MSC04 Series

Coaxial Switch Rack Mount Matrix System

Highlights:

- 4 SPnT Coax Switch Matrix
- USB & Ethernet Control
- Internal 50Ω Terminations
- SMA Connectors
- RoHS Compliant

Applications:

- Labratories
- Test Equipment Setups
- Control Systems

GENERAL SPECIFICATIONS

Features		
Life Ratings		2,000,000 cycles min.
Characteristic Impedance		50Ω
Switching Time		15 ms max
Temperature Range	**Operation**	0°C to 50°C
	Storage	-15°C to 60°C
Termination Rating		50Ω Terminations, 2W CW max
Power Input		AC 100/240 VAC, 50/60Hz, 75W
Accessories Included		• 1x USB Type A Male to Type B Male • 1x Power Cord

PART NUMBER SCHEME

MSC04

Series
MSC04: Multi-Throw Rack Mount Matrix System

Switch Type[1]
14: SP4T
16: SP6T
18: SP8T

Frequency
B: 26.5 GHz[2]
C: 40 GHz
D: 52 GHz
E: 67 GHz

1. SP8T option only available for 26.5 GHz and 40 GHz box
2. SP8T 26.5 GHz is rated only up to 18 GHz

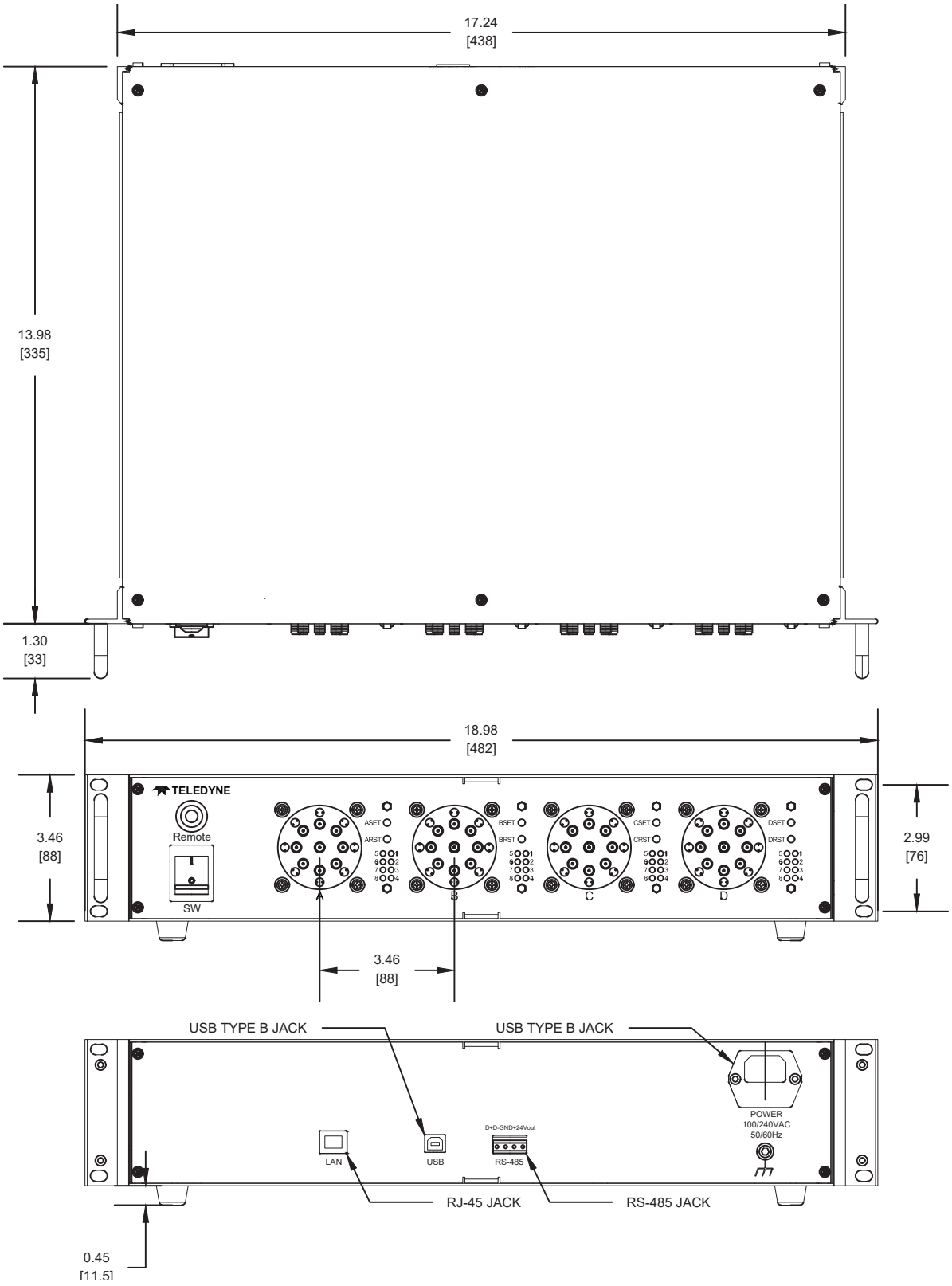
CONFIGURATIONS

Switch Type	Frequency	Description	Part Number
SP4T	DC to 26.5 GHz	4x SP4T Terminated DC to 26.5 GHz	MSC0414B
SP4T	DC to 40 GHz	4x SP4T Terminated DC to 40 GHz	MSC0414C
SP4T	DC to 52 GHz	4x SP4T Terminated DC to 52GHz	MSC0414D
SP4T	DC to 67 GHz	4x SP4T Terminated DC to 67GHz	MSC0414E
SP6T	DC to 26.5 GHz	4x SP6T Terminated DC to 26.5 GHz	MSC0416B
SP6T	DC to 40 GHz	4x SP6T Terminated DC to 40 GHz	MSC0416C
SP6T	DC to 52 GHz	4x SP6T Terminated DC to 52GHz	MSC0416D
SP6T	DC to 67 GHz	4x SP6T Terminated DC to 67GHz	MSC0416E
SP8T	DC to 18 GHz	4x SP8T Terminated DC to 26.5 GHz	MSC0418B
SP8T	DC to 40 GHz	4x SP8T Terminated DC to 40 GHz	MSC0418C

For additional options modifications please contact the factory

MECHANICAL OUTLINE DRAWING

DIMENSIONS ARE SHOWN IN INCHES [MILLIMETERS]



