
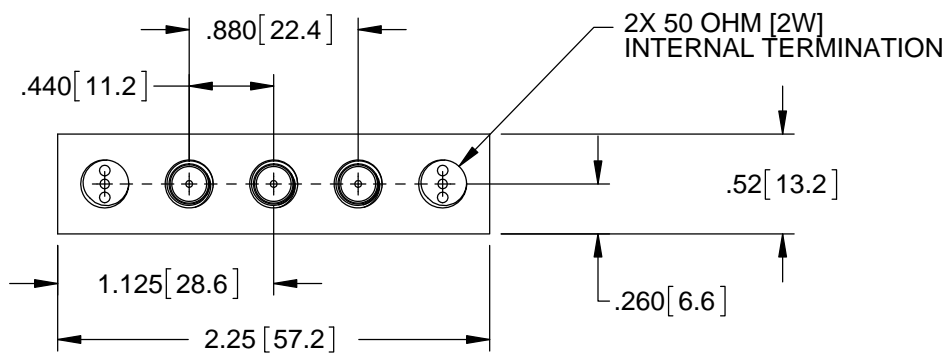
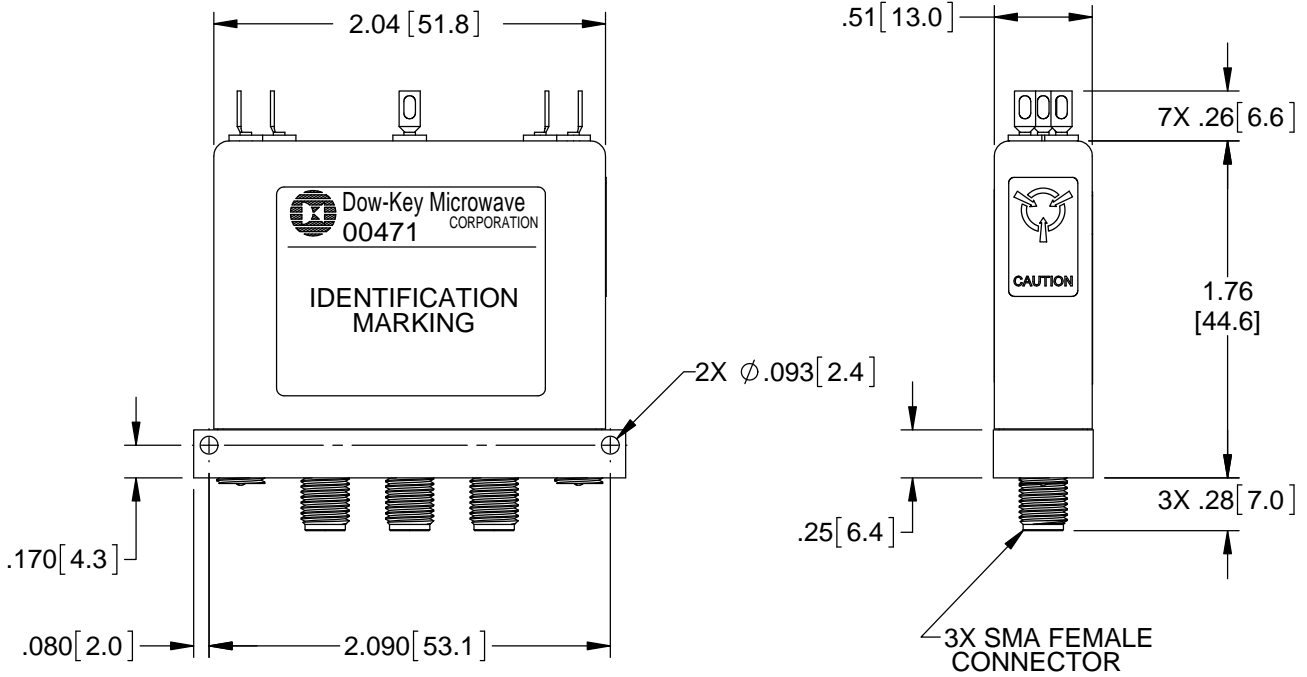
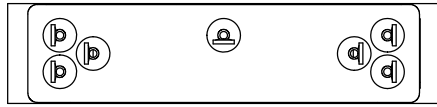


REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PRODUCTION RELEASE	11/25/15	K.R.
B	REVISED PER ECO 11448	4/14/16	K.R.
C	REVISED PER ECO 11505	7/14/16	K.R.

