

ADAPTENUATORS *Attenuators, between different series connectors*

DC to 2 GHz 3, 6, 10, 20 dB 50 Ω



MODEL PREFIX	CONNECTOR TYPE		FREQ. RANGE (MHz) f_L - f_U	ATTENUATION (dB)								VSWR (:1)						INPUT POWER (W) Max.
	CONNECTOR 1	CONNECTOR 2		Flatness								VSWR (:1)						
				Nom.	Typ.	L Max.	Typ.	M Max.	Typ.	U Max.	Typ.	L Max.	Typ.	M Max.	Typ.	U Max.		

SMA to BNC Connectors

SF-BM-3	SMA-Female	BNC-Male	DC-2000	3±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
SF-BM-6	SMA-Female	BNC-Male	DC-2000	6±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
SF-BM-10	SMA-Female	BNC-Male	DC-2000	10±0.3	0.05	0.15	0.10	0.15	0.10	0.20	1.1	1.2	1.1	1.3	1.2	1.25	0.5
SM-BM-3	SMA-Male	BNC-Male	DC-2000	3±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
SM-BM-6	SMA-Male	BNC-Male	DC-2000	6±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
SM-BM-10	SMA-Male	BNC-Male	DC-2000	10±0.3	0.05	0.10	0.10	0.15	0.10	0.20	1.1	1.2	1.1	1.3	1.2	1.25	0.5
SF-BF-3	SMA-Female	BNC-Female	DC-2000	3±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
SF-BF-6	SMA-Female	BNC-Female	DC-2000	6±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
SF-BF-10	SMA-Female	BNC-Female	DC-2000	10±0.3	0.05	0.10	0.10	0.15	0.10	0.20	1.1	1.2	1.1	1.3	1.2	1.25	0.5
SM-BF-3	SMA-Male	BNC-Female	DC-2000	3±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
SM-BF-6	SMA-Male	BNC-Female	DC-2000	6±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
SM-BF-10	SMA-Male	BNC-Female	DC-2000	10±0.3	0.05	0.15	0.10	0.15	0.10	0.20	1.1	1.2	1.1	1.3	1.2	1.25	0.5



TYPE-N to BNC Connectors

NF-BM-3	N-Female	BNC-Male	DC-2000	3±0.3	0.05	0.15	0.10	0.25	0.17	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
NF-BM-6	N-Female	BNC-Male	DC-2000	6±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
NF-BM-10	N-Female	BNC-Male	DC-2000	10±0.3	0.05	0.15	0.10	0.25	0.15	0.30	1.1	1.2	1.1	1.3	1.2	1.25	0.5
NM-BM-3	N-Male	BNC-Male	DC-2000	3±0.3	0.10	0.20	0.20	0.25	0.20	0.30	1.1	1.2	1.1	1.2	1.2	1.30	0.5
NM-BM-6	N-Male	BNC-Male	DC-2000	6±0.3	0.05	0.15	0.15	0.25	0.20	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
NM-BM-10	N-Male	BNC-Male	DC-2000	10±0.3	0.05	0.15	0.15	0.25	0.20	0.25	1.1	1.2	1.1	1.3	1.2	1.25	0.5
NF-BF-3	N-Female	BNC-Female	DC-2000	3±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
NF-BF-6	N-Female	BNC-Female	DC-2000	6±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
NF-BF-10	N-Female	BNC-Female	DC-2000	10±0.3	0.05	0.15	0.10	0.15	0.10	0.20	1.1	1.2	1.1	1.3	1.2	1.25	0.5
NM-BF-3	N-Male	BNC-Female	DC-2000	3±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
NM-BF-6	N-Male	BNC-Female	DC-2000	6±0.3	0.05	0.15	0.10	0.20	0.15	0.25	1.1	1.2	1.1	1.2	1.2	1.25	0.5
NM-BF-10	N-Male	BNC-Female	DC-2000	10±0.3	0.05	0.15	0.15	0.25	0.20	0.30	1.1	1.2	1.1	1.2	1.2	1.25	0.5

