STANDARD PRODUCTS

SP6T SWITCH

SERIES SN60-33x

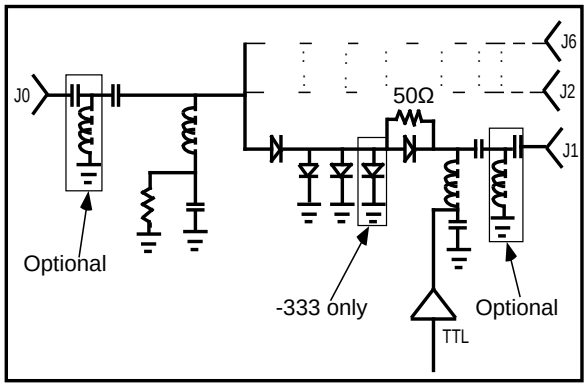
Non-Reflective Series/Shunt

25 nsec. Switching Speed

DESCRIPTION

The SN60-33x series of non-reflective single-pole sextuple-throw (2.0-18.0 gHz) PIN diode switches employ a series/shunt configuration in a microstrip transmission line circuit. They are compact in size, light weight, featured with field replaceable connectors, integral TTL compatible drivers, and offered in medium (-332) and high (-333) isolation models. They are also available with viedo transient filtering.

SCHEMATIC



ELECTRICAL PERFORMANCE

CHARACTERISTIC	WITH DRIVER	
	MAX.	TYP.
Switching Speed (1)	25ns	20ns
Transition Time (2)	20ns	10ns
Power Handling (CW or peak)	+30 dBm	+33 dBm
Positive Supply	5V± 2% 165 mA max	
Negative Supply (3)	See Option 120 mA max	
Control Impedance	TTL (1 unit loads max)	
Control Logic (3)	see Options on back	
Video Transients (4)	see Options on back	

MODEL	CHARACTERISTIC		FREQUENCY (GHz) See Note (5) S 2.0-4.0	C 4.0-8.0	X 8.0-12.4	P 12.4-18.0
SN60-332	INSERTION LOSS (dB max)	TYP.	1.2	1.8	2.3	2.9
		MAX	1.6	2.2	2.7	3.3
	VSWR {On/Off} (max)		1.6	2.0	2.2	2.3
	ISOLATION (dB min)		60	55	50	50
SN60-333	INSERTION LOSS (dB max)	TYP.	1.4	1.9	2.5	3.2
		MAX.	1.8	2.3	2.9	3.6
	VSWR {On/Off} (max)		1.6	2.0	2.2	2.3
	ISOLATION (dB min)		75	70	65	65

(1) Turn on time is the time interval between 50% of the control voltage and 90% of the detected RF. Turn off time is the time interval between 50% of the control voltage and 10% of the detected RF. Switching Speed is defined as the slower of the two times (usually the turn on time).

(2) Rise time is the time required for the detected RF to transition between 10% and 90% of its final value. Fall time is the time required for the detected RF to transition between 90% and 10% of its initial value. Transtion time is defined as the slower of the two times (usually the Rise time).

(3) Setting more than one RF port at a time to the loss state causes excessive current in the common arm bias return.

(4) Measured into a 50 ohms with a 150mHz B.W. oscilloscope. Typically 2V p-p max. unfiltered and 50mV p-p max. with filtering. Filtering will typically add 0.3dB insertion loss per filter in a transmission path.

(5) Operating frequency range for narrower bandwidth unit(s) is specified by an option code that is composed of two letters. The first letter designates the starting frequency band and the second one designates the ending frequency band. Frequency code is not required for standard unit that covers 2.0 to 18.0 GHz (“SP”).

ENVIRONMENTAL RATINGS

Temperature:

Operating.....-55°C to +85°C
Non-operating.....-65°C to +125°C

Humidity:

MIL-STD-202C, Method 103B,
Cond. B (96 hrs. at 95%)

Vibration:

MIL-STD-202C, Method 204A,
Cond. B (0.06" double amplitude
or 15G, whichever is less)

Altitude:

MIL-STD-202C, Method 105C,
Cond. B (50,000ft)

Temp Cycling:

MIL-STD-202C, Method 105C,
Cond. D, 5 cycles

Shock:

MIL-STD-202C, Method 213,
Cond. B (750G, 6ms)

OPTIONS

LOGIC:

OPTION NUMBER	LOGIC DESCRIPTION	1	0
(STD) (3)	**INVERTING**	**ISO.**	**LOSS**
L2 (3)	NON INVERTING	LOSS	ISO.

