

Technical Characteristics

Lab-Flex® T Series	065T	100T	160T
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Electrical

Frequency, Max (GHz)	50	50	40
Impedance, nominal (Ω)	50	50	50
Velocity of Propagation (%)	79	80	80
Shielding Effectiveness, 18 GHz (dB/ft)	>100	>100	>100
Capacitance (pF/ft)	26	25.4	23.3
Delay (ns/ft), (ns/meter)	1.29, 4.24	1.27, 4.17	1.27, 4.17
Attenuation k1 (db/100ft) @ 23 deg C	0.934	0.534	0.341
Attenuation k2 (db/100ft) @ 23 deg C	0.000602	0.000803	0.000891

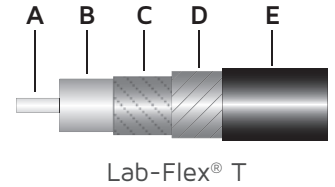
Attenuation (Typical) at any Frequency = k1 x SqRt (FMHz) + k2 x (FMHz)

Mechanical & Environmental

Weight (lbs/100ft), (Kg/100m)	0.412, 0.614	1.10, 1.64	2.47, 3.68
Temperature Range (°C)	-65 to +165	-65 to +165	-65 to +165
Minimum Bend Radius (inch), (mm)	0.250, 6.35	0.350, 8.90	0.500, 12.70

Construction

Inner Conductor	A	Solid SPC	Solid SPC	Solid SPC
Dielectric	B	Foam Fluoropolymer	Foam Fluoropolymer	Foam Fluoropolymer
First Outer Shield	C	SPC Spiral	SPC Spiral	SPC Spiral
Second Outer Shield	D	SPC Round	SPC Round	SPC Round
Jacket (inch O.D.)	E	0.065, FEP	0.100, FEP	0.160, FEP

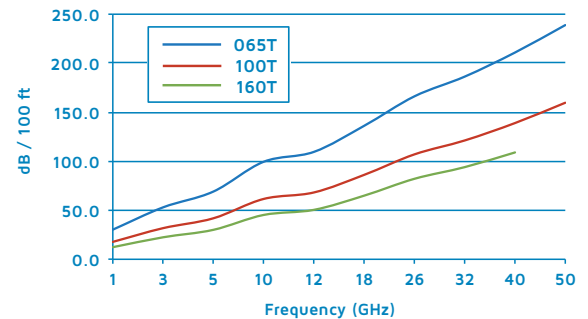


Attenuation (dB/100ft)

GHz	065T	100T	160T
1	30.1	17.7	12.3
3	52.9	31.7	22.4
5	69.0	41.8	30.0
10	99.4	61.5	45.2
12	109.5	68.1	50.4
18	136.1	86.1	64.9
26	166.2	107.0	82.1
32	186.3	121.2	94.0
40	210.9	139.0	109.0
50	238.9	159.7	

Typical Cable Loss at +25° C & Sea Level

Attenuation vs Frequency

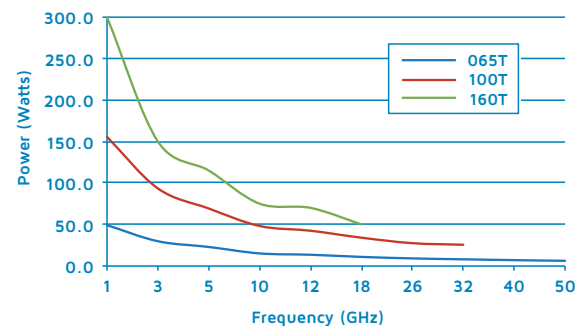


Average Power Rating (Watts)

GHz	065T	100T	160T
1	49.3	155.7	300
3	29.9	93.5	150
5	23.0	69.3	115
10	15.2	48.2	75
12	13.6	42.5	70
18	11.0	34.1	50
26	9.2	27.5	
32	8.1	25.6	
40	7.1	21.9	
50	6.3	19.3	