Nominal Coil Voltage	Part Number
12 Vdc	R521K-420853A
24 Vdc	R521K-480853A

REVISIONS	C	C	C	C	C		 <b>DowKey® Microwave</b> CORPORATION <small>A DOVER TECHNOLOGIES COMPANY</small>	4822 McGrath Street Ventura, CA. 93003-5641 PH: (805) 650-0260 FAX: (805) 650-1734					
SHEET NO.	1	2	3	4	5								
APPROVALS		DATE					<b>SW, SPDT, LATCHING SELF CUT-OFF, TTL SMA-FEMALE CONNECTORS, OPTICAL INDICATORS, 50 OHM [2W] TERMINATIONS, 10 MIL CYCLE, 26.5 GHz</b>						
DRAWN SARA LEE		07/20/15								CODE IDENT. NO.	DWG. NO.		
ENGINEERING J. WESSELY		7/14/2016								00471		R521K-4X0853A	
QUALITY S. LYNCH		11/25/2015								SCALE		NONE	
MANUFACTURING R. GARCIA		11/25/2015								FINAL ASSY: 11024-271-V		SHEET 1 OF 5	

# OUTLINE DRAWING:



[ ] MILLIMETERS

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: .XXX ±.010 ANGLES: ±3° .XX ±.030	CODE IDENT. NO. <b>00471</b>	DWG. NO. <b>R521K-4X0853A</b>	REV. <b>C</b>
	SCALE NONE	FINAL ASSY: 11024-271-V	SHEET 2 OF 5

# SPECIFICATION:

## 1.0 RF CHARACTERISTICS:

1.1 FREQUENCY (GHz)	DC - 4	4 - 12.4	12.4 - 20	20 - 26.5
1.2 VSWR (RATIO MAX)	1.15:1	1.25:1	1.35:1	1.50:1
1.3 INSERTION LOSS (dB MAX)	0.42	0.56	0.69	0.80
1.3.1 REPEATABILITY (MAX)	0.03 dB @ 25°C (DC - 26.5 GHz)			
1.4 ISOLATION (dB MIN)	85	76	67	60
1.5 HOT SWITCHING (WATTS CW)	2	2	2	2
1.6 IMPEDANCE (NOMINAL)	50 OHMS			

## 2.0 ACTUATION DATA:

2.1	<table border="1"><thead><tr><th>NOMINAL VOLTAGE</th><th>OPERATING VOLTAGE</th><th>CURRENT (TYP) @ NOMINAL VOLTAGE &amp; 25°C</th></tr></thead><tbody><tr><td>12</td><td>11-14</td><td>120mA</td></tr><tr><td>24</td><td>20-32</td><td>80mA</td></tr></tbody></table>	NOMINAL VOLTAGE	OPERATING VOLTAGE	CURRENT (TYP) @ NOMINAL VOLTAGE & 25°C	12	11-14	120mA	24	20-32	80mA	
NOMINAL VOLTAGE	OPERATING VOLTAGE	CURRENT (TYP) @ NOMINAL VOLTAGE & 25°C									
12	11-14	120mA									
24	20-32	80mA									
2.2 SWITCHING TIME	15mS MAX										
2.3 OPERATING MODE	LATCHING SELF CUT-OFF										

## 3.0 MECHANICAL:

3.1 CONTACT ARRANGEMENT	SPDT
3.2 RF CONTACTS	BREAK BEFORE MAKE
3.3 WEIGHT	2.5 oz (71 g) NOMINAL
3.4 DESIGN LIFE *	10,000,000 CYCLES MINIMUM

## 4.0 ENVIRONMENTAL:

4.1 OPERATING TEMPERATURE	-25 °C TO +75 °C
4.2 STORAGE TEMPERATURE	-55 °C TO +85 °C
4.3 TEMPERATURE CYCLING	-55 °C TO +85 °C (10 CYCLES PER MIL-STD-202, METHOD 107G, COND A)
4.4 VIBRATION	
4.4.1 SINUSOIDAL OPERATING	7 g, 5-2000 Hz
4.4.2 SINUSOIDAL SURVIVAL	20 g, 20-2000 Hz
4.4.3 RANDOM (OPERATING)	2.41 g (rms), 10 min/AXIS
4.5 SHOCK	
4.5.1 SURVIVAL	HALF SINE: 500 g at 0.5 mS
4.5.2 OPERATING	50 g at 6mS
4.6 HUMIDITY (OPERATING)	15 TO 95% RELATIVE HUMIDITY (NON-CONDENSING)
4.7 ALTITUDE	
4.7.1 OPERATING	15,000 FEET
4.7.2 SURVIVAL	50,000 FEET