TYPE-N to SMA Connectors

NM-SF-20	N-Male	SMA-Female	DC-3000	20±0.3	0.05	0.15	0.10	0.30	0.60	1.0	1.01	1.20	1.04	1.20	1.09	1.25	0.5
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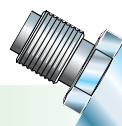
L = low range (DC to 500 MHz)

M = mid range (DC to 1000 MHz)

U = upper range (DC to f_U MHz)

What is an Adaptenuator? Our new line of Adaptenuators is simply an attenuator with different connector types at the input and output. The benefits of using Mini-Circuits Adaptenuators are, improved interface matching and eliminating the hassle of working with, misplacing and stocking all different types of adapters to fit your attenuators. Based on the **attenuation** value you require you can now order the attenuator you need with the **connectors** you need. These are the new Adaptenuators from Mini-Circuits, designed with an ultra wideband frequency response, usable to 4 GHz with a super flat frequency response. Durably built with solid unibody construction.





ATTENUATORS, ELECTRONIC

3.5 dB to 40 dB 50 Ω



MODEL PREFIX	FREQUENCY RANGE (MHz)	INSERTION LOSS (dB) @ 15 V control voltage Typ. Max.	ATTENUATION (dB) @ 0 V control voltage Typ. Min.	IP3 (dBm) Typ.	RETURN LOSS (dB) Typ.	POWER SUPPLY Voltage (V) Current (mA) Max.	CONTROL Voltage (V) Current (mA) Max.
	Min. Max.						

VOLTAGE VARIABLE 10 MHz to 2500 MHz

ZX73-2500M	10-2500	3.3 6.2	40 25	+43	20	+3 to +5 5	0-17 30
ZX73-2500	10-2500	3.3 6.2	40 25	+43	20	+3 to +5 5	0-17 30

MODEL PREFIX	FREQUENCY (MHz)	PRIMARY ATTENUATION STEPS (dB)	ATTENUATION (dB)	VSWR (:1) Max.
	f_L f_U	#1 @TTL CONTROL PORT #2 #3	Typ. Max. Attenuation Above insertion loss at (1,1,1) state Insertion loss at (0,0,0) state	L M U

DIGITAL STEP PIN DIODE 10 MHz TO 1000 MHz

ZFAT-R512	10 1000	0.5±0.18	1±0.25	2±0.25	3.5 4.0	1.6 1.4 1.5
ZFAT-124	10 1000	1±0.25	2±0.25	4±0.3	7.0 4.0	1.6 1.4 1.5
ZFAT-3610	10 1000	3±0.3	6±0.4	10±0.4	19.0 4.0	1.6 1.4 1.5
ZFAT-4816	10 1000	4±0.4	8±0.4	16±0.5	28.0 4.0	1.6 1.4 1.5
ZFAT-51020	10 1000	5±0.4	10±0.4	20±0.5	35.0 4.0	1.6 1.4 1.5
ZSAT-31R5	10 1000	(1) 0.5±0.18 (4) 4±0.3	SIX CONTROL PORTS (2) 1±0.25 (5) 8±0.4	(3) 2±0.25 (6) 16±0.5	LOGIC STATE (1,1,1,1,1,1) (0,0,0,0,0,0) 31.5 7.0	2.0 1.5 1.6

L = low range (10 to 100 MHz)

M = mid range (100 to 500 MHz)

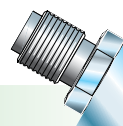
U = upper range (500 to 1000 MHz)

MODEL PREFIX	FREQUENCY RANGE (MHz)	TOTAL STEP ATTENUATION (dB)	LOWEST ATTENUATION STEP (dB)	INPUT IP3 (dBm)	SINGLE POWER SUPPLY Typ. (V _{DD})	DUAL POWER SUPPLY Typ. (V _{DD} , V _{SS})	SWITCHING SPEED (μSec.)	INPUT PWR. @ 0.2 dB COMPRESSION Typ. dBm	CONTROL INTERFACE	No. OF BITS
		Typ.	Typ.	Typ.			Typ.			

