

| PART NUMBER | DESCRIPTION |
|-------------|--|
| CCS-37K | Commercial Failsafe TRANSFER, DC-40GHz |
| CS-37K | Elite Failsafe TRANSFER, DC-40GHz |

The CCS-37K/CS-37K is a long-life high performance transfer switch designed for use in 50 Ohms coaxial transmission lines operating over frequencies ranging from DC to 40GHz. The switch is designed for minimum size compatible with K connector spacing.

The failsafe switches on this page are provided with a spring operated actuator which is particularly desirable in applications where the switch is connected to one position (normally closed) most of the time and only periodically switched to the alternate position. In this type of application, holding power is required only when operating in the alternate position. Also, switching circuitry is simplified, since only one DC circuit is required.

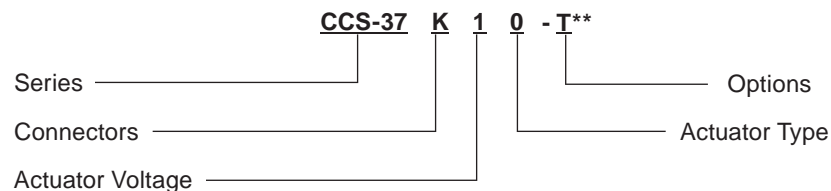


| ENVIRONMENTAL AND PHYSICAL CHARACTERISTICS | |
|--|-------------------------|
| Operating Temperature | |
| Commercial Model, CCS-37K | -25°C to 65°C |
| Elite Model, CS-37K | -55°C to 85°C |
| Vibration (MIL-STD-202 Method 214, Condition D, non-operating) | 10 g's RMS |
| Shock (MIL-STD-202 Method 213, Condition D, non-operating) | 500 g's |
| Standard Actuator Life | 2,000,000 cycles |
| Connector Type | 2.92 mm / K |
| Weight | 3.0 oz. (70.87g) (max.) |

| ELECTRICAL CHARACTERISTICS | |
|-----------------------------------|-----------------------------|
| Form Factor | TRANSFER, break before make |
| Frequency Range | |
| CCS-37K | DC-40 GHz |
| CS-37K | DC-40 GHz |
| Characteristic Impedance | 50 Ohms |
| Operate Time | 20 ms (max.) |
| Release Time | 10 ms (max.) |
| Actuation Voltage Available | 12 15 24 28 V |
| Actuation Current, max. @ ambient | 800 650 700 400 mA |

| TYPICAL PERFORMANCE CHARACTERISTICS | | | | | | |
|-------------------------------------|----------|----------|-----------|----------|-----------|-----------|
| Frequency | DC-6 GHz | 6-12 GHz | 12-18 GHz | 18-30GHz | 30-33 GHz | 33-40 GHz |
| Insertion Loss, dB, typical. | 0.15 | 0.25 | 0.35 | 0.55 | 1.00 | 1.35 |
| Isolation, dB, typical. | 70 | 70 | 65 | 60 | 50 | 50 |
| VSWR , typical. | 1.15:1 | 1.20:1 | 1.25:1 | 1.50:1 | 2.00:1 | 2.50:1 |

PART NUMBERING SYSTEM



Connector
K: 2.92 mm Female

Actuator Voltage
1: 28 Vdc Failsafe
2: 15 Vdc Failsafe
3: 12 Vdc Failsafe
4: 24 Vdc Failsafe