\* NOMINAL VOLTAGE = 24V

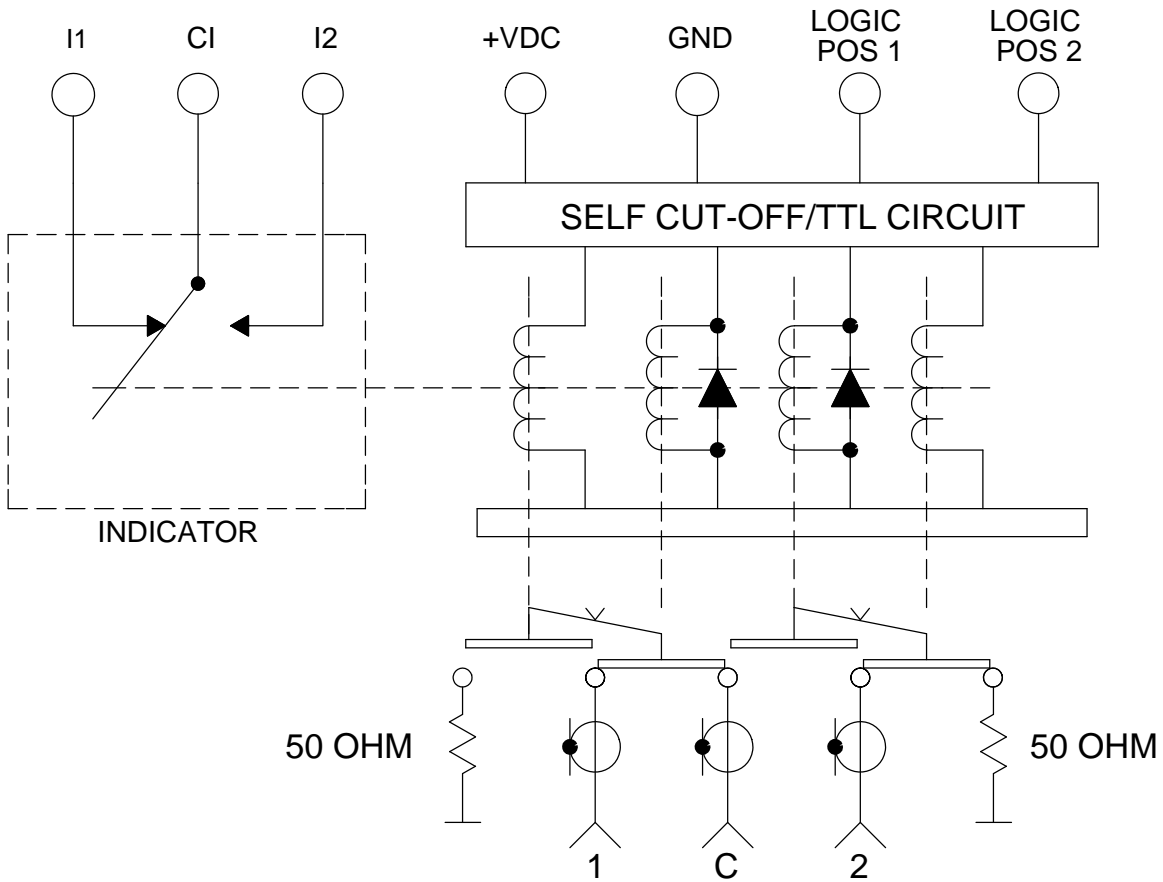
DESIGN LIFE IS 10 MILLION CYCLES MINIMUM, WHEN DRIVEN AT VOLTAGES  $20 \leq V_{supply} \leq 28$  VDC  
DESIGN LIFE IS 2 MILLION CYCLES MINIMUM, WHEN DRIVEN AT VOLTAGES  $28 < V_{supply} \leq 32$  VDC