DIGITAL STEP CMOS DC-2400 MHz

ZX76-31R5-PN	DC-2400	31.5	0.5	+52	—	+3 V, -3 V	1.0	+24	Parallel	6
ZX76-31R5-PP	DC-2400	31.5	0.5	+52	+3 V	—	1.0	+24	Parallel	6
ZX76-31R5-SN	DC-2400	31.5	0.5	+52	—	+3 V, -3 V	1.0	+24	Serial	6
ZX76-31R5-SP	DC-2400	31.5	0.5	+52	+3 V	—	1.0	+24	Serial	6
ZX76-31-PN	DC-2400	31.0	1.0	+52	—	+3 V, -3 V	1.0	+24	Parallel	5
ZX76-31-PP	DC-2400	31.0	1.0	+52	+3 V	—	1.0	+24	Parallel	5
ZX76-31-SN	DC-2400	31.0	1.0	+52	—	+3 V, -3 V	1.0	+24	Serial	5
ZX76-31-SP	DC-2400	31.0	1.0	+52	+3 V	—	1.0	+24	Serial	5
ZX76-15R5-PN	DC-4000	15.5	0.5	+52	—	+3 V, -3 V	1.0	+24	Parallel	5
ZX76-15R5-PP	DC-4000	15.5	0.5	+52	+3 V	—	1.0	+24	Parallel	5
ZX76-15R5-SN	DC-4000	15.5	0.5	+52	—	+3 V, -3 V	1.0	+24	Serial	5
ZX76-15R5-SP	DC-4000	15.5	0.5	+52	+3 V	—	1.0	+24	Serial	5





ATTENUATORS, FIXED

DC to 6 GHz, 1 dB to 30 dB
General Response / DC Passing



VAT Case FF704
SMA

VAT Case DC1066
SMA (2W)

UNAT Case FF779
Type N

MODEL PREFIX	FREQ. RANGE (MHz) f_L - f_U	ATTENUATION (dB)					VSWR (:1) TYP.			INPUT POWER (W) Max.
		Nom.	L Typ.	FLATNESS		Total Band Typ.	L Typ.	M Typ.	U Typ.	
				M Typ.	U Typ.					
SMA (VAT) 0.5W 1W 50 Ω										
VAT-1	DC-6000	1±0.3	0.20	0.20	0.20	0.60	1.05	1.10	1.40	1.0
VAT-2	DC-6000	2±0.3	0.20	0.20	0.25	0.65	1.05	1.20	1.50	1.0
VAT-3	DC-6000	3±0.3	0.20	0.15	0.15	0.45	1.05	1.15	1.40	1.0
VAT-4	DC-6000	4±0.3	0.20	0.15	0.20	0.55	1.05	1.15	1.45	1.0
VAT-5	DC-6000	5±0.3	0.10	0.10	0.10	0.25	1.05	1.15	1.40	1.0
VAT-6	DC-6000	6±0.3	0.15	0.10	0.20	0.45	1.05	1.15	1.50	1.0
VAT-7	DC-6000	7±0.3	0.10	0.10	0.10	0.10	1.05	1.15	1.40	1.0
VAT-8	DC-6000	8±0.3	0.10	0.10	0.15	0.20	1.05	1.20	1.60	1.0
VAT-9	DC-6000	9±0.3	0.10	0.10	0.10	0.10	1.05	1.15	1.60	1.0
VAT-10	DC-6000	10±0.3	0.10	0.20	0.15	0.35	1.05	1.20	1.90	1.0
VAT-12	DC-6000	12±0.3	0.10	0.10	0.10	0.30	1.05	1.20	1.65	1.0
VAT-15	DC-6000	15±0.3	0.20	0.30	0.30	0.80	1.05	1.40	1.75	1.0
VAT-20	DC-6000	20±0.3	0.45	0.55	0.35	0.85	1.05	1.20	1.30	0.5
VAT-30	DC-6000	30±0.3	1.10	0.70	0.35	1.30	1.05	1.15	1.25	0.5