Actuator Type
0: Standard Contacts
C: Indicator Contacts

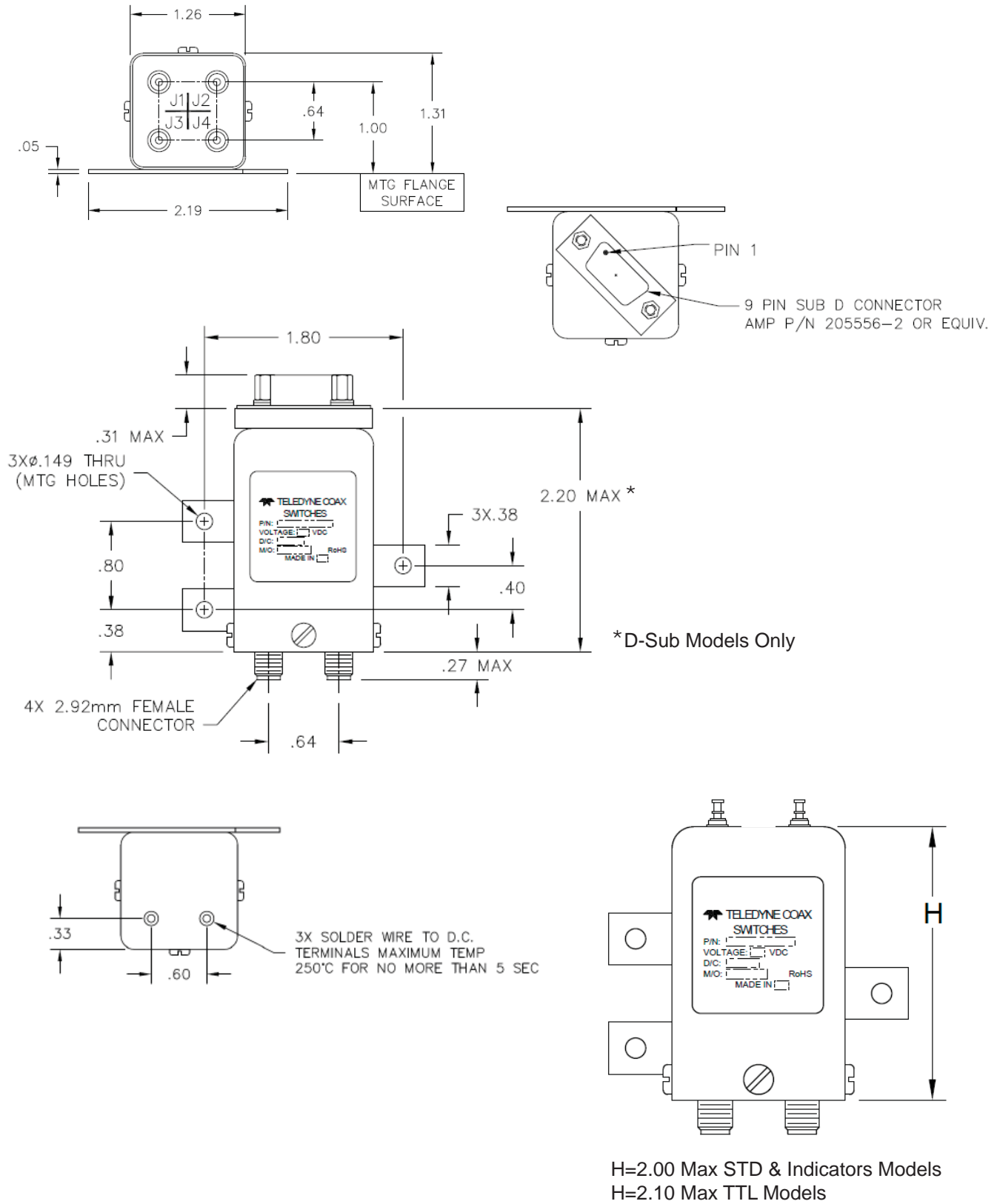
Options
T: TTL Drivers with Diodes
D: Transient Suppression Diodes
M: Moisture Seal
S: 9 Pin D-Sub Connector

For other options, contact factory.

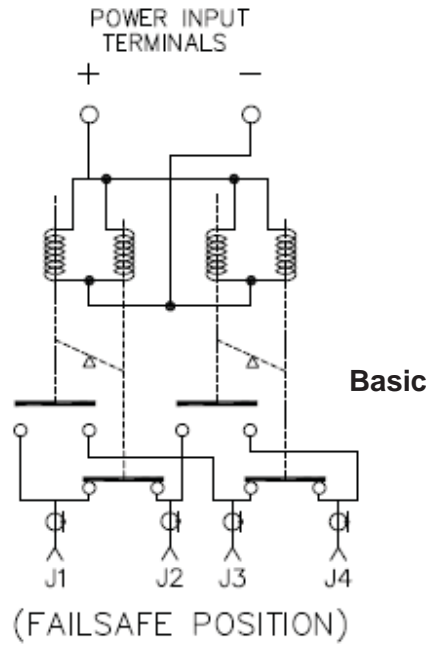
Series CCS-37K/CS-37K
 DC-40 GHz
 Failsafe TRANSFER Coaxial Switch