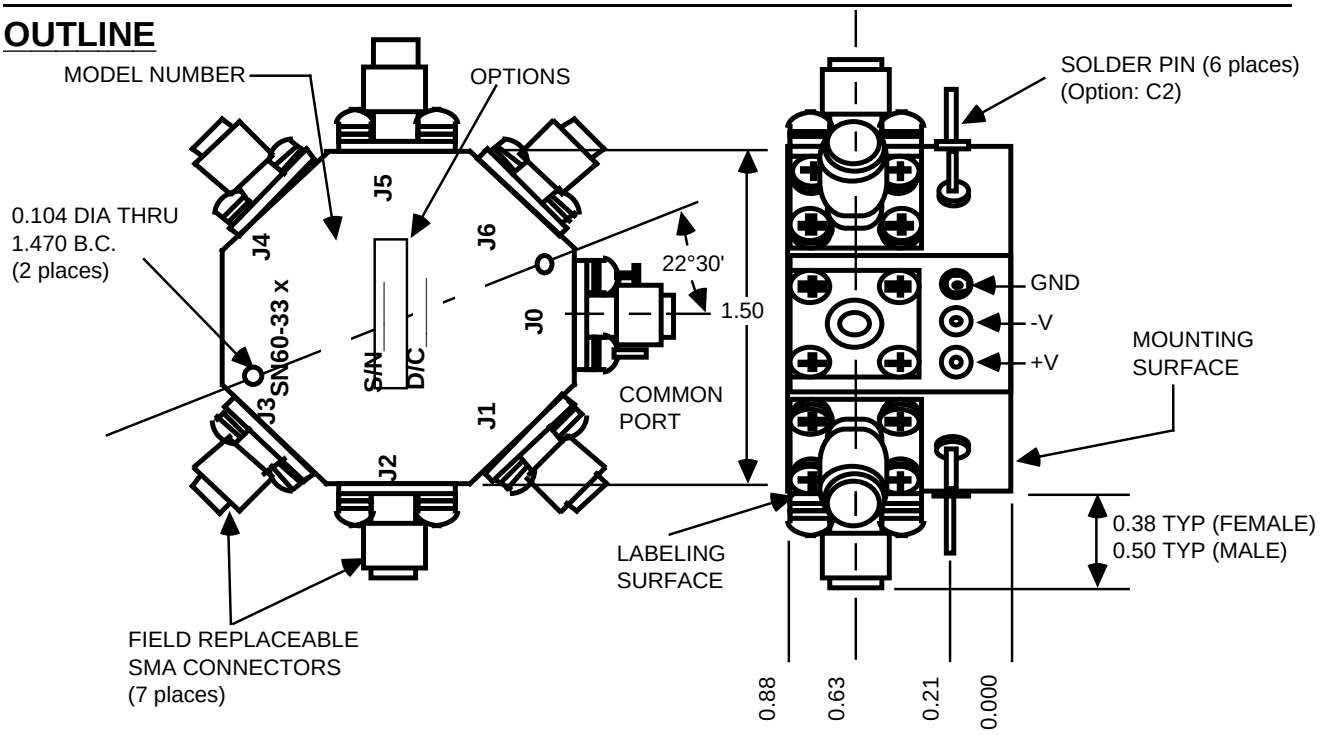
CONTROL CONNECTOR:
(STD).....Solder Pin
C2.....SMC-M
for detail.

VIDEO TRANSIENT:
(STD).....None
F2.....All Ports
F3.....Common Port Only
F4.....Non-Common Ports Only

FREQUENCY:
(STD).....2.0 to 18.0 GHz
Two Letter Code, see note 5

NEGATIVE SUPPLY
(STD).....-12V
N2.....-15V

OUTLINE



Custom Microwave Components, Inc.
44249 Old Warm Springs Blvd.
Fremont, California 94538
510-651-3434