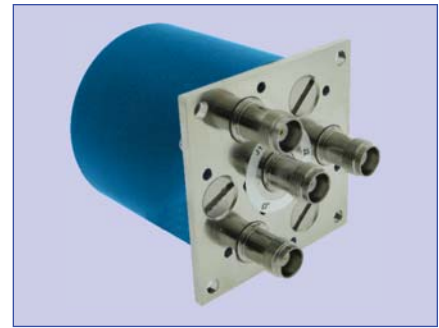


PART NUMBER	DESCRIPTION
CCS-19	Commercial Latching Multi-throw, DC-2GHz, with N or TNC connectors
CS-19	Elite Latching Multi-throw, DC-2GHz, with N or TNC connectors

The CCS-19/CS-19 is a broadband, multi-throw, electromechanical coaxial switch designed to switch a microwave signal from a common input to any of 3, 4, 5, or 6 outputs. The characteristic impedance is 50 Ohms. Each position has an individual actuator mechanism allowing random position selection. This also minimizes switching time.

The CCS-19/CS-19 comes with a latching actuator. The latching switch remains in the last position selected when the switch is de-energized. STD dual command requires a reset pulse before a new selected position. A separate reset circuit allows all positions to be set to an open position. User must provide both reset (clear) and set (select new position) commands.

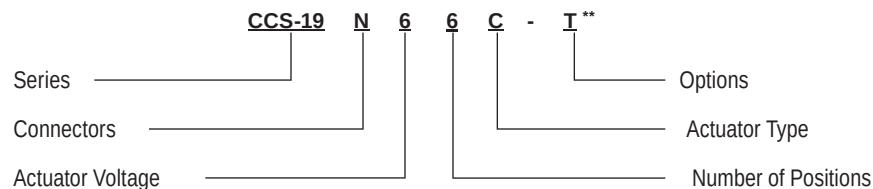


ENVIRONMENTAL AND PHYSICAL CHARACTERISTICS	
Operating Temperature	
Commercial Model, CCS-19N	-40°C to 65°C
Elite Model, CS-19N	-55°C to 85°C
Vibration (MIL-STD-202 Method 214, Condition D, non-operating)	10 g's RMS
Shock (MIL-STD-202 Method 213, Condition D, non-operating)	500 g's
Standard Actuator Life	3,000,000 cycles
Actuator Life w/ Additional Features	1,000,000 cycles
Connector Type	Type N and TNC
Humidity (Moisture Seal)	Available
Weight	9 oz. (255.2g) (max.)

ELECTRICAL CHARACTERISTICS	
Form Factor	Multi-Throw, break before make
Frequency Range	
CCS-19N	DC-2 GHz
CS-19N	DC-2 GHz
Characteristic Impedance	50 Ohms
Operate Time	20 ms (max.)
Actuation Voltage Available	12 15 24 28 V
Actuation Current	255 205 130 90 mA
Reset Current (# of Positions)	3 765 615 390 270 mA
	4 1020 820 520 360 mA
	5 1275 1025 650 450 mA
	6 1530 1230 780 540 mA

PERFORMANCE CHARACTERISTICS		
Frequency	DC-1 GHz	1-2 GHz
Insertion Loss, dB, max.	0.7	0.9
Isolation, dB, min.	80	80
VSWR, max.	1.15:1	1.20:1

PART NUMBERING SYSTEM



CONNECTOR	ACTUATOR VOLTAGE	NUMBER OF POSITIONS	ACTUATOR TYPE	OPTIONS
N: N FEMALE	6: 28 VDC LATCHING	3: SP3T	O: NO INDICATOR CONTACTS	T: TTL DRIVERS WITH DIODES
T: TNC FEMALE	7: 15 VDC LATCHING	4: SP4T	C: INDICATOR CONTACTS	D: COIL TRANSIENT SUPPRESSION DIODES
	8: 12 VDC LATCHING	5: SP5T		R: POSITIVE + COMMON
	9: 24 VDC LATCHING	6: SP6T		TD: DECODERS AND TTL DRIVERS WITH DIODES

**SEE PARTS LIST ON PAGE 11-13

M: MOISTURE SEAL

S: D-SUB CONNECTOR*

For additional options, please contact factory.

* D-Sub Connector may be 9 or 15 pin depending on number of throws. (See Connector Pinout page)