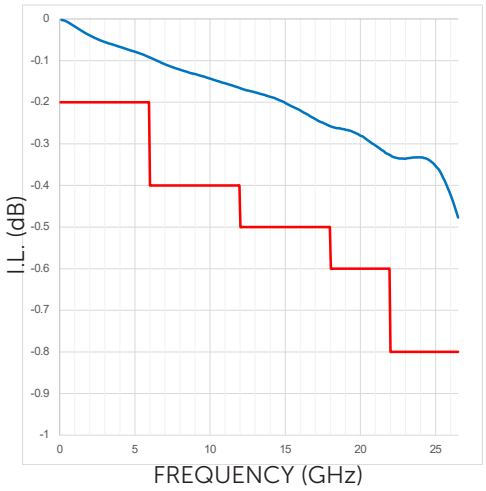
RF PERFORMANCE CHARACTERISTICS & CHARTS

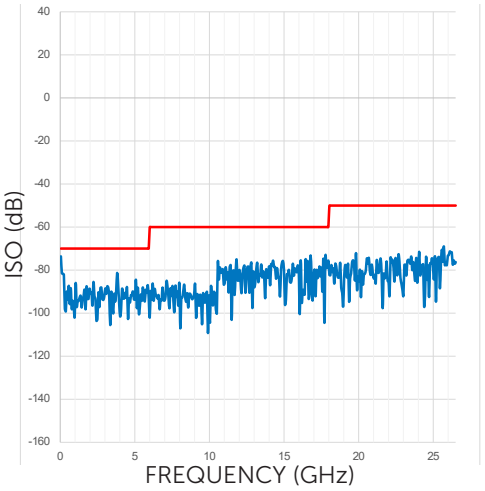
MSC0414B & MSC0416B RF PERFORMANCE CHARACTERISTICS

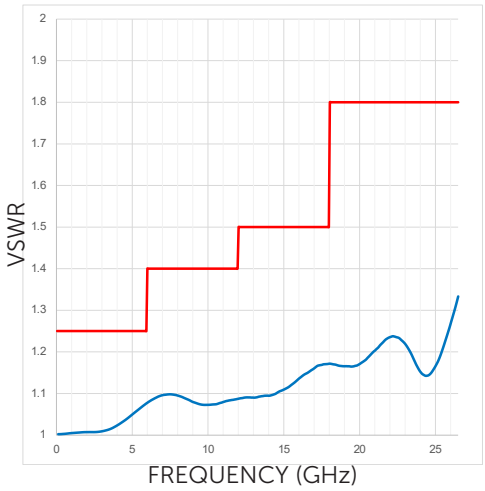
Frequency (GHz)	DC - 3	3 - 6	6 - 12	12 - 18	18 - 20	20 - 22	22 - 26.5
Insertion loss (max)	0.2 dB	0.2 dB	0.4 dB	0.5 dB	0.6 dB	0.6 dB	0.8 dB
Isolation (min)	70 dB	70 dB	60 dB	60 dB	50 dB	50 dB	50 dB
VSWR (max)	1.25:1	1.25:1	1.40:1	1.50:1	1.80:1	1.80:1	1.80:1

MSC0414B & MSC0416B RF PERFORMANCE CHARTS

TYPICAL MAXIMUM TEST LIMIT





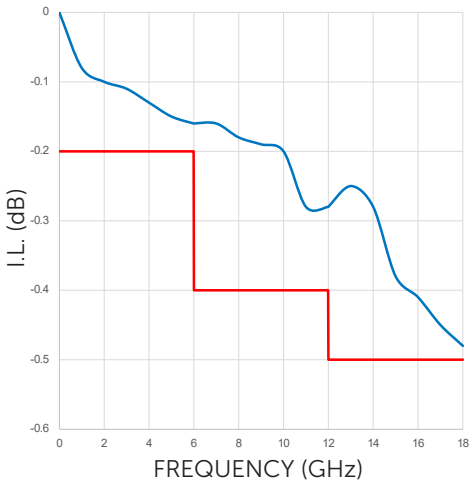


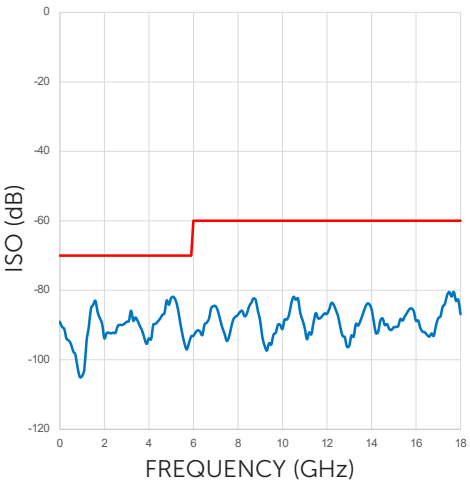
MSC0418B RF PERFORMANCE CHARACTERISTICS

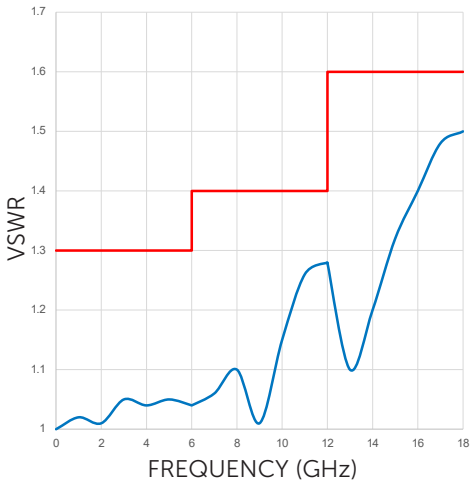
Frequency (GHz)	DC - 6	6 - 12	12 - 18
Insertion loss (max)	0.2 dB	0.4 dB	0.5 dB
Isolation (min)	70 dB	60 dB	60 dB
VSWR (max)	1.30:1	1.40:1	1.60:1

