

**D3 SERIES: SPDT 50 OHM  
TERMINATED SWITCH  
DC-22 GHz ◆ SMA**

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The **D3 Series** features SMA connectors and a frequency range of DC to 22 GHz.

This series is available with fail-safe, latching self cut-off or pulse latching functions.

<b>RF Impedance:</b>	50 ohms nominal
<b>Temperature Range:</b>	-35°C to +85°C ambient
<b>Operating Life:</b>	1,000,000 cycles min.
<b>Switching Time:</b>	15 mSec max.
<b>Switching Sequence:</b>	Break Before Make
<b>Environmental:</b>	Designed in Accordance to MIL-DTL-3928 (Testing and Operation Modes)

**SPECIFICATIONS**

Frequency	VSWR (max.)	Insertion Loss (dB max.)	Isolation (dB min.)
DC-3 GHz	1.20	0.20	80
3-8 GHz	1.30	0.30	70
8-12.4 GHz	1.40	0.40	60
12.4-18 GHz	1.50	0.50	60
18-22 GHz	1.60	0.60	55

Actuator Current (typical)	12Vdc	12-15 Vdc	20-24 Vdc	24-30Vdc
Fail-safe	480mA	600mA	400mA	280mA
Latching	282mA	353mA	218mA	175mA

\* If reduced coil current is required, please contact Factory.

**AVAILABLE OPTIONS**

OPTION 2 RF CONNECTORS	OPTION 4 VOLTAGE	OPTION 5 ACTUATOR	OPTION 6 FREQUENCY	OPTION 8 SPECIAL OPTIONS
4 - SMA	1 - 6 Vdc +/- 10% 2 - 12 Vdc +/- 10% 3 - 24-30 Vdc	<b>Fail-safe</b>		5 - DC to 22 GHz
		A - Standard M - Diodes	B - Indicators Q - Diodes, Indicators	
OPTION 3 TERMINALS	4 - 48 Vdc +/- 10% 5 - 110 Vac +/- 10% 6 - 12-15 Vdc 7 - 18-20 Vdc 8 - 20-24 Vdc	<b>Latching Self Cut-Off</b>		OPTION 7 POLARITY
		D - Diodes E - Diodes, Indicators		
1 - Solder Terminals 4 - Sub M miniature D-Shell Connector		<b>Pulse Latching</b>		
		C - Standard Y - Diodes	F - Indicators L - Diodes, Indicators	
		<b>Normally Open</b>		
		K - Standard J - Diodes	H - Indicators G - Diodes, Indicators	

**D3**

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**4**

**5**

Option 1  
Series

Option 2  
RF Connectors

Option 3  
Terminals

Option 4  
Voltage

Option 5  
Actuator

Option 6  
Frequency

Option 7  
Polarity

Option 8  
Special  
Options

High quality microwave and millimeter wave components and subsystems. Visit Ducommun RF Products online at [www.ducommun.com](http://www.ducommun.com) or contact us at 310.513.7200. All specifications are subject to change without notice.

**DC TERMINAL FUNCTION**

PIN	FAILSAFE				LATCHING								NORMALLY OPEN							
	A	M	A, M w/ TTL	B	Q	B, Q w/ TTL	C, Y	C, Y w/ TTL	D	D w/ TTL	E	E w/ TTL	F, L	F, L w/ TTL	J	K	J, K w/ TTL	G	H	G, H w/ TTL
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	2	N/A	2	N/A	2	N/A	2	N/A	N/A	2
2	N/A	N/A	2	2	2	2	2-/+	1	2-/+	1	2-/+	1	2-/+	1	2-/+	2	1	2-/+	2	1
3	1	+1	-B	1	1	-B	1-/+	-B	1-/+	-B	1-/+	-B	1-/+	-B	1-/+	1	-B	1-/+	1	-B
4	2	-2	+A	COM	COM	+A	COM+/-	+A	COM+/-	+A	COM+/-	+A	COM+/-	+A	COM+/-	COM	+A	COM+/-	COM	+A
5	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	2	2	2	2	N/A	N/A	N/A	2	2	2
6	N/A	N/A	N/A	2	-2	1	N/A	N/A	N/A	N/A	1	1	1	1	N/A	N/A	N/A	1	1	1
7	N/A	N/A	N/A	1	+1	COM	N/A	N/A	N/A	N/A	COM	COM	COM	COM	N/A	N/A	N/A	COM	COM	COM

**SCHEMATICS**

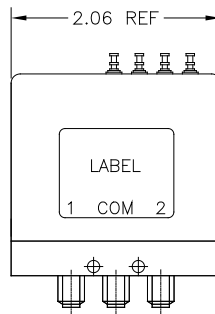
Pages 139-143

FIG.	5	5	6	5	5	6	17	18	11	12	11	12	17	18	23	23	24	23	23	24
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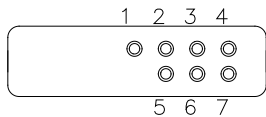
**OUTLINE DRAWING DIMENSION "A"**

1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"	1.98"
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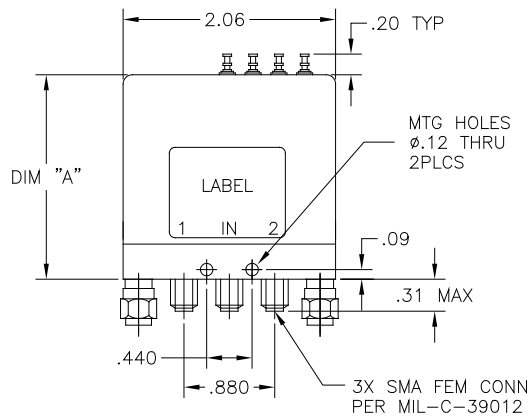
**FRONT VIEW  
Internal Terminations**



**TOP VIEW**



**FRONT VIEW  
External Terminations**



**SIDE VIEW**