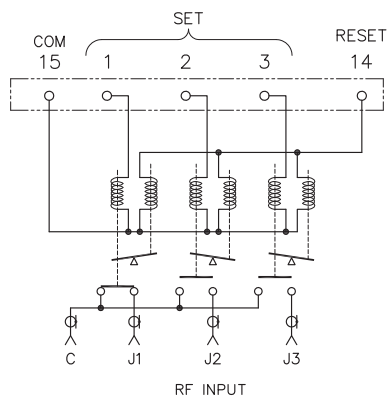
Series CCS-19

Multi-Throw DC-2 GHz

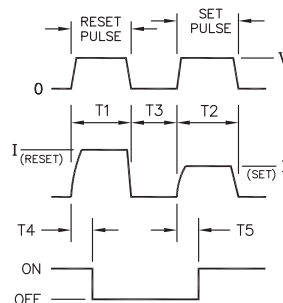
Latching Coaxial Switch



SCHEMATICS AND MECHANICAL OUTLINE

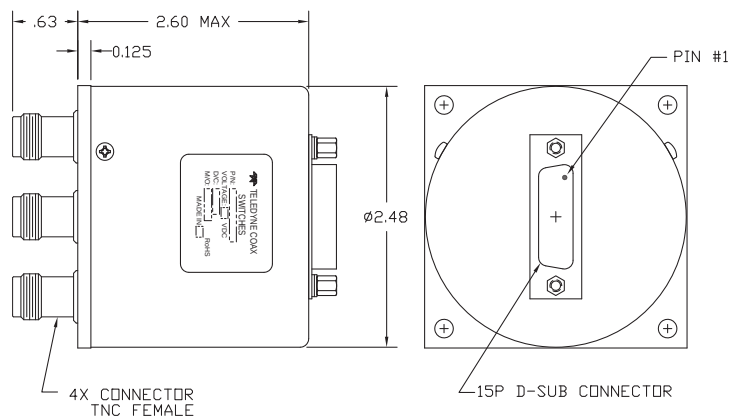
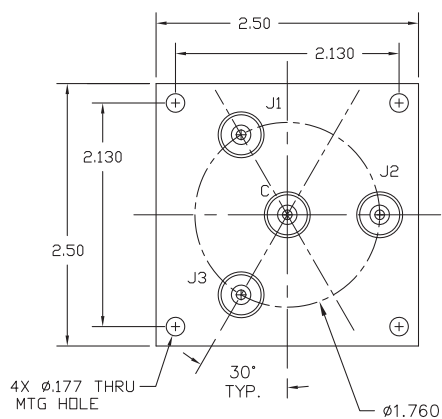


SCHEMATIC

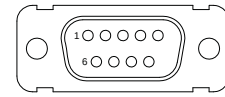
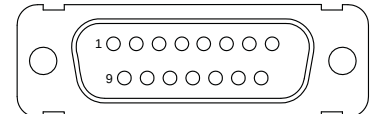


ACTUATION CHARACTERISTICS:

- REQUIRES TWO (2) SEQUENTIAL PULSES (RESET & SET)
- T1 & T2 = 30 mSEC MIN
- T3 = 10 mSEC MIN
- T4 & T5 = 20 mSEC MAX



CONNECTOR PINOUT FOR LATCHING SP3T MULTI-THROW SWITCHES						
EXAMPLE	CS-19N630-S	CS-19N63C-S	CS-19N630-TS	CS-19N63C-TS	CS-19N630-TDS	CS-19N63C-TDS
INDICATOR		YES		YES		YES
TTL			YES	YES		
DECODERS & TTL					YES	YES
PIN NO.	9-PIN	9-PIN	9-PIN	15-PIN	9-PIN	9-PIN
1	PORT 1	PORT 1	TTL 1	TTL 1	LOGIC 1	LOGIC 1
2	PORT 2	PORT 2	TTL 2	TTL 2	LOGIC 2	LOGIC 2
3	PORT 3	PORT 3	TTL 3	TTL 3	LOGIC 3	LOGIC 3
4		E INDICATOR				E INDICATOR
5		F INDICATOR				F INDICATOR
6		G INDICATOR				G INDICATOR
7	COMMON	COMMON	COMMON	COMMON	COMMON	COMMON
8	RESET	RESET	RESET	RESET		D INDICATOR (COM)
9		D INDICATOR (COM)	VSW	VSW	VSW	VSW
10				D INDICATOR (COM)		
11				E INDICATOR		
12				F INDICATOR		
13				G INDICATOR		
14						
15	N/A	N/A	N/A		N/A	N/A


9-PIN D-SUB CONNECTOR

15-PIN D-SUB CONNECTOR

CONNECTOR PINOUT FOR LATCHING SP4T MULTI-THROW SWITCHES						
EXAMPLE	CS-19N640-S	CS-19N64C-S	CS-19N640-TS	CS-19N64C-TS	CS-19N640-TDS	CS-19N64C-TDS
INDICATOR		YES		YES		YES
TTL			YES	YES		
DECODERS & TTL					YES	YES
PIN NO.	9-PIN	15-PIN	9-PIN	15-PIN	9-PIN	9-PIN
1	PORT 1	PORT 1	TTL 1	TTL 1	LOGIC 1	LOGIC 1
2	PORT 2	PORT 2	TTL 2	TTL 2	LOGIC 2	LOGIC 2
3	PORT 3	PORT 3	TTL 3	TTL 3	LOGIC 3	LOGIC 3
4	PORT 4	PORT 4	TTL 4	TTL 4		
5						
6						
7	COMMON	COMMON	COMMON	COMMON	COMMON	COMMON
8	RESET	RESET	RESET	RESET		
9			VSW	VSW	VSW	VSW
10		D INDICATOR (COM)		D INDICATOR (COM)		D INDICATOR (COM)
11		E INDICATOR		E INDICATOR		E INDICATOR
12		F INDICATOR		F INDICATOR		F INDICATOR
13		G INDICATOR		G INDICATOR		G INDICATOR
14		H INDICATOR		H INDICATOR		H INDICATOR
15	N/A		N/A		N/A	