MSC0418B SP8T RF PERFORMANCE CHARTS

TYPICAL MAXIMUM TEST LIMIT







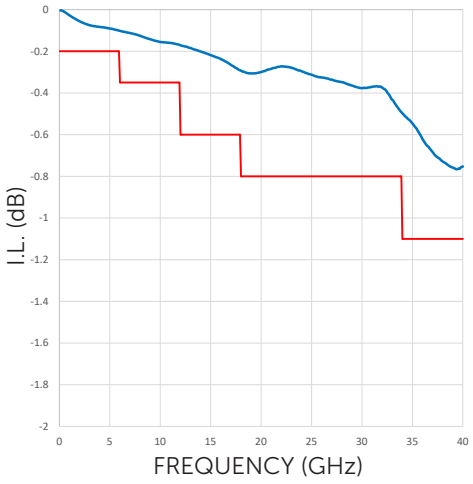
RF PERFORMANCE CHARACTERISTICS & CHARTS (CONTINUED)

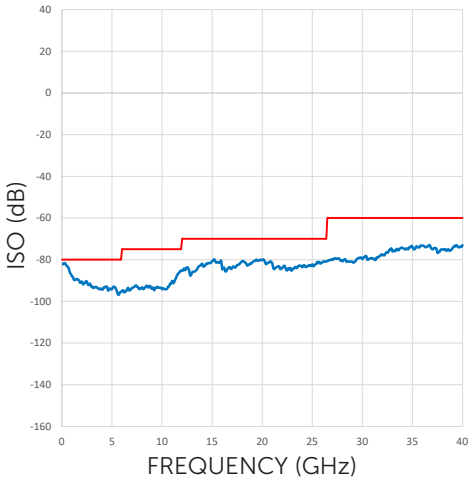
MSC0414C & MSC0416C RF PERFORMANCE CHARACTERISTICS

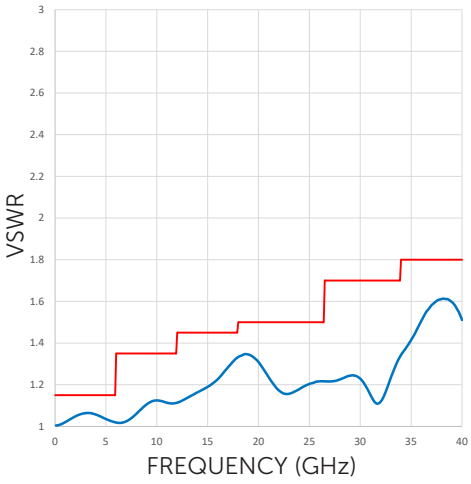
Frequency (GHz)	DC - 6	6 - 12	12 - 18	18 - 26.5	26.5 - 32	32 - 40
Insertion loss (max)	0.2 dB	0.3 dB	0.6 dB	0.8 dB	0.8 dB	1.4 dB
Isolation (min)	80 dB	75 dB	70 dB	70 dB	60 dB	60 dB
VSWR (max)	1.25:1	1.30:1	1.60:1	1.70:1	1.80:1	1.95:1

