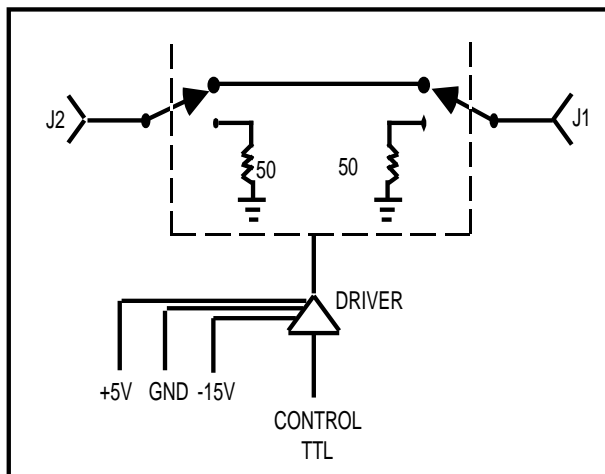


DESCRIPTION

This ultra-fast non-reflective single-pole single-throw switch with integral TTL compatible driver incorporates GaAs MMIC technology to obtain extremely low self-generated R.F. (Video Leakage).

- Wide-band
- High isolation
- Ultra-fast switching
- Low self-generated R.F. (Video Leakage)
- Field replaceable connectors
- Drop-in package

SCHEMATIC



HIGH-SPEED GaAs SWITCH CMCS0463

10 nsec. Switching Speed
-70 dBm Self-generated R.F. (Video Leakage)

ELECTRICAL PERFORMANCE

CHARACTERISTIC	MAX.	TYP.
Switching Speed (1)	10 ns	8 ns
Transition Time (2)	4 ns	2 ns
Power Handling (CW or peak)	+20 dBm	+22 dBm
Positive Supply	5V ± 2% @ 40 mA max	
Negative Supply	-15V ± 2% @ 35 mA max	
Control Impedance	TTL (2 unit loads max)	
Control Logic	1 = isolation 0 = low loss	
Video Transients (3) (peak to peak)	20 mV	15 mV
Self-Generated R.F. Energy	-70 dBm	-75 dBm

CHARACTERISTIC	FREQUENCY (GHz)		
	0.5-2.0	2.0-4.0	4.0-6.0
INSERTION LOSS (dB max)	2.5	3.0	3.3
VSWR {On} (max)	1.5:1	1.4:1	1.3:1
VSWR {Off} (max)	1.3:1	1.5:1	2.0:1
ISOLATION (dB min)	80	70	60

- (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. Transition time is defined as the slower of the two times (usually the Rise time).
- (3) Measured into a 50 ohms with a 300MHz B.W. oscilloscope.



ENVIRONMENTAL RATINGS

Temperature:

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

Altitude:

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

Humidity:

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

Temp Cycling:

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

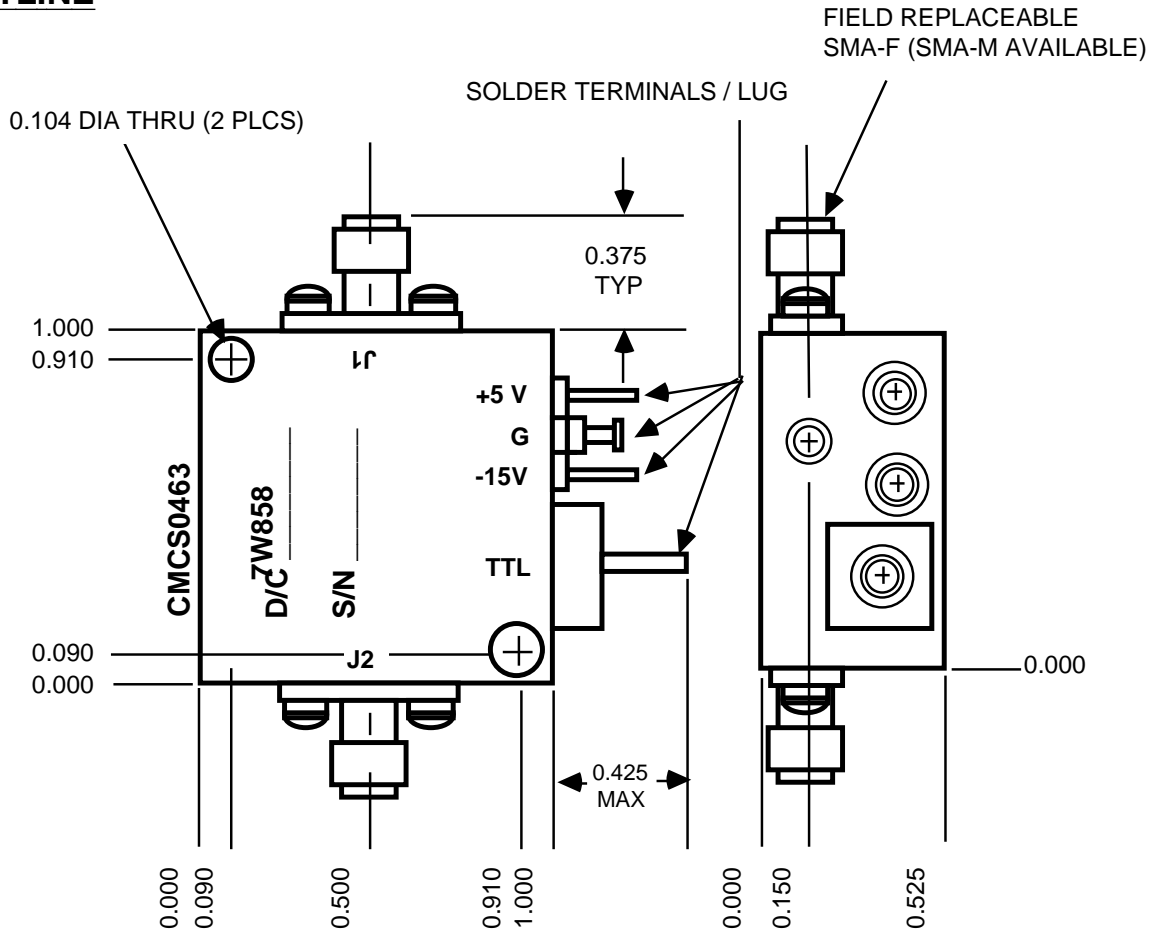
Vibration:

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

Shock:

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

OUTLINE



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