CONNECTOR PINOUT FOR LATCHING SP5T MULTI-THROW SWITCHES						
EXAMPLE	CS-19N650-S	CS-19N65C-S	CS-19N650-TS	CS-19N65C-TS	CS-19N650-TDS	CS-19N65C-TDS
INDICATOR		YES		YES		YES
TTL			YES	YES		
DECODERS & TTL					YES	YES
PIN NO.	9-PIN	15-PIN	9-PIN	15-PIN	9-PIN	15-PIN
1	PORT 1	PORT 1	TTL 1	TTL 1	LOGIC 1	LOGIC 1
2	PORT 2	PORT 2	TTL 2	TTL 2	LOGIC 2	LOGIC 2
3	PORT 3	PORT 3	TTL 3	TTL 3	LOGIC 3	LOGIC 3
4	PORT 4	PORT 4	TTL 4	TTL 4		
5	PORT 5	PORT 5	TTL 5	TTL 5		
6						
7	COMMON	COMMON	COMMON	COMMON	COMMON	COMMON
8	RESET	RESET	RESET	RESET		
9			VSW	VSW	VSW	VSW
10		D INDICATOR (COM)		D INDICATOR (COM)		D INDICATOR (COM)
11		E INDICATOR		E INDICATOR		E INDICATOR
12		F INDICATOR		F INDICATOR		F INDICATOR
13		G INDICATOR		G INDICATOR		G INDICATOR
14		H INDICATOR		H INDICATOR		H INDICATOR
15	N/A	K INDICATOR	N/A	K INDICATOR	N/A	K INDICATOR

CONNECTOR PINOUT FOR LATCHING SP6T MULTI-THROW SWITCHES						
EXAMPLE	CS-19N660-S	CS-19N66C-S	CS-19N660-TS	CS-19N66C-TS	CS-19N660-TDS	CS-19N66C-TDS
INDICATOR		YES				YES
TTL			YES			
DECODERS & TTL					YES	YES
PIN NO.	9-PIN	15-PIN	9-PIN		9-PIN	15-PIN
1	PORT 1	PORT 1	TTL 1		LOGIC 1	LOGIC 1
2	PORT 2	PORT 2	TTL 2		LOGIC 2	LOGIC 2
3	PORT 3	PORT 3	TTL 3		LOGIC 3	LOGIC 3
4	PORT 4	PORT 4	TTL 4			
5	PORT 5	PORT 5	TTL 5			
6	PORT 6	PORT 6	TTL 6			
7	COMMON	COMMON	COMMON		COMMON	COMMON
8	RESET	RESET	RESET			
9		D INDICATOR (COM)	VSW		VSW	D INDICATOR (COM)
10		E INDICATOR				E INDICATOR
11		F INDICATOR				F INDICATOR
12		G INDICATOR				G INDICATOR
13		H INDICATOR				H INDICATOR
14		K INDICATOR				K INDICATOR
15	N/A	L INDICATOR	N/A		N/A	L INDICATOR

CONFIGURATION
NOT AVAILABLE
CONTACT FACTORY

Series CCS-19

Multi-Throw DC-2 GHz

Latching Coaxial Switch



TRUTH TABLE Latching
CCS-19NX3C-T

Logic Input				RF Path				Indicator Switches		
1	2	3	R	J1	J2	J3	Reset	E	F	G
1	0	0	0	On	Off	Off	Off	C	0	0
0	1	0	0	Off	On	Off	Off	0	C	0
0	0	1	0	Off	Off	On	Off	0	0	C

TRUTH TABLE Latching
CCS-19NX3C-TD

Logic Input			RF Path				Indicator Switches		
1	2	3	J1	J2	J3	Reset	E	F	G
0	0	0	On	Off	Off	Off	C	0	0
1	0	0	Off	On	Off	Off	0	C	0
0	1	0	Off	Off	On	Off	0	0	C
0	1	1	Off	Off	Off	Reset	0	0	0
1	1	1	COIL OFF				0	0	0

TRUTH TABLE Latching
CCS-19NX4C-T

Logic Input					RF Path					Indicator Switches			
1	2	3	4	R	J1	J2	J3	J4	Reset	E	F	G	H
1	0	0	0	0	On	Off	Off	Off	Off	C	0	0	0
0	1	0	0	0	Off	On	Off	Off	Off	0	C	0	0
0	0	1	0	0	Off	Off	On	Off	Off	0	0	C	0
0	0	0	1	0	Off	Off	Off	On	Off	0	0	0	C

TRUTH TABLE Latching
CCS-19NX4C-TD

Logic Input			RF Path					Indicator Switches			
1	2	3	J1	J2	J3	J4	Reset	E	F	G	H
0	0	0	On	Off	Off	Off	Off	C	0	0	0
1	0	0	Off	On	Off	Off	Off	0	C	0	0
0	1	0	Off	Off	On	Off	Off	0	0	C	0
1	1	0	Off	Off	Off	On	Off	0	0	0	C
0	1	1	Off	Off	Off	Off	Reset	0	0	0	0
1	1	1	COIL OFF					0	0	0	0

TRUTH TABLE Latching
CCS-19NX5C-T

Logic Input						RF Path						Indicator Switches				
1	2	3	4	5	R	J1	J2	J3	J4	J5	Reset	E	F	G	H	K
1	0	0	0	0	0	On	Off	Off	Off	Off	Off	C	0	0	0	0
0	1	0	0	0	0	Off	On	Off	Off	Off	Off	0	C	0	0	0
0	0	1	0	0	0	Off	Off	On	Off	Off	Off	0	0	C	0	0
0	0	0	1	0	0	Off	Off	Off	On	Off	Off	0	0	0	C	0
0	0	0	0	1	0	Off	Off	Off	Off	On	Off	0	0	0	0	C

