn off): 5 μ S MAX 1 μ S TYP.







Package: Kovar per MIL-STD-1276, Type K, gold plated per MIL-G-45204, Type I, Class I.

Cover: Cold rolled steel per QQS-698, nickel plated per QQN-290, Class II.

Leads: Kovar per MIL-STD-1276, Type K, gold plated per MIL-G-45204, Type II, Class I.

Soldering of leads should be limited to 5 seconds at 500°F.

