

Medium & High Power Fixed Attenuators

5 to 300 Watts Available

Features

- 5 to 50 Watts offered to 18 GHz in Type N, TNC, and SMA
- 5 to 50 watt 7/16 DIN offered to 7.5 GHz. 100 and 200 watt units also shown. All components in the signal path are silver plated for low intermodulation distortion
- BNC up to 20 Watts available
- Other Options available

MIDISCO steps up with an expanded lineup of high power, high frequency attenuators that have widespread use in EW, Communication, and Cellular systems. Applications include new systems, upgrades to existing ones, and for use in Test Laboratories. 18 GHz Type N, SMA, TNC, and 7.5 GHz 7/16 DIN are available to 50 watts. Lower frequency 100 watt units are also available. Consult factory for 300 watt attenuators and for 100 and 200 watt dB values not listed.

Specifications: (All parts listed are Male to Female. Male to Male and Female to Female available.)

Model No.	Frequency (GHz)	VSWR Vs Frequency GHz (Max.)	Available Values (dB)	Power (Watts)	Size (in.) (L X W X H)
SMA					
MDC9040-(dB)	DC-4	1.15	0-10,12,15,20,30,40	5	0-30 dB: 1.2 X Ø 0.61 40 dB: 1.49 X Ø 0.61
MDC9030-(dB)	DC-6	1.20:1	0-10,12,15,20,30,40	5	
MDC9055-(dB)	DC-12.4	DC-4: 1.15:1; 4-8: 1.20:1; 8-12.4: 1.25:1	0-10,12,15,20,30,40	5	
MDC9065-(dB)	DC-18	Same as MDC9055-(dB), 12.4-18 is 1.35:1	0-10,12,15,20,30,40	5	
MDC9131B-(dB)	DC-6	1.20:1	0-10,12,15,20,30,40	10	1.7 X Ø 1.00
MDC8155-(dB)	DC-12.4	1.30:1	0-10,12,15,20,30,40	10	1.7 X Ø 1.00
MDC8165-(dB)	DC-18	1.40:1	0-10,12,15,20,30,40	10	1.7 X Ø 1.00
MDC8255-(dB)	DC-18	DC-6:1.20:1; 6-12.4:1.30:1; 12.4-18: 1.40:1	3-40	20	2.3 X Ø 1.50
MDC9231-(dB)	DC-6	1.20:1	3-40	25	3.79 X 2.65 X 2.65
MDC9255-(dB)	DC-12.4	1.30:1	3-40	25	3.79 X 2.65 X 2.65
MDC9265-(dB)	DC-18	1.40:1	3-40	25	3.79 X 2.65 X 2.65
MDC9331-(dB)	DC-6	1.25:1	3-40	50*	3.79 X 3.50 X 2.65
MDC9355-(dB)	DC-12.4	1.35:1	3-40	50*	3.79 X 3.50 X 2.65
MDC9365-(dB)	DC-18	1.45:1	3-40	50*	3.79 X 3.50 X 2.65
MDC9785-(dB)	DC-3	1.15:1	10,20,30	100*	5.66 X 3.46 X 3.46
MDC9885-(dB)	DC-6	1.35:1	20,30	100*	5.66 X 3.46 X 3.46
TYPE N					
MDC1102X-(dB)	DC-18	DC-6: 1.20:1; DC-12.4: 1.30:1; DC-18: 1.40:1	3,6,10,20,30,40	20	3.04 X Ø 1.49
MDC9231N-(dB)	DC-6	1.20:1	3,6,10,20,30,40	25	4.49 X 2.65 X 2.65
MDC9255N-(dB)	DC-12.4	1.30:1	3,6,10,20,30,40	25	4.49 X 2.65 X 2.65
MDC9265N-(dB)	DC-18	1.40:1	3,6,10,20,30,40	25	4.49 X 2.65 X 2.65
MDC9331N-(dB)	DC-6	1.25	3,6,10,20,30,40	50*	4.49 X 3.50 X 2.65
MDC9355N-(dB)	DC-12.4	1.35	3,6,10,20,30,40	50*	4.49 X 3.50 X 2.65
MDC9365N-(dB)	DC-18	1.45	3,6,10,20,30,40	50*	4.49 X 3.50 X 2.65
MDC9785N-(dB)	DC-1.5	1.15	3,6,10,20,30,40	100*	6.36 X 3.46 X 3.46
MDC9795-(dB)	DC-6	1.35:1	20,30	100*	6.36 X 3.46 X 3.46
MDC9885N-(dB)	DC-3	1.25:1	10,20,30	100*	6.36 X 3.46 X 3.46
MDC9886N-(dB)	DC-1.5	1.35:1	10,20,30,40	200*	8.4 X 6.25 X 6.25
MDC9886AN-(dB)	DC-2.5	1.25:1	30,40	300*	8.4 X 6.25 X 6.25
BNC					
MDC9110B-(dB)	DC-4	1.25:1	1-40	5	1-30 dB: 2.10 X Ø 0.61 40 dB: 2.39 X Ø 0.61
MDC9040B-(dB)	DC-4	DC-2: 1.20:1; 2-4: 1.40:1	1-60	5	2.63 X Ø 0.63
MDC9040BA-(dB)	DC-4	DC-1: 1.30:1; 1-4: 1.60:1	0-40	10	2.60 X Ø 1.00
MDC9040BB-(dB)	DC-4	1.40:1	1-60	10	2.58 X Ø 1.25
MDC9040BC-(dB)	DC-4	1.35:1 at 2-4 GHz, 1.15:1 at 1 GHz	3,6,10,20,30,40	20	3.62 X 1.75