SCHEMATICS AND MECHANICAL OUTLINE

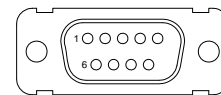


SCHEMATICS AND MECHANICAL OUTLINE



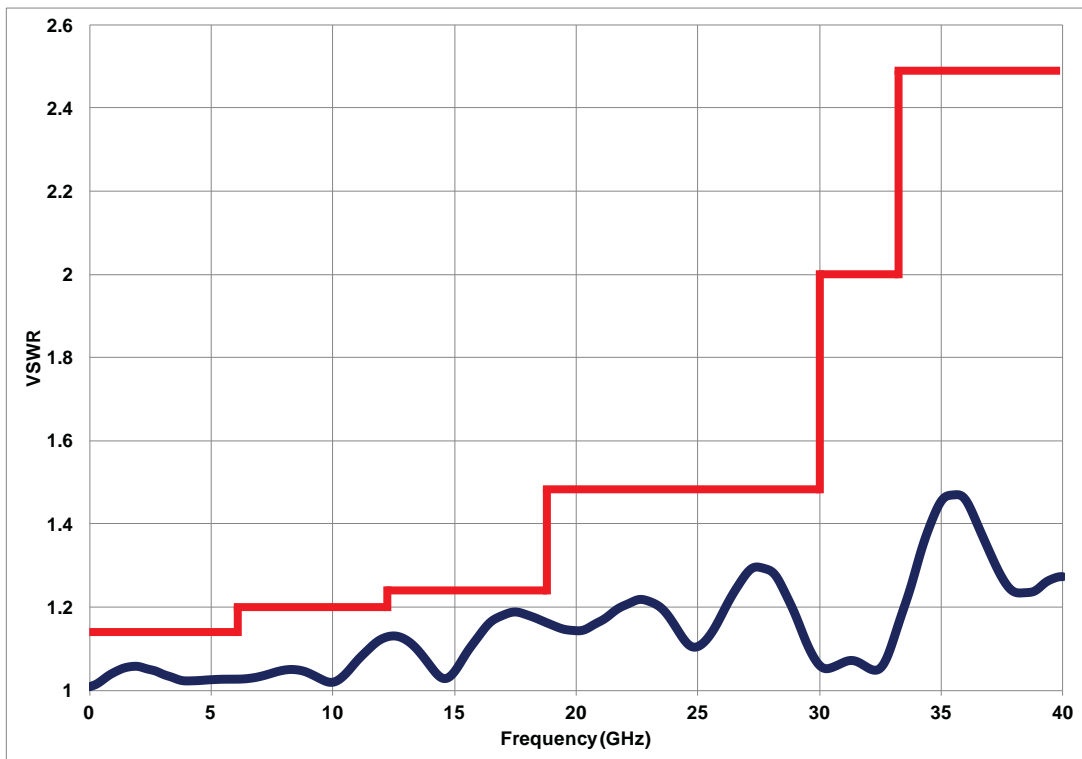
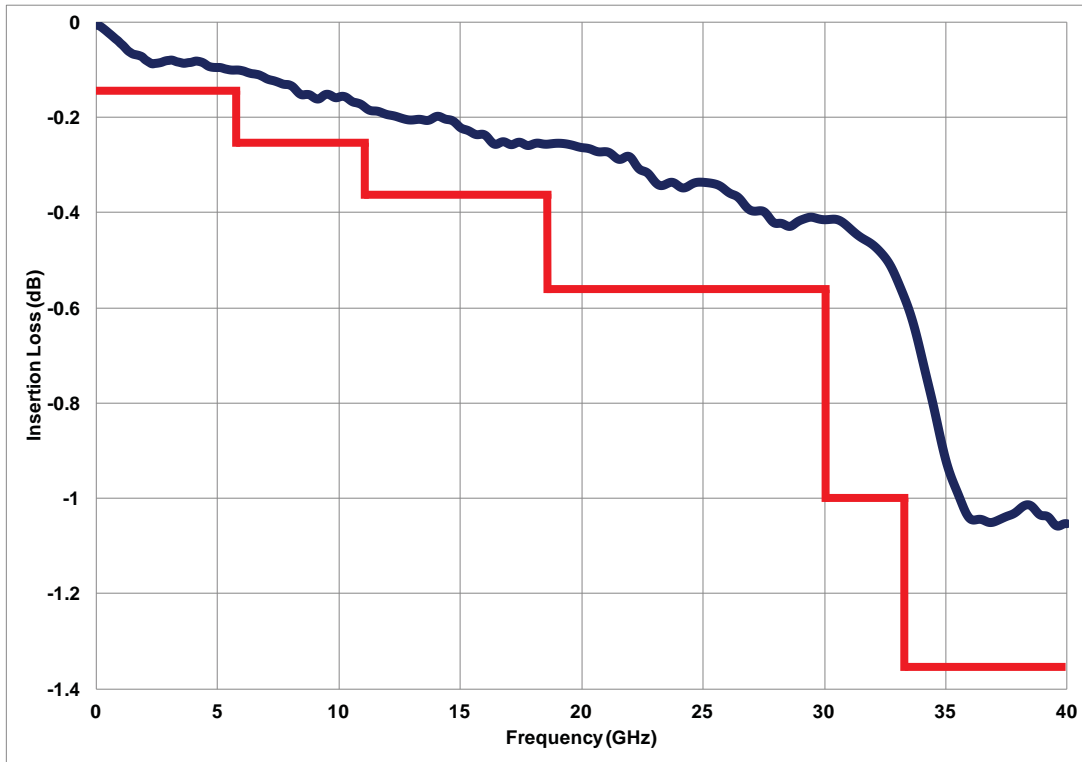
| VOLTAGE | RF CONTINUITY |
|--------------|---------------|
| DE-ENERGIZED | J1-J2 & J3-J4 |
| ENERGIZED | J1-J3 & J2-J4 |

