

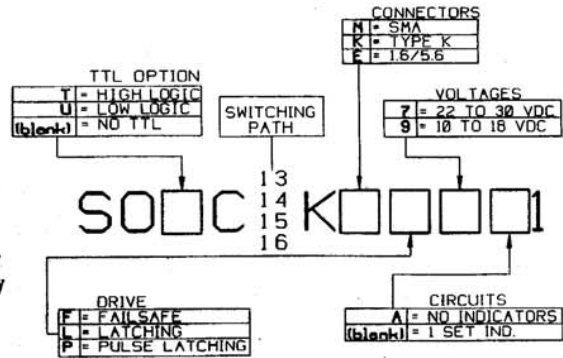
# C<sup>13</sup> C<sup>14</sup> C<sup>15</sup> K SERIES

16 SP3T thru SP6T relay style DC to 40 GHz family.

The C13Z thru C16Z series offers reliability and performance in SP3T, SP4T, SP5T, and SP6T switching utilizing SMA, K, and 1.5/5.6 connectors.

This DC to 40 GHz series is typically used in mobile radio, cellular telecommunications and ATE applications.

The following pages comprise a variety of sample models commonly used.



| REVISIONS |     |             |      |          |
|-----------|-----|-------------|------|----------|
| EDN       | LTR | DESCRIPTION | DATE | APPROVED |
|           |     |             |      |          |

CONNECTOR TYPE "SMA" FEMALE  
4 PLACES  
3 CONNECTORS SPACED AS SHOWN ON 1.66 DIA B.C.

**SPECIFICATIONS:**

| FREQUENCY RANGE GHz | DC TO 3 | 3 TO 8 | 8 TO 12.4 | 12.4 TO 18 |
|---------------------|---------|--------|-----------|------------|
| V.S.W.R. MAX        | 1.2:1   | 1.3:1  | 1.4:1     | 1.5:1      |
| INSERTION LOSS MAX  | 0.2 dB  | 0.3 dB | 0.4 dB    | 0.5 dB     |
| ISOLATION MIN       | 80 dB   | 78 dB  | 68 dB     | 68 dB      |

POWER MAX: 50 CW  
 RF IMPEDANCE: 50 OHMS

**ELECTRICAL:**  
 VOLTAGE: 22 TO 30 VDC  
 CURRENT: 300 mA MAX @ 28 VDC @ 20°C  
 TTL LOGIC: VOLTAGE LOW: 0 TO 0.8 VDC  
 VOLTAGE HIGH: 2.4 TO 5.5 VDC  
 CURRENT LOW: 0 mA  
 CURRENT HIGH: 1.75 mA MAX @ 5 V

**SWITCHING TIME:** 20 MILLISECONDS MAX.

**MECHANICAL:**  
 MATERIAL: ALUMINUM (RF ASSY)  
 RF CONTACTS: BREAK-BEFORE MAKE  
 FINISH: IRIDIUM PER MIL-C-5541  
 PAINT: DULL BLACK ENAMEL  
 LIFE: 1,000,000 CYCLES MIN.

**ENVIRONMENTAL:**  
 TEMP: OPERATING: 0°C TO +70°C  
 NON-OPERATING: -40°C TO +100°C  
 HUMIDITY: 0 TO 95% NO CONDENSATION

SCHEMATIC SHOWN IN POSITION 1

|                                                                                 |                                                                 |                  |                            |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------|----------------------------|
| MODEL # SOTC13KML71<br>DRAWN: 7/28/95 LLS<br>CHECKED: 8/16/95 M.K.<br>APPROVED: | COAXIAL SWITCH, SP3T, TYPE "SMA"<br>TTL, LATCHING, W/INDICATORS | B 09080 B 9604-6 | SCALE UNIT WT SHEET 1 OF 1 |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------|----------------------------|

SOTC13KML71

CNC14KMF7A1

| REVISIONS |     |             |      |          |
|-----------|-----|-------------|------|----------|
| ECN       | LTR | DESCRIPTION | DATE | APPROVED |
|           |     |             |      |          |

SCHEMATIC SHOWN IN NORMALLY OPEN POSITION (DE-ENERGIZED)

RF CONNECTORS  
"SMA" FEMALE  
PER MIL-C-38812  
5 PLACES  
4 CONNECTORS SPACED AS SHOWN ON 1.862 DIA B.C.