New Products

Model No.	Frequency (GHz)	VSWR Vs Frequency GHz (Max.)	Available Values (dB)	Power (Watts)	Size (in.) (L X W X H)
TNC					
MDC9110T-(dB)	DC-6	1.20:1	0-10, 12, 15, 20, 30, 40	5	0-30dB: 2.06 X Ø 0.61
MDC9088-(dB)	DC-12.4	1.25:1	0-10, 12, 15, 20, 30, 40	5	31-60 dB: 2.25 X Ø 0.61
MDC9088X-(dB)	DC-18	1.35:1	0-10, 12, 15, 20, 30, 40	5	0-40 dB: 2.58 X Ø 1.00
MDC9111T-(dB)	DC-6	1.20:1	0-10, 12, 15, 20, 30, 40	10	40 dB: 2.82 X Ø 1.24
MDC9188-(dB)	DC-12.4	1.30:1	0-10, 12, 15, 20, 30, 40	10	
MDC9188X-(dB)	DC-18	1.40:1	0-10, 12, 15, 20, 30, 40	10	4.66 X 2.65 X 2.65
MDC9112T-(dB)	DC-6	1.20:1	3, 6, 10, 20, 30, 40	25	4.66 X 2.65 X 2.65
MDC9288-(dB)	DC-12.4	1.30:1	3, 6, 10, 20, 30, 40	25	4.66 X 2.65 X 2.65
MDC9288X-(dB)	DC-18	1.40:1	3, 6, 10, 20, 30, 40	25	4.66 X 2.65 X 2.65
MDC9113T-(dB)	DC-6	1.25:1	3, 6, 10, 20, 30, 40	50*	4.66 X 3.50 X 2.65
MDC9388-(dB)	DC-12.4	1.35:1	3, 6, 10, 20, 30, 40	50*	4.66 X 3.50 X 2.65
MDC9388X-(dB)	DC-18	1.45:1	3, 6, 10, 20, 30, 40	50*	4.66 X 3.50 X 2.65
MDC9785T-(dB)	DC-1.5	1.15:1	3, 6, 10, 20, 30, 40	100*	6.53 X 3.46 X 3.46
MDC9785AT-(dB)	DC-2	1.15:1	3, 6, 10, 20, 30, 40	100*	6.53 X 3.46 X 3.46
MDC9885T-(dB)	DC-2.5	1.35:1	30, 40	200*	8.52 X 6.25 X 6.25
7/16 DIN					
MDC9716-(dB)	DC-7.5	1.20:1	1-12, 20, 30, 40	5	2.33 X Ø 1.49
MDC9726-(dB)	DC-7.5	1.30:1	1-10, 20, 30, 40	10	4.49 X 2.65 X 2.65
MDC9736-(dB)	DC-7.5	1.30:1	3, 6, 10, 20, 30, 40	20	4.49 X 2.65 X 2.65
MDC9746-(dB)	DC-7.5	1.30:1	3, 6, 10, 20, 30, 40	25	4.49 X 2.65 X 2.65
MDC9785/716-*	DC-7.5	1.35:1	3, 6, 10, 20, 30, 40	50*	4.49 X 3.50 X 2.65
MDC9785-(dB)	DC-3	1.35:1	10, 20, 30	100*	4.49 X 3.50 X 2.65
MDC9766-(dB)	DC-2.5	1.35:1	30, 40	200*	4.49 X 3.50 X 2.65