TRUTH TABLE Latching
CCS-19NX5C-TD

Logic Input			RF Path						Indicator Switches				
1	2	3	J1	J2	J3	J4	J5	Reset	E	F	G	H	K
0	0	0	On	Off	Off	Off	Off	Off	C	0	0	0	0
1	0	0	Off	On	Off	Off	Off	Off	0	C	0	0	0
0	1	0	Off	Off	On	Off	Off	Off	0	0	C	0	0
1	1	0	Off	Off	Off	On	Off	Off	0	0	0	C	0
0	0	1	Off	Off	Off	Off	On	Off	0	0	0	0	C
0	1	1	Off	Off	Off	Off	Off	Reset	0	0	0	0	0
1	1	1	COIL OFF						0	0	0	0	0

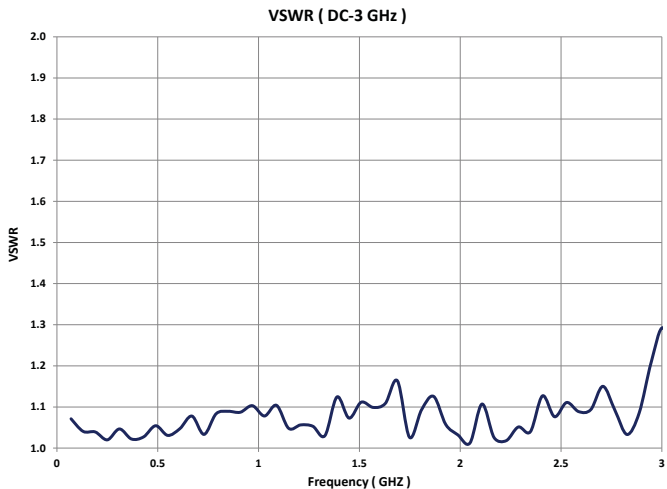
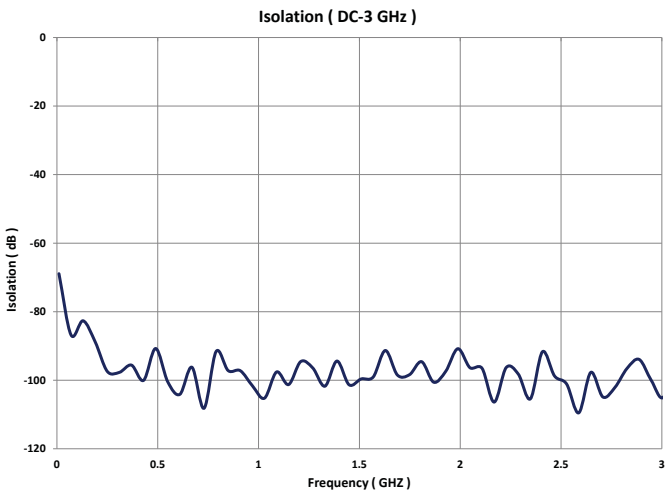
TRUTH TABLE Latching
CCS-19NX6C-T

Logic Input							RF Path							Indicator Switches					
1	2	3	4	5	6	R	J1	J2	J3	J4	J5	J6	Reset	E	F	G	H	K	L
1	0	0	0	0	0	0	On	Off	Off	Off	Off	Off	Off	C	0	0	0	0	0
0	1	0	0	0	0	0	Off	On	Off	Off	Off	Off	Off	0	C	0	0	0	0
0	0	1	0	0	0	0	Off	Off	On	Off	Off	Off	Off	0	0	C	0	0	0
0	0	0	1	0	0	0	Off	Off	Off	On	Off	Off	Off	0	0	0	C	0	0
0	0	0	0	1	0	0	Off	Off	Off	Off	On	Off	Off	0	0	0	0	C	0
0	0	0	0	0	1	0	Off	Off	Off	Off	Off	On	Off	0	0	0	0	0	C