SMA (VAT) 2W 50 Ω

VAT-1W2	DC-6000	1 $\pm$ 0.3	0.20	0.20	0.20	0.60	1.10	1.30	1.55	2.0
VAT-2W2	DC-6000	2 $\pm$ 0.3	0.20	0.20	0.25	0.65	1.10	1.30	1.50	2.0
VAT-3W2	DC-6000	3 $\pm$ 0.3	0.20	0.15	0.15	0.45	1.05	1.30	1.45	2.0
VAT-4W2	DC-6000	4 $\pm$ 0.3	0.20	0.15	0.20	0.55	1.05	1.30	1.50	2.0
VAT-5W2	DC-6000	5 $\pm$ 0.3	0.20	0.10	0.15	0.35	1.10	1.40	1.65	2.0
VAT-6W2	DC-6000	6 $\pm$ 0.3	0.20	0.10	0.20	0.45	1.10	1.30	1.50	2.0
VAT-7W2	DC-6000	7 $\pm$ 0.3	0.25	0.15	0.10	0.45	1.10	1.25	1.40	2.0
VAT-8W2	DC-6000	8 $\pm$ 0.3	0.15	0.10	0.15	0.25	1.10	1.25	1.60	2.0
VAT-9W2	DC-6000	9 $\pm$ 0.3	0.15	0.10	0.10	0.15	1.10	1.15	1.50	2.0
VAT-10W2	DC-6000	10 $\pm$ 0.3	0.10	0.20	0.15	0.35	1.15	1.35	1.60	2.0
VAT-12W2	DC-6000	12 $\pm$ 0.3	0.10	0.15	0.10	0.30	1.20	1.50	1.70	2.0
VAT-15W2	DC-6000	15 $\pm$ 0.3	0.20	0.30	0.30	0.80	1.30	1.60	1.75	2.0
VAT-20W2	DC-6000	20 $\pm$ 0.3	0.50	0.45	0.20	1.05	1.35	1.70	1.95	2.0
VAT-30W2	DC-6000	30 $\pm$ 0.3	0.70	0.45	0.20	1.30	1.25	1.45	1.60	2.0

VAT Models: L = low range (DC to 3000 MHz)

M = mid range (3000 to 5000 MHz)

U = upper range (5000 to 6000 MHz)

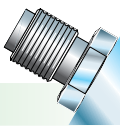
TYPE-N (UNAT) 0.5W 1W 50 Ω

UNAT-1	DC-6000	1 $\pm$ 0.3	0.20	0.15	0.10	0.45	1.10	1.40	1.0	1.0
UNAT-2	DC-6000	2 $\pm$ 0.3	0.20	0.25	0.15	0.50	1.07	1.22	1.50	1.0
UNAT-3	DC-6000	3 $\pm$ 0.3	0.20	0.10	0.10	0.35	1.05	1.22	1.50	1.0
UNAT-4	DC-6000	4 $\pm$ 0.3	0.15	0.15	0.10	0.40	1.05	1.10	1.50	1.0
UNAT-5	DC-6000	5 $\pm$ 0.3	0.15	0.15	0.10	0.35	1.05	1.10	1.50	1.0
UNAT-6	DC-6000	6 $\pm$ 0.3	0.15	0.15	0.15	0.40	1.05	1.20	1.50	1.0
UNAT-7	DC-6000	7 $\pm$ 0.3	0.10	0.10	0.15	0.20	1.05	1.10	1.50	1.0
UNAT-8	DC-6000	8 $\pm$ 0.3	0.10	0.10	0.10	0.10	1.05	1.10	1.50	1.0
UNAT-9	DC-6000	9 $\pm$ 0.3	0.15	0.10	0.10	0.15	1.05	1.10	1.50	1.0
UNAT-10	DC-6000	10 $\pm$ 0.3	0.10	0.20	0.20	0.40	1.15	1.20	1.50	1.0
UNAT-12	DC-6000	12 $\pm$ 0.3	0.15	0.20	0.15	0.35	1.15	1.20	1.80	1.0
UNAT-15	DC-6000	15 $\pm$ 0.3	0.20	0.35	0.20	0.60	1.15	1.20	1.70	1.0
UNAT-20	DC-6000	20 $\pm$ 0.3	0.45	0.45	0.40	0.75	1.15	1.20	1.30	0.5
UNAT-30	DC-6000	30 $\pm$ 0.3	1.20	0.70	0.40	2.30	1.04	1.07	1.10	0.5

