TELEDYNE
MICROWAVE SOLUTIONS
Everywhereyoulook™

9/2010

S2CP20201 DC TO 20 GHz NON REFLECTIVE SINGLE-POLE DOUBLE-THROW SWITCH

Typical Values	S2CP20201
Low Insertion Loss	<3.0 dB
High Isolation	>45 dB
High Output Power	+22.0 dBm
High Third Order I.P.	+XX dBm
2 Stage CougarPak™ for Switches	

SPECIFICATIONS*

Parameter	Typical	Guaranteed* 0 to 50 °C	Guaranteed* -55 to +85 °C
Frequency (Min.)	DC - 20 GHz	DC - 20 GHz	DC - 20 GHz
Insertion Loss (Max.)			
DC-500 MHz	<1.5 dB	1.8 dB	2.0 dB
500-18000 MHz	<2.2 dB	3.5 dB	3.7 dB
18000-20000 MHz	<3.0 dB	3.8 dB	4.0 dB
Isolation (Min.) DC-500 MHz	63 dB	60.0 dB	60.0 dB
500-18000 MHz	45 dB	42.0 dB	42.0 dB
18000-20000 MHz	45 dB	42.0 dB	42.0 dB
SWR (Max.)^ Input/Output			
DC-500 MHz	<1.3:1	1.9:1	2.0:1
500-18000 MHz	<1.3:1	1.9:1	2.0:1
18000-20000 MHz	<1.4:1	1.9:1	2.0:1
Power Output (Min.)			
@ 1dB comp. DC-500 MHz	+22.0 dBm	+20.0 dBm	+19.0 dBm
500-18000 MHz	+24.0 dBm	+22.0 dBm	+21.0 dBm
18000-20000 MHz	+22.0 dBm	+20.0 dBm	+19.0 dBm
Switching Time†			
DC-20 GHz	75/50 ηsec	80/60 ηsec	80/60 ηsec
DC Current (Max.)	4 mA	5 mA	5 mA

* Measured in a 50-ohm system at –5 Vdc unless otherwise specified.
^ Insertion loss state. † 50% TTL control to 10% or 90% RF.

INTERMODULATION PERFORMANCE

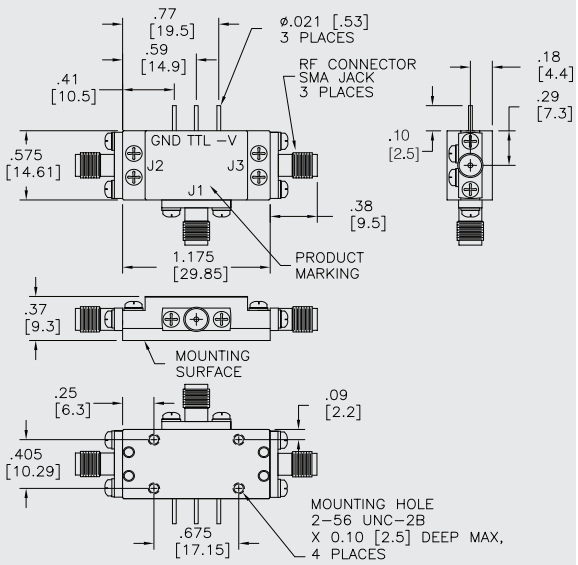
Typical @ 25 °C, –5 Volts, and 1000 MHz	S2CP20201
Second Order Two Tone Intercept Point	+XX dBm
Third Order Two Tone Intercept Point	+XX dBm

ABSOLUTE MAXIMUM RATINGS

Storage Temperature	-65 to +125 °C
Maximum Case Temperature	+150 °C
Maximum DC Voltage	–5.5 Volts
Maximum Continuous RF Input Power	+28 dBm
Maximum Short Term Input Power (1 Minute Max.)	+31 dBm
Maximum Peak Power (3 µsec Max.)	+34 dBm
Burn-in Temperature	+125 °C

S2CP20201

2 Stage CougarPak™ for Switches



LOGIC TABLE

TTL CONTROL	J1-J2	J1-J3
LOW	ISOLATION	INSERTION LOSS
HI	INSERTION LOSS	ISOLATION

LOW is defined as 0 to +0.8 V
HI is defined as +2.4 V to +5.5 V

DIMENSIONS ARE IN INCHES [MILLIMETERS]