COMTECH PST Hill Engineering Division	Cage Code: 02WL0	Title: PRODUCT DATA (subject to change)	Date: 8/5/03	Rev: None		Model no: M20-030

This document describes the performance of a high power 1P2T/TR switch. This is a cold-switched design i.e.; switched while RF is off. Proper bias connections must be made before operation of this switch. See section 11, below.

ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
1	POWER SPECIFICATION	IN BAND				
1.1	FREQUENCY		20	500	MHz	
1.2	PEAK POWER	100 uS duration		500	WATTS	TRANSMIT PATH
1.3	PULSE WIDTH			100	µs	TRANSMIT PATH
1.4	DUTY			50	%	TRANSMIT PATH
1.5	AVG POWER	ABSOLUTE MAX		250	WATTS	TRANSMIT PATH
1.6	Receive power			30	WATTS	RECEIVE PATH
2	POWER SPECIFICATIONS	GUARD BAND				
2.1	FREQUENCY		500	700	MHz	
2.2	PEAK POWER			5	WATTS	
2.3	PULSE WIDTH		CW		µs	
2.4	DUTY		CW		%	
2.5	CW POWER			5	WATTS	
3	POWER SPECIFICATIONS	OUT OF BAND				
3.1	FREQUENCY		>700		MHz	
3.2	PEAK POWER			33	dBm	
3.3	PULSE WIDTH			CW	µs	
3.4	DUTY			CW	%	
3.5	CW POWER			33	dBm	
4	OPERATING FREQUENCY		20	500	MHz	
5	INSERTION LOSS					
5.1	RCV	J3-J2		0.8	dB	
5.2	TX	J1-J3		0.5	dB	
6	ISOLATION					
6.1	TX	J1-J3	40		dB	
6.2	RCV	J1-J2	50		dB	
7	PHASE					
7.1	MATCHING/TRACKING					NOT SPECIFIED
8	VSWR					
8.1	RCV PORT SELECTED	J3-J2		1.7:1		RECEIVE PATH
8.1.1	TX PORT SELECTED	J1-J3		1.5:1		TRANSMIT PATH

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8.2	PORT NOT SELECTED			>20:1		INFINITY
8.3	LOAD			2.0:1		
8.4	SOURCE			1.5:1		
9	HARMONICS & SPURS					
9.1	INTERNALLY GENERATED	TRANSMIT MODE		-50	dBc	
10	SWITCHING					
10.1	SPEED	TO 0.50DB I.L.		30	µs	
10.2	SWITCHING RATE			2	KHz	
10.3	VIDEO LEAKAGE			20	Vpp	Across 50 Ohms
10.4	COMMAND LOGIC	RS-422				
10.5	LOGIC TABLE					DWG: 3714 BELOW
11	D.C. POWER					
11.1	POSITIVE BIAS VOLTAGE 1		4.80	5.20	VDC	
11.2	NEGATIVE BIAS VOLTAGE		-240	-260	VDC	
11.3	POSITIVE BIAS CURRENT 1			500	mA	
11.4	NEGATIVE BIAS CURRENT			25	mA	
11.5	NOTE 1: Power on sequence - To prevent possible damage to the switch, the + 5Vshould be applied first, then the -250V.					
11.6	NOTE 2: Voltage Protection – This unit does not have over-voltage or reverse polarity protection on any bias port.					
12	CONNECTORS					
12.1	RF	INPUT & XMIT				Type NF
12.3	DC					9 pin “D” type
13	MECHANICAL					
13.1	WEIGHT			0.9	LBS	
13.2	OUTLINE					DWG: 3714 BELOW
14	ENVIRONMENTAL					
14.1	OPERATING TEMPERATURE		-20	+55	^{o}C	
14.2	STORAGE TEMPERATURE		-40	+70	^{o}C	
14.3	VIBRATION LEVEL					GROUND TRANSPORT
14.4	HUMIDITY RH	@ +40 DEG C		95%		

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