1/8 X 45° CHAMFER  
4 PLACES

.144 DIA THRU  
4 HOLES

**SPECIFICATIONS:**

| FREQUENCY RANGE GHz | DC TO 3 | 3 TO 8 | 8 TO 12.4 | 12.4 TO 18 |
|---------------------|---------|--------|-----------|------------|
| V.S.W.R. MAX        | 1.2:1   | 1.3:1  | 1.4:1     | 1.5:1      |
| INSERTION LOSS MAX  | 0.2 dB  | 0.3 dB | 0.4 dB    | 0.5 dB     |
| ISOLATION MIN       | 60 dB   | 70 dB  | 60 dB     | 60 dB      |

POWER MAX. 50 CW  
RF IMPEDANCE 50 OHMS

**ELECTRICAL:**  
VOLTAGE 22 TO 30 VDC  
CURRENT 140 mA MAX @ 28 VDC @ 20°C  
SWITCHING TIME 20 MILLISECONDS MAX.

**MECHANICAL:**  
MATERIAL ALUMINUM (RF ASSY)  
RF CONTACTS BREAK-BEFORE MAKE  
FINISH IRIDIUM PER MIL-C-5541  
PAINT DULL BLACK ENAMEL

**LIFE** 1,000,000 CYCLES MIN.

**ENVIRONMENTAL:**  
TEMP. OPERATING 0°C TO +70°C  
NON-OPERATING -40°C TO +100°C  
HUMIDITY 0 TO 95%, NO CONDENSATION

| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES |           | MODEL #     |          | LOGIS MICROWAVE                                               |         |
|-----------------------------------------------------|-----------|-------------|----------|---------------------------------------------------------------|---------|
| TOLERANCES                                          |           | SOC14KMF7A1 |          | DRAWN 8/16/95 JLS                                             |         |
| DECIMAL                                             | FRACTIONS | CHECKED     | APPROVED | COAXIAL SWITCH, SP4T, FAILSAFE, TYPE "SMA", FAILSAFE, NO IND. |         |
| PLACE .010                                          | 1/64      | APPROVED    | APPROVED |                                                               |         |
| PLACE .005                                          | 1/32      | APPROVED    | APPROVED |                                                               |         |
| PLACE .002                                          | 1/160     | APPROVED    | APPROVED |                                                               |         |
| MATERIAL:                                           |           |             |          | B                                                             | 09080   |
| NEXT ASSY                                           | USED ON   | FRESH       |          | B                                                             | 9605-4  |
| APPLICATION                                         |           |             |          | SCALE                                                         | UNIT WT |
|                                                     |           |             |          | SHEET                                                         | 1 OF 1  |

CNC16KMP7A1

| REVISIONS |     |             |      |          |
|-----------|-----|-------------|------|----------|
| ECN       | LTR | DESCRIPTION | DATE | APPROVED |
|           |     |             |      |          |

RF CONNECTOR  
"SMA" FEMALE  
PER MIL-C-38812  
7 PLACES  
6 CONNECTORS SPACED AS SHOWN ON 1.862 DIA B.C.

1/8 X 45° CHAMFER  
4 PLACES

.144 DIA THRU  
4 HOLES

**SPECIFICATIONS:**

| FREQUENCY RANGE GHz | DC TO 3 | 3 TO 8 | 8 TO 12.4 | 12.4 TO 18 |
|---------------------|---------|--------|-----------|------------|
| V.S.W.R. MAX        | 1.2:1   | 1.3:1  | 1.4:1     | 1.5:1      |
| INSERTION LOSS MAX  | 0.2 dB  | 0.3 dB | 0.4 dB    | 0.5 dB     |
| ISOLATION MIN       | 60 dB   | 70 dB  | 60 dB     | 60 dB      |

POWER MAX. 50 CW  
RF IMPEDANCE 50 OHMS

**ELECTRICAL:**  
VOLTAGE 22 TO 30 VDC  
PULSE WIDTH 30 mS MIN; 50 mS MAX  
CURRENT 600 mA MAX @ 28 VDC @ 20°C  
SWITCHING TIME 20 MILLISECONDS MAX.

**MECHANICAL:**  
MATERIAL ALUMINUM (RF ASSY)  
RF CONTACTS BREAK-BEFORE MAKE  
FINISH IRIDIUM PER MIL-C-5541  
PAINT DULL BLACK ENAMEL

**LIFE** 1,000,000 CYCLES MIN.

**ENVIRONMENTAL:**  
TEMP. OPERATING 0°C TO +70°C  
NON-OPERATING -40°C TO +100°C  
HUMIDITY 0 TO 95%, NO CONDENSATION

SCHEMATIC SHOWN IN POSITION 1

| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES |           | MODEL #     |          | LOGIS MICROWAVE                                                 |         |
|-----------------------------------------------------|-----------|-------------|----------|-----------------------------------------------------------------|---------|
| TOLERANCES                                          |           | SOC16KMP7A1 |          | DRAWN 8/21/95 JLS                                               |         |
| DECIMAL                                             | FRACTIONS | CHECKED     | APPROVED | COAXIAL SWITCH, SP6T, TYPE "SMA", PULSE LATCHING, NO INDICATORS |         |
| PLACE .010                                          | 1/64      | APPROVED    | APPROVED |                                                                 |         |
| PLACE .005                                          | 1/32      | APPROVED    | APPROVED |                                                                 |         |
| PLACE .002                                          | 1/160     | APPROVED    | APPROVED |                                                                 |         |
| MATERIAL:                                           |           |             |          | B                                                               | 09080   |
| NEXT ASSY                                           | USED ON   | FRESH       |          | B                                                               | 9607-7  |
| APPLICATION                                         |           |             |          | SCALE                                                           | UNIT WT |
|                                                     |           |             |          | SHEET                                                           | 1 OF 1  |