\* NOMINAL VOLTAGE = 12V

NO DERATING WHEN SWITCH IS OPERATED WITHIN SPECIFIED VOLTAGE RANGE

CODE IDENT. NO. <b>00471</b>	DWG. NO. <b>R521K-4X0853A</b>	REV. <b>C</b>
SCALE NONE	FINAL ASSY: 11024-271-V	SHEET 3 OF 5

# SCHEMATIC:



SWITCH SHOWN IN POSITION 1

## OPERATION:

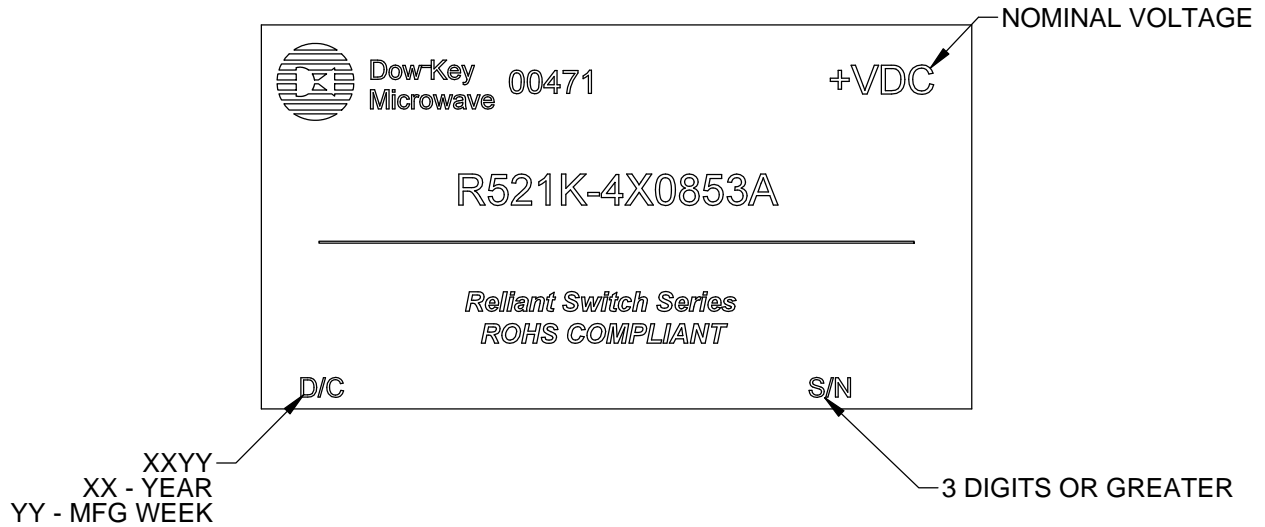
- CONNECT GROUND TO -COM, PIN 3
- CONNECT SUPPLY VOLTAGE (+VDC) TO PIN 4
- SELECT (CLOSE) THE DESIRED RF PATH BY APPLYING LOGIC HI SIGNAL TO THE DESIRED POSITION AND LOGIC LO SIGNAL TO THE ALTERNATE POSITION

LOGIC TRUTH TABLE			
RF PATH	INDICATOR PATH	LOGIC POS.1	LOGIC POS.2
1 - C	CI - I1	1	0
2 - C	CI - I2	0	1

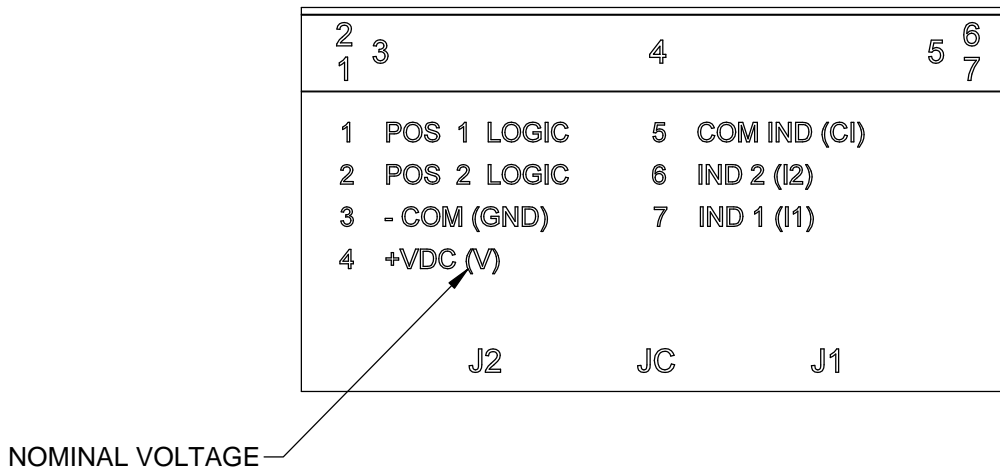
LOGIC "1" = 2.4 - 5.5 Vdc  
 LOGIC "0" = 0.0 - 0.8 Vdc

CODE IDENT. NO. <b>00471</b>	DWG. NO. <b>R521K-4X0853A</b>	REV. <b>C</b>
SCALE NONE	FINAL ASSY: 11024-271-V	SHEET 4 OF 5

# IDENTIFICATION MARKING:



# ACTUATION MARKING:



NOTE: ALL WORDS, LETTERS, NUMBERS AND SYMBOLS SHALL BE LOCATED APPROXIMATELY AS SHOWN

CODE IDENT. NO. <b>00471</b>	DWG. NO. <b>R521K-4X0853A</b>	REV. <b>C</b>
SCALE NONE	FINAL ASSY: 11024-271-V	SHEET 5 OF 5