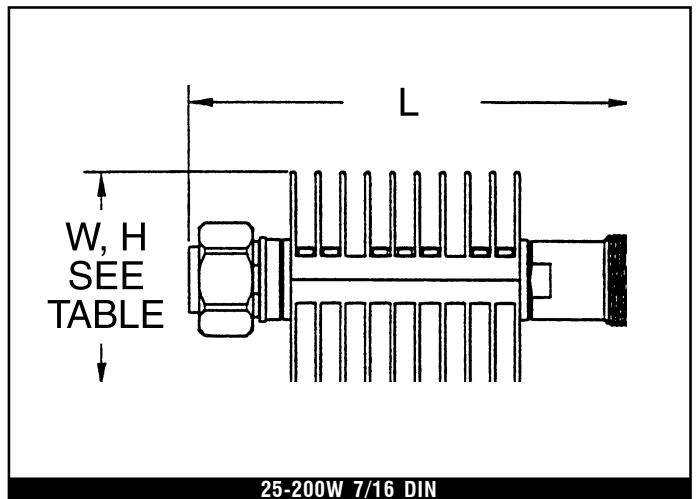
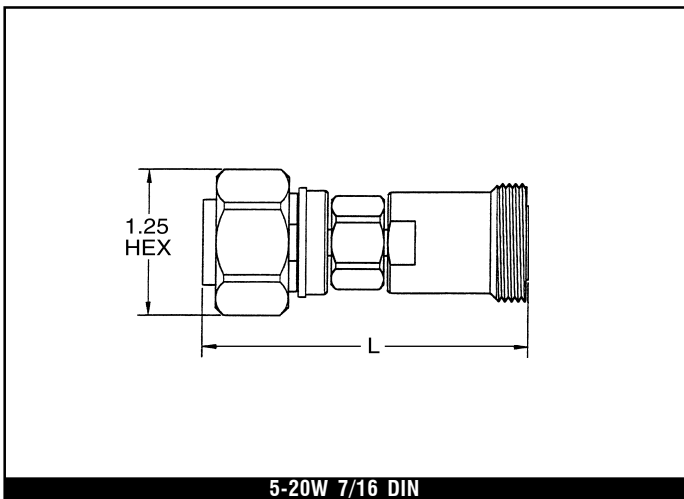
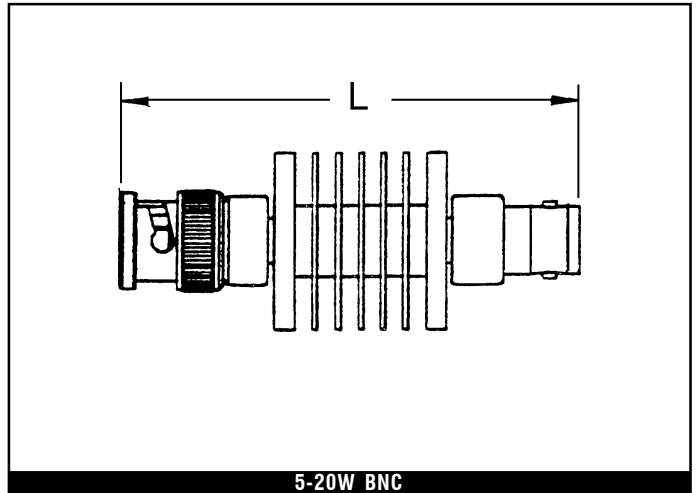
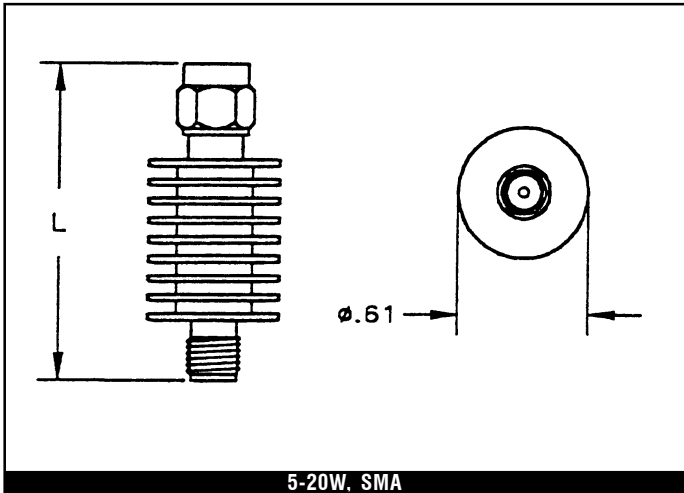