| 9 PIN D-SUB PINOUT FOR FAILSAFE TRANSFER | | | | |
|--|---------|------------|--------|------------------|
| Pin No. | OPTIONS | | | |
| | Basic | Indicators | TTL | Indicators & TTL |
| 1 | + | + | | |
| 2 | - | - | | |
| 3 | | | Common | Common |
| 4 | | | 1 | 1 |
| 5 | | | | |
| 6 | | | Vsw | Vsw |
| 7 | | A | | A |
| 8 | | B | | B |
| 9 | | C | | C |

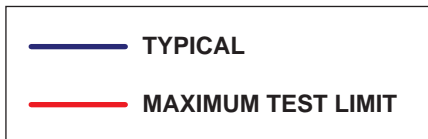
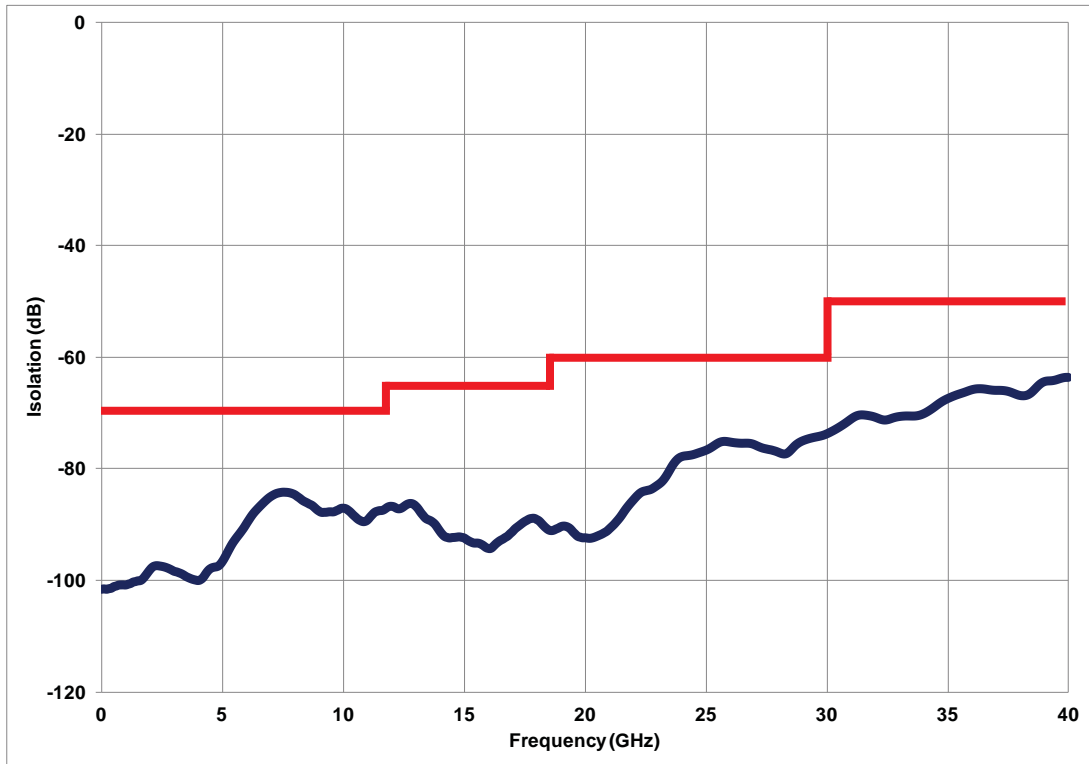