MSC0414C & MSC0416C RF PERFORMANCE CHARTS

TYPICAL MAXIMUM TEST LIMIT





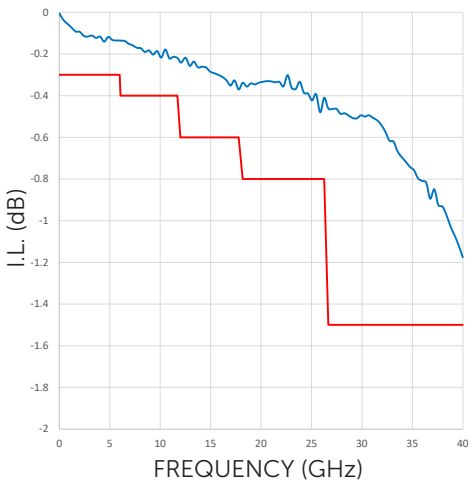


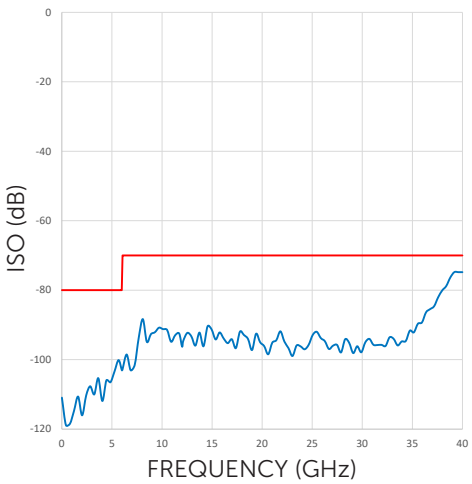
MSC0418C RF PERFORMANCE CHARACTERISTICS

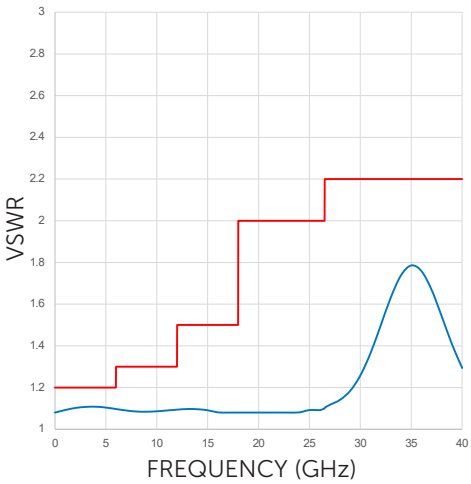
Frequency (GHz)	DC - 6	6 - 12	12 - 18	18 - 26.5	26.5 - 32	32 - 40
Insertion loss (max)	0.3 dB	0.4 dB	0.6 dB	0.8 dB	1.5 dB	1.5 dB
Isolation (min)	80 dB	70 dB	70 dB	70 dB	70 dB	70 dB
VSWR (max)	1.20:1	1.30:1	1.50:1	2.00:1	2.20:1	2.20:1

MSC0418C RF PERFORMANCE CHARTS

TYPICAL MAXIMUM TEST LIMIT







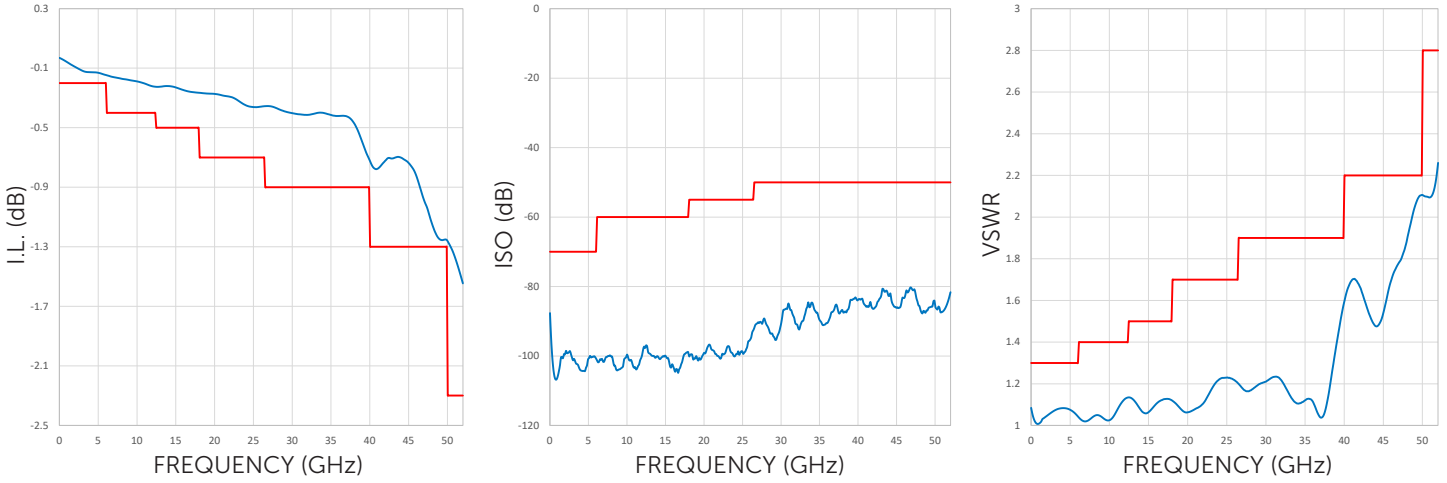
RF PERFORMANCE CHARACTERISTICS & CHARTS (CONTINUED)