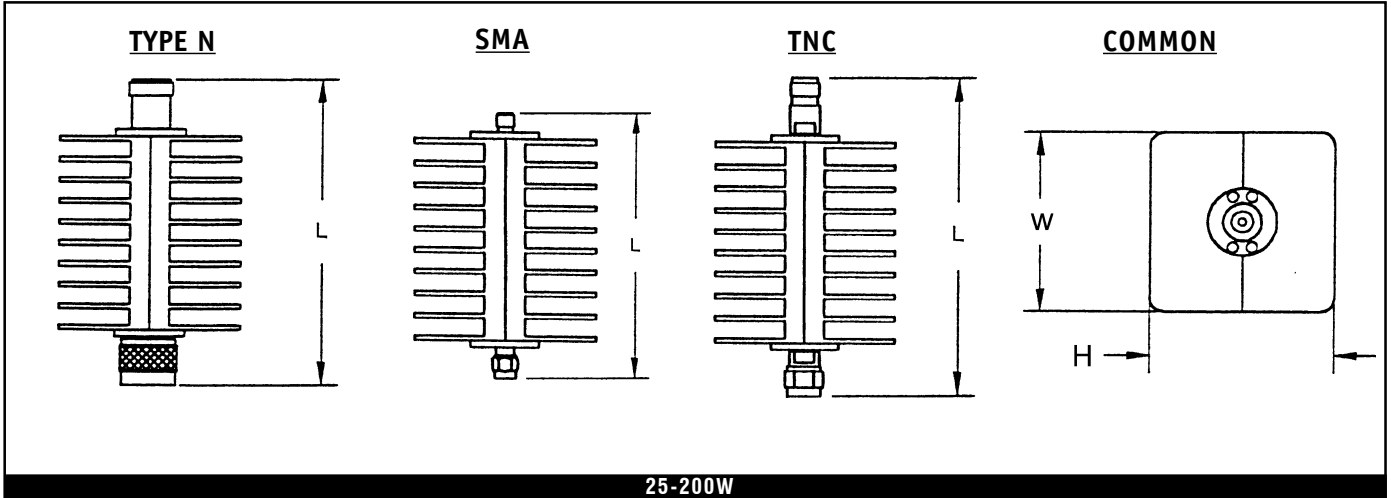
*: Units are uni-directional. The male connector is the input unless otherwise specified at the time of order.