“-S OPTION” 9-PIN D-SUB CONNECTOR (EXAMPLE: CCS-37K10-S)

TYPICAL RF PERFORMANCE CURVES

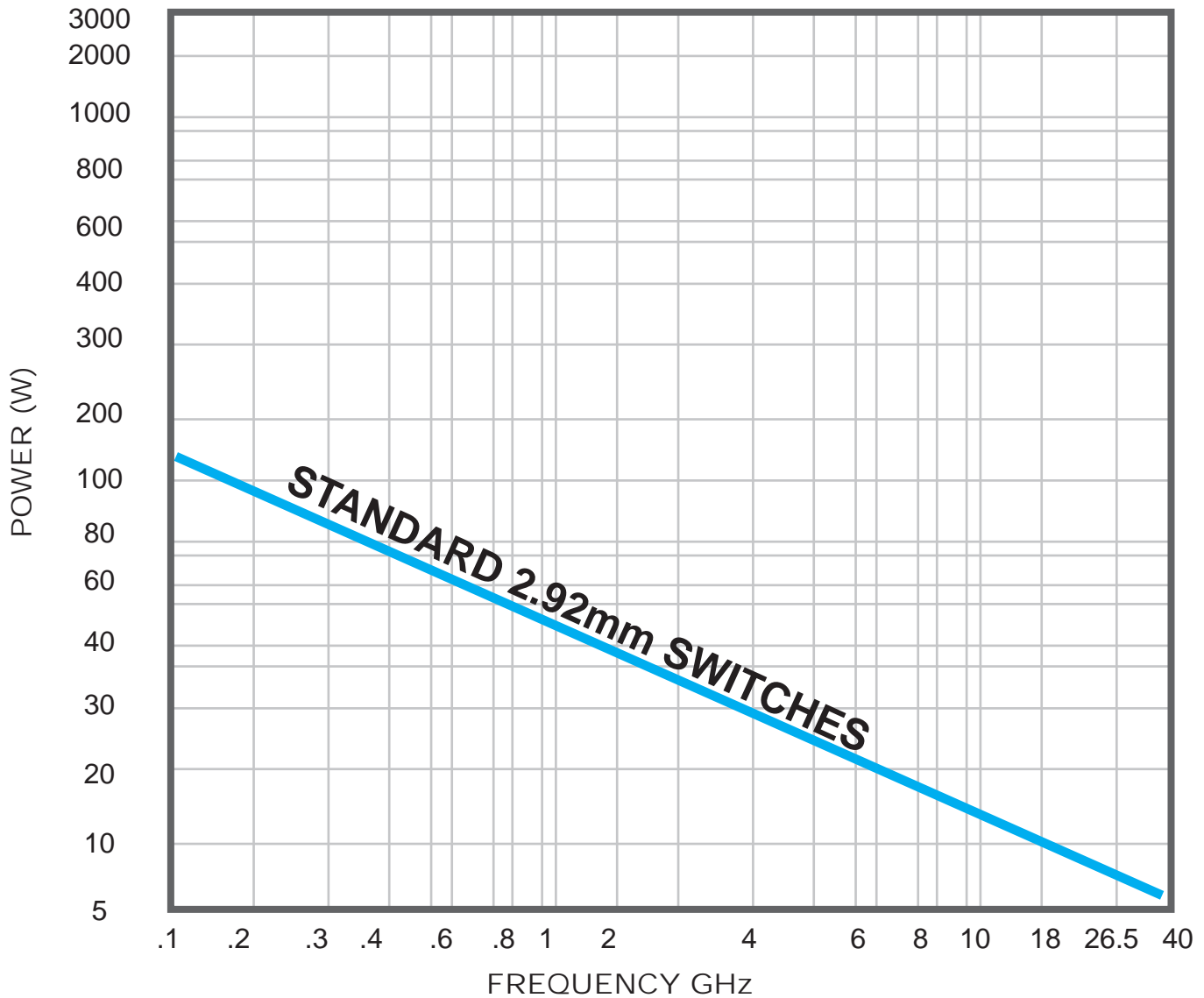


TYPICAL RF PERFORMANCE CURVES



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.