TRUTH TABLE Latching
CCS-19NX6C-TD

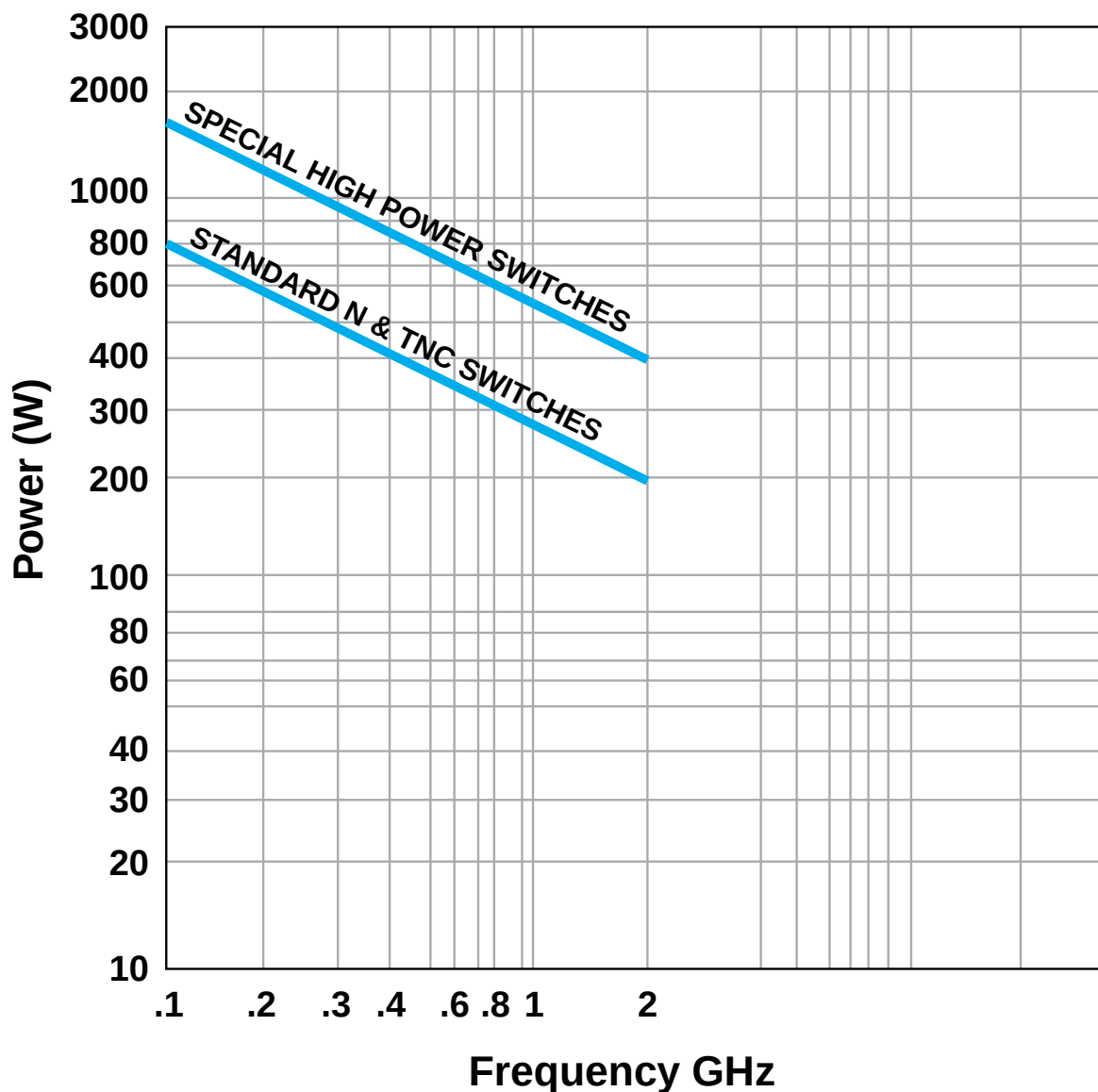
Logic Input			RF Path							Indicator Switches					
1	2	3	J1	J2	J3	J4	J5	J6	Reset	E	F	G	H	K	L
0	0	0	On	Off	Off	Off	Off	Off	Off	C	0	0	0	0	0
1	0	0	Off	On	Off	Off	Off	Off	Off	0	C	0	0	0	0
0	1	0	Off	Off	On	Off	Off	Off	Off	0	0	C	0	0	0
1	1	0	Off	Off	Off	On	Off	Off	Off	0	0	0	C	0	0
0	0	1	Off	Off	Off	Off	On	Off	Off	0	0	0	0	C	0
1	0	1	Off	Off	Off	Off	Off	On	Off	0	0	0	0	0	C
0	1	1	Off	Off	Off	Off	Off	Off	Reset	0	0	0	0	0	0
1	1	1	COIL OFF												

TYPICAL NARROWBAND RF INSERTION LOSS PERFORMANCE CURVES



TYPICAL POWER PERFORMANCE CURVE

Power Handling vs. Frequency



Estimates based on the following reference conditions:

- Ambient temperature of 40°C or less
- Sea level operation
- Load VSWR of 1.20:1 maximum
- No high-power (hot) switching

Please contact Teledyne Coax Switches for derating factors when applications do not meet the foregoing reference conditions.

GLOSSARY

Actuator

An actuator is the electromechanical mechanism that transfers the RF contacts from one position to another upon DC command.

Arc Suppression Diode

A diode is connected in parallel with the coil. This diode limits the "reverse EMF spike" generated when the coil de-energizes to 0.7 volts. The diode cathode is connected to the positive side of the coil and the anode is connected to the negative side.

Date Code

All switches are marked with either a unique serial number or a date code. Date codes are in accordance with MIL-STD-1285 Paragraph 5.2.5 and consist of four digits. The first two digits define the year and the last two digits define the week of the year (YYWW). Thus, 1032 identifies switches that passed through final inspection during the 32nd week of 2010.

Indicator

Indicators tell the system which position the switch is in. Other names for indicators are telemetry contacts or tellback circuit. Indicators are usually a set of internally mounted DC contacts linked to the actuator. They can be wired to digital input lines, status lights, or interlocks. Unless otherwise specified, the maximum indicator contact rating is 30 Vdc, 50 mA, or 1.5 Watts into a resistive load.

Isolation

Isolation is the measure of the power level at the output connector of an unconnected RF channel as referenced to the power at the input connector. It is specified in dB below the input power level.