Attenuator Accuracy (+/- dB):

SMA	
5 watts	DC-18 GHz: 0-6 dB: 0.3 dB; 7-20 dB: 0.5 dB; 21-30 dB: 0.75 dB; 31-40 dB: 1.5 dB
10 watts	0-6 dB: 0.3 dB to 12.4 GHz, 0.5 dB to 18 GHz; 7-20 dB: 0.5 dB to 12.4 GHz, 0.7 dB to 18 GHz; 21-40 dB: 0.7 dB to 12.4 GHz, 1.0 dB to 18 GHz
20, 25 watts	3,6 dB: 0.3 dB to 6 GHz, 0.5 dB to 12.4 GHz, 0.75 dB to 18 GHz; 10,20 dB: 0.5 dB to 6 GHz, 0.75 dB to 12.4 GHz, 1.0 dB to 18 GHz; 30,40 dB: 0.75 dB to 6 GHz, 1.0 dB to 12.4 GHz, 1.5 dB to 18 GHz
50 watts	3-6 dB: 0.3 dB to 6 GHz, 0.5 dB to 12.4 GHz, 0.75 dB to 18 GHz; 7-20 dB: 0.5 dB to 6 GHz, 0.75 dB to 12.4 GHz, 1.0 dB to 18 GHz; 21-30 dB: 0.75 dB to 6 GHz; 1.0 dB to 12.4 GHz, 1.25 dB to 18 GHz; 31-40 dB: 1.0 dB to 6 GHz, 1.25 dB to 12.4 GHz, 1.5 dB to 18 GHz
100 watts	1-10 dB: 0.5 dB; 20-40 dB: 0.75 dB
TYPE N	
5 watts	DC-18 GHz: 0-6 dB: 0.3 dB; 7-20 dB: 0.5 dB; 21-30 dB: 0.75 dB; 31-40 dB: 1.5 dB
10 watts	0-6 dB: 0.3 dB to 12.4 GHz, 0.5 dB to 18 GHz; 7-20 dB: 0.5 dB to 12.4 GHz, 0.7 dB to 18 GHz; 21-40 dB: 0.7 dB to 12.4 GHz, 1.0 dB to 18 GHz
20 watts	3,6 dB: 0.3 dB to 6 GHz, 0.5 dB to 12.4 GHz, 0.75 dB to 18 GHz; 10,20 dB: 0.5 dB to 6 GHz; 0.75 dB to 12.4 GHz; 1.0 dB to 18 GHz; 30,40 dB: 0.75 dB to 6 GHz; 1.0 dB to 12.4 GHz; 1.5 dB to 18 GHz
25 watts	3-6 dB: 0.3 dB to 6 GHz, 0.5 dB to 12.4 GHz, 0.75 dB to 18 GHz; 7-20 dB: 0.5 dB to 6 GHz, 0.75 dB to 12.4 GHz, 1.0 dB to 18 GHz; 21-30 dB: 0.75 dB to 6 GHz; 1.0 dB to 12.4 GHz, 1.25 dB to 18 GHz; 31-40 dB: 1.0 dB to 6 GHz; 1.25 dB to 12.4 GHz; 1.5 dB to 18 GHz
50 watts	3-6 dB: 0.3 dB to 6 GHz, 0.5 dB to 12.4 GHz, 0.75 dB to 18 GHz; 7-20 dB: 0.5 dB to 6 GHz, 0.75 dB to 12.4 GHz, 1.0 dB to 18 GHz; 21-30 dB: 0.75 dB to 6 GHz; 1.0 dB to 12.4 GHz, 1.25 dB to 18 GHz; 31-40 dB: 1.0 dB to 6 GHz, 1.25 dB to 12.4 GHz, 1.5 dB to 18 GHz