MSC0414D & MSC0416D RF PERFORMANCE CHARACTERISTICS

Frequency (GHz)	DC - 6	6 - 12.4	12.4 - 18	18 - 26.5	26.5 - 40	40 - 50	50 - 52
Insertion loss (max)	0.2 dB	0.4 dB	0.5 dB	0.7 dB	0.9 dB	1.3 dB	2.3 dB
Isolation (min)	70 dB	60 dB	60 dB	55 dB	50 dB	50 dB	50 dB
VSWR (max)	1.30:1	1.40:1	1.50:1	1.70:1	1.90:1	2.20:1	2.80:1

MSC0414D & MSC0416D RF PERFORMANCE CHARTS

TYPICAL MAXIMUM TEST LIMIT

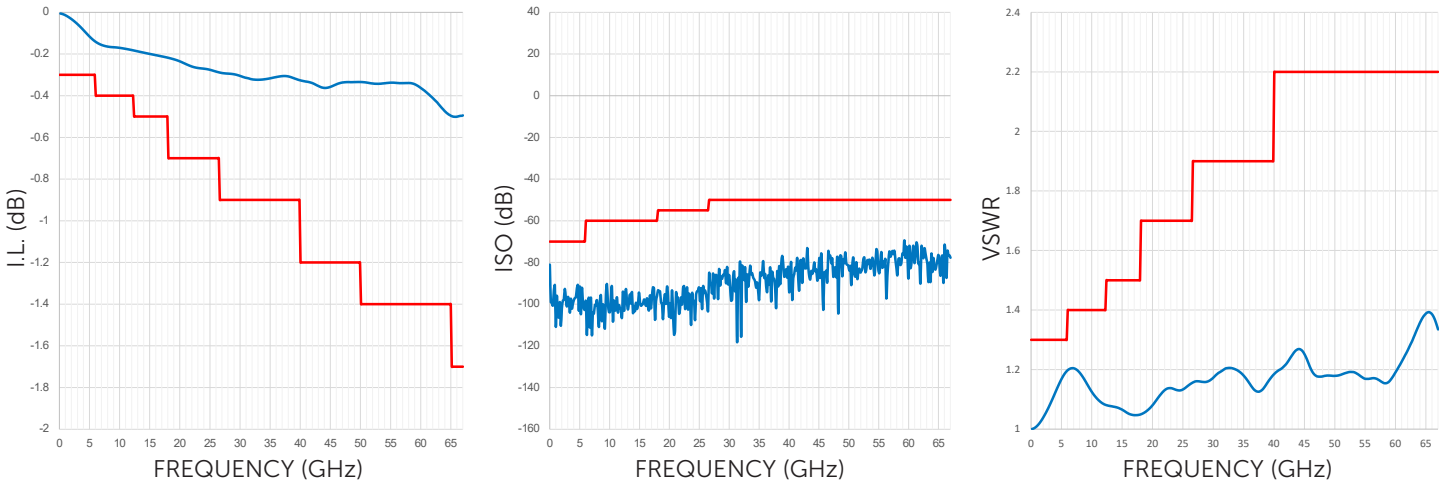


MSC0414E & MSC0416E RF PERFORMANCE CHARACTERISTICS

Frequency (GHz)	DC - 6	6 - 12.4	12.4 - 18	18 - 26.5	26.5 - 40	40 - 50	50 - 65	65 - 67
Insertion loss (max)	0.3 dB	0.2 dB	0.4 dB	0.5 dB	0.6 dB	1.2 dB	1.4 dB	1.7 dB
Isolation (min)	70 dB	60 dB	60 dB	55 dB	50 dB	50 dB	50 dB	50 dB
VSWR (max)	1.30:1	1.40:1	1.50:1	1.70:1	1.90:1	2.20:1	2.20:1	2.20:1