Multi-Throw Latching Switch

A multi-throw switch is a switch with one input and three or more output ports. The CCS-19 can switch a microwave signal to any of 2,3,4,5 or 6 output from a single common input.

Switching Time

Switching time is the total interval beginning with the arrival of the leading edge of the command pulse at the switch DC input and ending with the completion of the switch transfer, including contact bounce. It consists of three parts: (1) inductive delay in the coil, (2) transfer time of the physical movement of the contacts, and (3) the bounce time of the RF contacts.

TTL Switch Driver Option

As a special option, switch drivers can be provided for both failsafe and latching switches, which are compatible with industry-standard low-power Schottky TTL circuits.

TD-Option

This option includes a decoder. The 3-bit parallel command is decoded to internally select the appropriate position. See the logic tables. The TD-Option increases the Vsw supply current demand by 50mA max at 28Vdc and +20°C.

Performance Parameters vs Frequency

Generally speaking, the RF performance of coaxial switches is frequency dependent. With increasing frequency, VSWR and insertion loss increase while isolation decreases. All data sheets specify these three parameters as "worst case" at the highest operating frequency. If the switch is to be used over a narrow frequency band, better performance can be achieved.

Actuator Current vs Temperature

The resistance of the actuator coil varies as a function of temperature. There is an inverse relationship between the operating temperature of the switch and the actuator drive current. For switches operating at 28 VDC, the approximate actuator drive current at temperature, T, can be calculated using the equation:

$$I_T = \frac{I_A}{[1 + .00385 (T-20)]}$$

Where:

I_T = Actuator current at temperature, T

I_A = Room temperature actuator current – see data sheet

T = Temperature of interest in °C

Magnetic Sensitivity

An electro-mechanical switch can be sensitive to ferrous materials and external magnetic fields. Neighboring ferrous materials should be permitted no closer than 0.5 inches and adjacent external magnetic fields should be limited to a flux density of less than 5 Gauss.

SPECIAL FEATURE

Switching High-Power or Highly Sensitive Signals

Ensure the most linear response with the best galvanically matched contact system in the industry. Extremely low passive intermodulation is standard on all of our switches.

Carrier Frequency 1	Carrier Frequency 2	PIM 3rd Order Frequency	PIM 5th Order Frequency
870 MHz	893 MHz	847 MHz	824 MHz
		3rd Order Intermodulation	5th Order Intermodulation
Multiple Positions		–96 dBm	–115 dBm
		–139 dBc	–158 dBc