100 watts	1-10 dB: 0.5 dB; 20-40 dB: 0.75 dB
250 watts	3,6 dB: 0.5 dB to 2.5 GHz, 0.75 dB to 4 GHz; 10-40 dB: 0.75 to 1.5 GHz; 1.5 dB to 4 GHz
TNC	
5 watts	DC-18 GHz: 0-6 dB: 0.3 dB; 7-20 dB: 0.5 dB; 21-30 dB: 0.75 dB; 31-40 dB: 1.5 dB
10 watts	0-6 dB: 0.3 dB to 12.4 GHz, 0.5 dB to 18 GHz; 7-20 dB: 0.5 dB to 12.4 GHz, 0.7 dB to 18 GHz; 21-40 dB: 0.7 dB to 12.4 GHz, 1.0 dB to 18 GHz
20, 25 watts	3,6 dB: 0.3 dB to 6 GHz, 0.5 dB to 12.4 GHz, 0.75 dB to 18 GHz; 10,20 dB: 0.5 dB to 6 GHz, 0.75 dB to 12.4 GHz, 1.0 dB to 18 GHz; 30,40 dB: 0.75 dB to 6 GHz, 1.0 dB to 12.4 GHz, 1.5 dB to 18 GHz
50 watts	3-6 dB: 0.3 dB to 6 GHz, 0.5 dB to 12.4 GHz, 0.75 dB to 18 GHz; 7-20 dB: 0.5 dB to 6 GHz, 0.75 dB to 12.4 GHz, 1.0 dB to 18 GHz; 21-30 dB: 0.75 dB to 6 GHz; 1.0 dB to 12.4 GHz, 1.25 dB to 18 GHz; 31-40 dB: 1.0 dB to 6 GHz, 1.25 dB to 12.4 GHz, 1.5 dB to 18 GHz
100 watts	1-10 dB: 0.5 dB; 20-40 dB: 0.75 dB
250 watts	3-6 dB: 0.5 dB to 1.5 GHz, 0.75 dB to 2.5 GHz; 10-40 dB: .75 dB to 1.5 GHz, 1.5 dB to 2.5 GHz
BNC	
5 watts	1-6 dB: 0.3 dB; 7-20 dB: 0.5 dB; 21-30 dB: 0.75 dB; 31-40 dB: 1.5 dB; 41-60 dB: DC-1 GHz: 3%; 1-4 GHz: 4%
10 watts	DC- 1 GHz: 0.6 dB; 1-4 GHz: 1.0 dB ; 41-60 dB: DC-1 GHz: 3%; 1-4 GHz: 4%
20 watts	3-6 dB: 0.3 dB; 10,20 dB: 0.5 dB; 30,40 dB: 0.75 dB
7/16 DIN	
5, 10 watts	0-6 dB: 0.3 dB; 7-20 dB: 0.5 dB; 21-30 dB: 0.75 dB
20 watts	3,6 dB: 0.3 dB; 10 dB: 0.5 dB; 20 dB: 0.75 dB; 30 dB: 1.0 dB
25, 50 watts	3-6 dB: 0.3 dB; 7-20 dB: 0.75 dB; 21-30 dB: 1.0 dB; 31-40 dB: 1.25 dB
100 watts	3-10 dB: 0.5 dB; 20-40 dB: 0.75 dB
250 watts	3-6 dB: 0.5 dB to 2.5 GHz, 0.75 dB to 4 GHz; 10-40 dB: 0.75 dB to 1.5 GHz; 1.0 dB to 2.5 GHz; 1.5 dB to 4 GHz