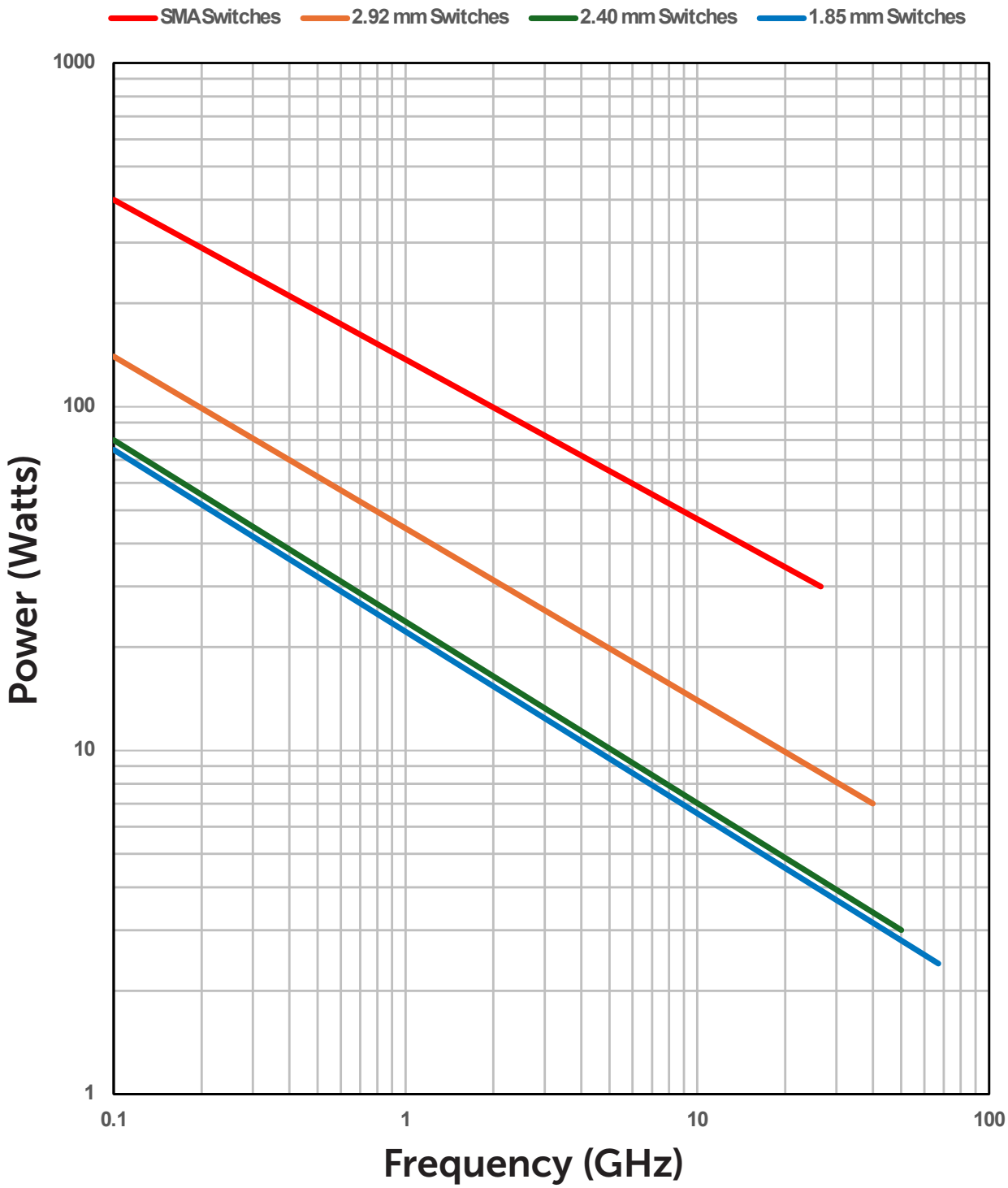
MSC0414E & MSC0416E RF PERFORMANCE CHARTS

TYPICAL MAXIMUM TEST LIMIT



RF POWER HANDLING

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.

SOFTWARE SPECIFICATIONS

SOFTWARE DOWNLOAD:

- Visit www.teledynerelays.com to download software
- Please visit https://form.jotform.com/teledyneade/contact-us-teledyne-relays for support

SYSTEM REQUIREMENTS

Parameter	Requirement	
Interface	USB or Ethernet	
System Requirements	GUI	Windows 7 with LabView 2017
	USB Direct Programming	Linux, Windows 7
	Ethernet	Windows 7

GUI FEATURES:

- Connect via USB
- Runs on LabView 2017