LATCHING CCS-19N/CS-19N PART NUMBER LIST

	PART No.		PART No.		PART No.		PART No.
1	CCS-19NX3C	43	CCS-19NX3O-TMS	85	CCS-19NX4O-TDS	127	CCS-19NX5O-TDM
2	CCS-19NX3C-D	44	CCS-19NX3O-TS	86	CCS-19NX4O-TM	128	CCS-19NX5O-TDMS
3	CCS-19NX3C-DM	45	CCS-19NX4C	87	CCS-19NX4O-TMS	129	CCS-19NX5O-TDS
4	CCS-19NX3C-DR	46	CCS-19NX4C-D	88	CCS-19NX4O-TS	130	CCS-19NX5O-TM
5	CCS-19NX3C-DRM	47	CCS-19NX4C-DM	89	CCS-19NX5C	131	CCS-19NX5O-TMS
6	CCS-19NX3C-DRS	48	CCS-19NX4C-DR	90	CCS-19NX5C-D	132	CCS-19NX5O-TS
7	CCS-19NX3C-DS	49	CCS-19NX4C-DRM	91	CCS-19NX5C-DM	133	CCS-19NX6C
8	CCS-19NX3C-M	50	CCS-19NX4C-DRS	92	CCS-19NX5C-DR	134	CCS-19NX6C-D
9	CCS-19NX3C-MS	51	CCS-19NX4C-DS	93	CCS-19NX5C-DRM	135	CCS-19NX6C-DM
10	CCS-19NX3C-R	52	CCS-19NX4C-M	94	CCS-19NX5C-DRS	136	CCS-19NX6C-DR
11	CCS-19NX3C-RM	53	CCS-19NX4C-MS	95	CCS-19NX5C-DS	137	CCS-19NX6C-DRM
12	CCS-19NX3C-RMS	54	CCS-19NX4C-R	96	CCS-19NX5C-M	138	CCS-19NX6C-DRS
13	CCS-19NX3C-RS	55	CCS-19NX4C-RM	97	CCS-19NX5C-MS	139	CCS-19NX6C-DS
14	CCS-19NX3C-S	56	CCS-19NX4C-RMS	98	CCS-19NX5C-R	140	CCS-19NX6C-M
15	CCS-19NX3C-T	57	CCS-19NX4C-RS	99	CCS-19NX5C-RM	141	CCS-19NX6C-MS
16	CCS-19NX3C-TD	58	CCS-19NX4C-S	100	CCS-19NX5C-RMS	142	CCS-19NX6C-R
17	CCS-19NX3C-TDM	59	CCS-19NX4C-T	101	CCS-19NX5C-RS	143	CCS-19NX6C-RM
18	CCS-19NX3C-TDMS	60	CCS-19NX4C-TD	102	CCS-19NX5C-S	144	CCS-19NX6C-RMS
19	CCS-19NX3C-TDS	61	CCS-19NX4C-TDM	103	CCS-19NX5C-T	145	CCS-19NX6C-RS
20	CCS-19NX3C-TM	62	CCS-19NX4C-TDMS	104	CCS-19NX5C-TD	146	CCS-19NX6C-S
21	CCS-19NX3C-TMS	63	CCS-19NX4C-TDS	105	CCS-19NX5C-TDM	147	CCS-19NX6C-T
22	CCS-19NX3C-TS	64	CCS-19NX4C-TM	106	CCS-19NX5C-TDMS	148	CCS-19NX6C-TD
23	CCS-19NX3O	65	CCS-19NX4C-TMS	107	CCS-19NX5C-TDS	149	CCS-19NX6C-TDM
24	CCS-19NX3O-D	66	CCS-19NX4C-TS	108	CCS-19NX5C-TM	150	CCS-19NX6C-TDMS
25	CCS-19NX3O-DM	67	CCS-19NX4O	109	CCS-19NX5C-TMS	151	CCS-19NX6C-TDS
26	CCS-19NX3O-DR	68	CCS-19NX4O-D	110	CCS-19NX5C-TS	152	CCS-19NX6C-TM
27	CCS-19NX3O-DRM	69	CCS-19NX4O-DM	111	CCS-19NX5O	153	CCS-19NX6C-TMS
28	CCS-19NX3O-DRS	70	CCS-19NX4O-DR	112	CCS-19NX5O-D	154	CCS-19NX6C-TS
29	CCS-19NX3O-DS	71	CCS-19NX4O-DRM	113	CCS-19NX5O-DM	155	CCS-19NX6O
30	CCS-19NX3O-M	72	CCS-19NX4O-DRS	114	CCS-19NX5O-DR	156	CCS-19NX6O-D
31	CCS-19NX3O-MS	73	CCS-19NX4O-DS	115	CCS-19NX5O-DRM	157	CCS-19NX6O-DM
32	CCS-19NX3O-R	74	CCS-19NX4O-M	116	CCS-19NX5O-DRS	158	CCS-19NX6O-DR
33	CCS-19NX3O-RM	75	CCS-19NX4O-MS	117	CCS-19NX5O-DS	159	CCS-19NX6O-DRM
34	CCS-19NX3O-RMS	76	CCS-19NX4O-R	118	CCS-19NX5O-M	160	CCS-19NX6O-DRS
35	CCS-19NX3O-RS	77	CCS-19NX4O-RM	119	CCS-19NX5O-MS	161	CCS-19NX6O-DS
36	CCS-19NX3O-S	78	CCS-19NX4O-RMS	120	CCS-19NX5O-R	162	CCS-19NX6O-M
37	CCS-19NX3O-T	79	CCS-19NX4O-RS	121	CCS-19NX5O-RM	163	CCS-19NX6O-MS
38	CCS-19NX3O-TD	80	CCS-19NX4O-S	122	CCS-19NX5O-RMS	164	CCS-19NX6O-R
39	CCS-19NX3O-TDM	81	CCS-19NX4O-T	123	CCS-19NX5O-RS	165	CCS-19NX6O-RM
40	CCS-19NX3O-TDMS	82	CCS-19NX4O-TD	124	CCS-19NX5O-S	166	CCS-19NX6O-RMS
41	CCS-19NX3O-TDS	83	CCS-19NX4O-TDM	125	CCS-19NX5O-T	167	CCS-19NX6O-RS
42	CCS-19NX3O-TM	84	CCS-19NX4O-TDMS	126	CCS-19NX5O-TD	168	CCS-19NX6O-S

* X = 6 (28Vdc), 7 (15Vdc), 8 (12Vdc) and 9 (24Vdc)