Power Rating at +25° C & Sea Level

Average Power Rating



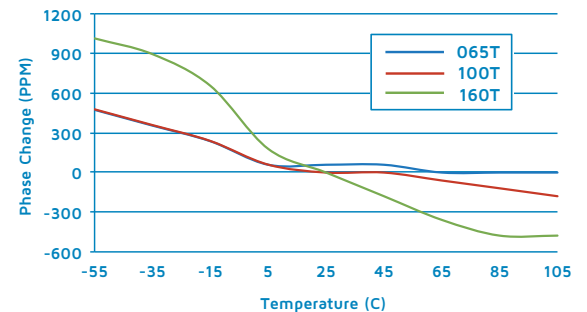
Technical Characteristics

Phase vs. Temperature (PPM)

Temperature (°C)	065T	100T	160T
-55	474	478	1014
-35	355	359	895
-15	237	239	656
5	59	60	179
25	59	0	0
45	59	0	-179
65	0	-60	-358
85	0	-119	-477
105	0	-179	-477

Typical Values

Phase vs. Temperature (°C)

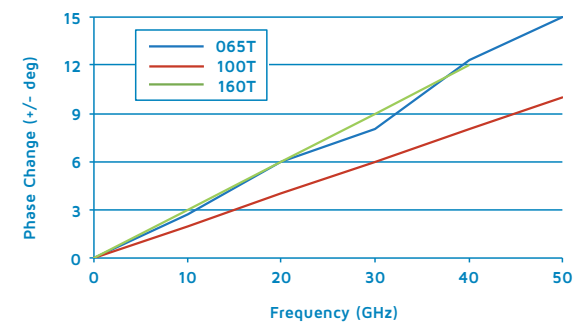


Phase vs. Flexure

Frequency (GHz)	065T (+/-deg)	100T (+/-deg)	160T (+/-deg)
0	0	0	0
10	2.7	2	3
20	6	4	6
30	8	6	9
40	12.3	8	12
50	15	10	15

Typical Values +25° C

Phase vs. Flexure



Cable Code	Connector Code	Series	Gender	Type	C-Nut Style ¹	Body Material ²	Body Finish ³	Loss per GHz	Frequency Max GHz
065T, 100T, 160T	SMS	SMA	Male	Straight	H	SS	P	0.01	18
065T, 100T, 160T	KMS	2.92mm	Male	Straight	H	SS	P	0.01	40
065T, 100T	MMS	2.4mm	Male	Straight	H	SS	P	0.01	50
065T, 100T	SMPFS	SMP	Female	Straight	N/A	Be	G	0.02	40
065T, 100T	SMPFR	SMP	Female	Right Angle	N/A	Be	G	0.02	40
065T, 100T	SMPMFS	SMPM	Female	Straight	N/A	Be	G	0.02	50

¹ C-Nut Style: H=Hex, K-Knurled, HK=Hex Nut & Knurled

² Body Materials: B=Brass, SS=Stainless, Be=Beryllium Copper

³ Body Finish: N=Nickel, S=Silver, G=Gold, P=Passivated

Sex of connector is determined by center conductor

Cable Code	Option Code	Option Description	Option Details
065T, 100T, 160T	+/-2.8 ps ⁴	Phase Match	Standard Tolerance of +/-2.8ps
065T, 100T, 160T	RoHS ⁵	RoHS Compliant	Per EU Directive 2002/95/EC

⁴for phase matched assemblies (+/-2.8ps) is required to be added to the end of standard part number example: SMS-160T-24.0-SMS +/-2.8ps

⁵for RoHS assemblies (RoHS) is required to be added to the end of standard part number example: SMS-160T-24.0-SMS-RoHS

Custom Options:

The above connectors and options represent the most common types used. Smiths Interconnect offers a wide range of cables, connectors and options. If you do not see an option you require please consult the sales department.