Medium & High Power Attenuator Outlines

New Products



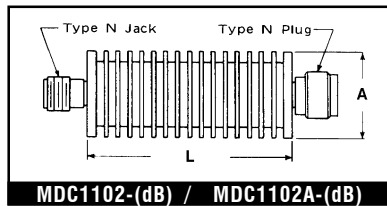
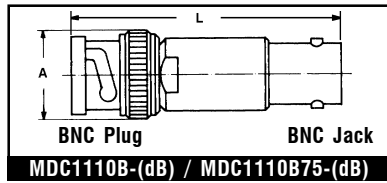
Coaxial Attenuators

Type BNC, N, TNC, 7 mm

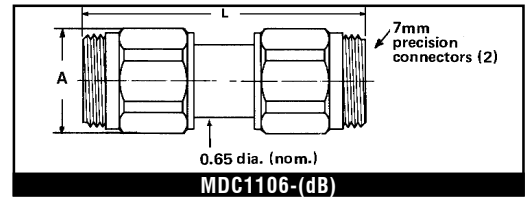
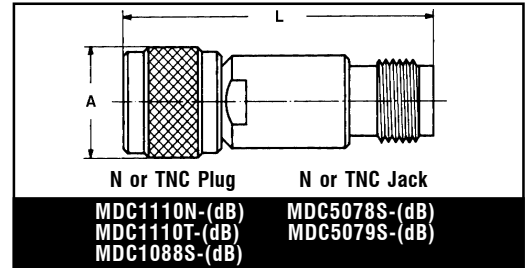
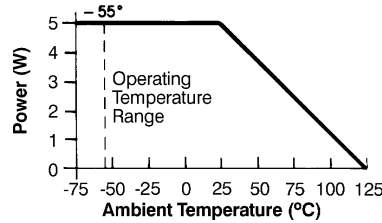
Features

- 50 or 75 Ohm Impedance
- Up to 20W average power (higher available)
- Rugged brass or stainless construction
- All attenuation values available
- Calibration chart at nominal cost
- Low VSWR and attenuation variation
- Good phase tracking
- Meets or exceeds all applicable MIL Specs
- Delivery from stock

MIDISCO attenuators are designed to exceed MIL-A-3933 and MIL-C-39012 where applicable. The high quality models shown here provide the user with a sufficient selection of attenuation values and frequency coverage to properly select for the application. Other attenuation values, different connector types such as SMS, SMC, SSMA and higher power models are available. Calibration charts may be purchased at nominal cost. Double male or female connector combinations are specified by the suffix "M" or "F". All models shown below are in stock. Additional frequency ranges are available.