LATCHING CCS-19N/CS-19N PART NUMBER LIST

	PART No.		PART No.		PART No.		PART No.
169	CCS-19NX6O-T	211	CS-19NX3O-RS	253	CS-19NX4O-RM	295	CS-19NX5O-MS
170	CCS-19NX6O-TD	212	CS-19NX3O-S	254	CS-19NX4O-RMS	296	CS-19NX5O-R
171	CCS-19NX6O-TDM	213	CS-19NX3O-T	255	CS-19NX4O-RS	297	CS-19NX5O-RM
172	CCS-19NX6O-TDMS	214	CS-19NX3O-TD	256	CS-19NX4O-S	298	CS-19NX5O-RMS
173	CCS-19NX6O-TDS	215	CS-19NX3O-TDM	257	CS-19NX4O-T	299	CS-19NX5O-RS
174	CCS-19NX6O-TM	216	CS-19NX3O-TDMS	258	CS-19NX4O-TD	300	CS-19NX5O-S
175	CCS-19NX6O-TMS	217	CS-19NX3O-TDS	239	CS-19NX4O-TDM	301	CS-19NX5O-T
176	CCS-19NX6O-TS	218	CS-19NX3O-TM	260	CS-19NX4O-TDMS	302	CS-19NX5O-TD
177	CS-19NX3C	219	CS-19NX3O-TMS	261	CS-19NX4O-TDS	303	CS-19NX5O-TDM
178	CS-19NX3C-D	220	CS-19NX3O-TS	262	CS-19NX4O-TM	304	CS-19NX5O-TDMS
179	CS-19NX3C-DM	221	CS-19NX4C	263	CS-19NX4O-TMS	305	CS-19NX5O-TDS
180	CS-19NX3C-DR	222	CS-19NX4C-D	264	CS-19NX4O-TS	306	CS-19NX5O-TM
181	CS-19NX3C-DRM	223	CS-19NX4C-DM	265	CS-19NX5C	307	CS-19NX5O-TMS
182	CS-19NX3C-DRS	224	CS-19NX4C-DR	266	CS-19NX5C-D	308	CS-19NX5O-TS
183	CS-19NX3C-DS	225	CS-19NX4C-DRM	267	CS-19NX5C-DM	309	CS-19NX6C
184	CS-19NX3C-M	226	CS-19NX4C-DRS	268	CS-19NX5C-DR	310	CS-19NX6C-D
185	CS-19NX3C-MS	227	CS-19NX4C-DS	269	CS-19NX5C-DRM	311	CS-19NX6C-DM
186	CS-19NX3C-R	228	CS-19NX4C-M	270	CS-19NX5C-DRS	312	CS-19NX6C-DR
187	CS-19NX3C-RM	229	CS-19NX4C-MS	271	CS-19NX5C-DS	313	CS-19NX6C-DRM
188	CS-19NX3C-RMS	230	CS-19NX4C-R	272	CS-19NX5C-M	314	CS-19NX6C-DRS
189	CS-19NX3C-RS	231	CS-19NX4C-RM	273	CS-19NX5C-MS	315	CS-19NX6C-DS
190	CS-19NX3C-S	232	CS-19NX4C-RMS	274	CS-19NX5C-R	316	CS-19NX6C-M
191	CS-19NX3C-T	233	CS-19NX4C-RS	275	CS-19NX5C-RM	317	CS-19NX6C-MS
192	CS-19NX3C-TD	234	CS-19NX4C-S	276	CS-19NX5C-RMS	318	CS-19NX6C-R
193	CS-19NX3C-TDM	235	CS-19NX4C-T	277	CS-19NX5C-RS	319	CS-19NX6C-RM
194	CS-19NX3C-TDMS	236	CS-19NX4C-TD	278	CS-19NX5C-S	320	CS-19NX6C-RMS
195	CS-19NX3C-TDS	237	CS-19NX4C-TDM	279	CS-19NX5C-T	321	CS-19NX6C-RS
196	CS-19NX3C-TM	238	CS-19NX4C-TDMS	280	CS-19NX5C-TD	322	CS-19NX6C-S
197	CS-19NX3C-TMS	239	CS-19NX4C-TDS	281	CS-19NX5C-TDM	323	CS-19NX6C-T
198	CS-19NX3C-TS	240	CS-19NX4C-TM	282	CS-19NX5C-TDMS	324	CS-19NX6C-TD
199	CS-19NX3O	241	CS-19NX4C-TMS	283	CS-19NX5C-TDS	325	CS-19NX6C-TDM
200	CS-19NX3O-D	242	CS-19NX4C-TS	284	CS-19NX5C-TM	326	CS-19NX6C-TDMS
201	CS-19NX3O-DM	243	CS-19NX4O	285	CS-19NX5C-TMS	327	CS-19NX6C-TDS
202	CS-19NX3O-DR	244	CS-19NX4O-D	286	CS-19NX5C-TS	328	CS-19NX6C-TM
203	CS-19NX3O-DRM	245	CS-19NX4O-DM	287	CS-19NX5O	329	CS-19NX6C-TMS
204	CS-19NX3O-DRS	246	CS-19NX4O-DR	288	CS-19NX5O-D	330	CS-19NX6C-TS
205	CS-19NX3O-DS	247	CS-19NX4O-DRM	289	CS-19NX5O-DM	331	CS-19NX6O
206	CS-19NX3O-M	248	CS-19NX4O-DRS	290	CS-19NX5O-DR	332	CS-19NX6O-D
207	CS-19NX3O-MS	249	CS-19NX4O-DS	291	CS-19NX5O-DRM	333	CS-19NX6O-DM
208	CS-19NX3O-R	250	CS-19NX4O-M	292	CS-19NX5O-DRS	334	CS-19NX6O-DR
209	CS-19NX3O-RM	251	CS-19NX4O-MS	293	CS-19NX5O-DS	335	CS-19NX6O-DRM
210	CS-19NX3O-RMS	252	CS-19NX4O-R	294	CS-19NX5O-M	336	CS-19NX6O-DRS

* X = 6 (28Vdc), 7 (15Vdc), 8 (12Vdc) and 9 (24Vdc)

LATCHING CCS-19N/CS-19N PART NUMBER LIST

	PART No.
337	CS-19NX6O-DS
338	CS-19NX6O-M
339	CS-19NX6O-MS
340	CS-19NX6O-R
341	CS-19NX6O-RM
342	CS-19NX6O-RMS
343	CS-19NX6O-RS
344	CS-19NX6O-S
345	CS-19NX6O-T
346	CS-19NX6O-TD
347	CS-19NX6O-TDM
348	CS-19NX6O-TDMS
349	CS-19NX6O-TDS
350	CS-19NX6O-TM
351	CS-19NX6O-TMS
352	CS-19NX6O-TS

* X = 6 (28Vdc), 7 (15Vdc), 8 (12Vdc) and 9 (24Vdc)