Typical Temperature vs. Power Derating Chart for MDC5078S and MDC5079S Series



Freq Range (GHz)	DC-500 MHz		DC-2.5		DC-4.0		DC-12.4		DC-18.0	
	Connector Type	BNC	BNC	N	TNC	N	TNC***	N	N	7 mm**
Model	MDC110B75-(dB)	MDC110B-(dB)	MDC1110N-(dB)	MDC1110T-(dB)	MDC1102A-(dB)	MDC1088S-(dB)	MDC5079S-(dB)	MDC1102-(dB)	MDC5078S-(dB)	MDC1106-(dB)
ATTENUATION AND MAXIMUM DEVIATION OVER THE ENTIRE FREQUENCY RANGE IN dB (Deviation is much tighter over narrower frequency segments - contact MIDISCO for data)	1±0.4	1±0.5	1±0.3	1±0.3		1±0.3	1±0.3		1±0.4	1±0.3
	2±0.4	2±0.5	2±0.3	2±0.3		2±0.3	2±0.3		2±0.4	2±0.3
	3±0.4	3±0.5	3±0.3	3±0.3	3±0.75	3±0.3	3±0.3	3±0.75	3±0.3	3±0.3
	4±0.4	4±0.5	4±0.4	4±0.4		4±0.3	4±0.3		4±0.3	4±0.3
	5±0.4	5±0.5	5±0.4	5±0.4		5±0.3	5±0.3		5±0.3	5±0.3
	6±0.4	6±0.5	6±0.4	6±0.4	6±0.75	6±0.3	6±0.3	6±0.75	6±0.3	6±0.3
	7±0.4	7±0.5	7±0.4	7±0.4		7±0.3	7±0.3		7±0.3	7±0.5
	8±0.4	8±0.5	8±0.4	8±0.4		8±0.4	8±0.3		8±0.3	8±0.5
	9±0.4	9±0.5	9±0.4	9±0.4		9±0.4	9±0.3		9±0.3	9±0.5
	10±0.4	10±0.5	10±0.4	10±0.4	10±0.75	10±0.5	10±0.5	10±0.75	10±0.5	10±0.5
	11±0.4	11±0.5	11±0.5	11±0.5		11±0.5	11±0.5		11±0.5	11±0.5
	12±0.4	12±0.5	12±0.5	12±0.5		12±0.6	12±0.5		12±0.5	12±0.5
	13±0.4	13±0.5	13±0.5	13±0.5		13±0.6	13±0.5		13±0.5	13±0.5
	14±0.4	14±0.5	14±0.5	14±0.5		14±0.6	14±0.5		14±0.5	14±0.5
	15±0.4	15±0.5	15±1.0	15±1.0		15±0.6	15±0.75		15±0.5	15±0.5
	16±0.4	16±0.5	16±1.0	16±1.0		16±0.7	16±0.75		16±0.5	16±0.5
17±0.4	17±0.5	17±1.0	17±1.0		17±0.7	17±0.75		17±0.5	17±0.5	
18±0.4	18±0.5	18±1.0	18±1.0		18±0.8	18±0.75		18±0.5	18±0.5	
19±0.4	19±0.5	19±1.0	19±1.0		19±0.9	19±0.75		19±0.5	19±0.5	
20±0.4	20±0.5	20±1.0	20±1.0	20±0.75	20±1.0	20±0.75	20±0.75	20±0.5	20±0.5	
30±0.4	30±0.75	30±1.5	30±1.5	30±1.00	30±1.5	30±0.75	30±1.00	30±1.00	30±0.75	
40±0.4	40±0.75	40±1.5	40±1.5		40±2.0	40±0.75		40±1.00	40±1.5	
		50±2.0	50±2.0	50±2.0		50±2.0	50±0.75		50±1.25	50±1.5
		60±2.5	60±2.5	60±2.5		60±2.5	60±1.20		60±1.50	60±1.5
Length "L" (in.)*	1.43	1.90	1.76	1.98	2.75	1.80	2.04	3.20	2.04	2.12 (thru 30 dB)
"A"(nom.)	0.58 dia.	0.58 dia.	0.82 dia.	0.63 dia.	1.50 dia.	0.63 dia.	0.83 dia.	1.50 dia.	0.83 dia.	0.87 dia.
Material & Finish	Brass - Nickel or Silver plated				Stainless Steel & Black Anodize	Brass - Nickel plated	Stainless Steel	Stainless Steel & Black Anodize	Stainless Steel	
Weight (oz.)	1.40	1.40	2.8	1.40	6.0	1.8	2.6	6.0	2.6	5.0
Impedance (ohms)	75	50	50	50	50	50	50	50	50	50
VSWR (max.) @f (GHz)	DC-0.5 (1.30)	DC-2.0 (1.25)			DC-4.0 (1.20)	DC-4.0 (1.15) 4.0-8.0 (1.25) 8.0-12.4 (1.28)	DC-4.0 (1.15) 4.0-8.0 (1.20) 8.0-12.4 (1.25)	DC-4.0 (1.20) 4.0-8.0 (1.25) 8.0-12.4 (1.35)	DC-4.0 (1.15) 4.0-8.0 (1.20) 8.0-12.4 (1.25) 12.4-18.0 (1.40)	DC-4.0 (1.10) 4.0-12.4 (1.15) 12.4-18 (1.20)
Power	1 Watt Average 1 kW Peak	1 Watt Average 500 W Peak	2 Watts Average; 200 W Peak		20 watts Avg. 1 kW peak @+25°C	2 watts Avg. 500 W peak @+25°C	5 watts Avg. 500 W peak @+25°C	20 watts Avg. 1 kW peak @+25°C	5 watts Avg. 500 W peak @+25°C	2 watts Avg. 250 W peak @+25°C
Oper. Temp. Range	-55° to +125°C		-55° to +100°C		-55° to +125°C					

* Higher values may be slightly longer.

Note: BNC attenuators - DC-4.0 GHz also available; Model MDC1051-(dB)

** 7 mm attenuators are also available in 1 dB increments from 21 to 29 dB with a +/-0.75 dB accuracy, and from 31-60 dB with a +/-1.5 dB accuracy.

*** Available in Stainless Steel version up to 18 GHz (MDC1088SX, etc.) consult MIDISCO.