UNAT Models: L = low range (DC to 3000 MHz)

M = mid range (3000 to 4500 MHz)

U = upper range (4500 to 6000 MHz)



HAT Case FF747
BNC



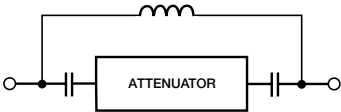
NAT Case FF57
Type N

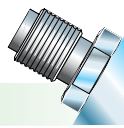
MODEL PREFIX	FREQ. RANGE (MHz) f_L - f_U	ATTENUATION (dB)					VSWR (:1) TYP.			INPUT POWER (W) Max.
		Nom.	L Typ.	FLATNESS M Typ.	U Typ.	Total Band Typ.	L Typ.	M Typ.	U Typ.	
BNC (HAT) 0.5 W 1 W 50 Ω										
HAT-1	DC-2000	1±0.2	0.05	0.10	0.15	Max. 0.25	1.05	1.10	1.10	1.0
HAT-2	DC-2000	2±0.2	0.05	0.10	0.15	0.25	1.05	1.10	1.10	1.0
HAT-3	DC-2000	3±0.2	0.05	0.10	0.15	0.25	1.05	1.10	1.10	1.0
HAT-4	DC-2000	4±0.2	0.05	0.10	0.15	0.25	1.05	1.10	1.10	1.0
HAT-5	DC-2000	5±0.2	0.05	0.10	0.15	0.25	1.05	1.10	1.10	1.0
HAT-6	DC-2000	6±0.2	0.05	0.10	0.15	0.25	1.05	1.10	1.10	1.0
HAT-7	DC-2000	7±0.2	0.05	0.10	0.15	0.25	1.05	1.10	1.10	1.0
HAT-8	DC-2000	8±0.2	0.05	0.10	0.15	0.25	1.05	1.10	1.10	1.0
HAT-9	DC-2000	9±0.2	0.05	0.10	0.15	0.25	1.05	1.10	1.10	1.0
HAT-10	DC-2000	10±0.2	0.05	0.10	0.10	0.25	1.05	1.10	1.10	1.0
HAT-12	DC-2000	12±0.2	0.05	0.10	0.10	0.25	1.05	1.10	1.15	1.0
HAT-15	DC-2000	15±0.2	0.05	0.10	0.20	0.30	1.05	1.10	1.15	1.0
HAT-20	DC-2000	20±0.2	0.05	0.15	0.25	0.40	1.05	1.10	1.15	0.5
HAT-30	DC-2000	30±0.2	0.30	0.60	0.80	1.30	1.05	1.10	1.15	1.0
BNC (HAT) 0.5 W 75 Ω										
HAT-3-75	DC-2000	3±0.2	0.05	0.10	0.15	0.30	1.05	1.15	1.22	0.5
HAT-6-75	DC-2000	6±0.2	0.05	0.10	0.15	0.3	1.03	1.05	1.15	0.5
HAT-10-75	DC-2000	10±0.2	0.05	0.05	0.05	0.15	1.03	1.04	1.10	0.5
HAT-15-75	DC-2000	15±0.2	0.05	0.05	0.05	0.15	1.03	1.04	1.10	0.5
HAT-20-75	DC-2000	20±0.2	0.05	0.05	0.05	0.15	1.03	1.04	1.10	0.5

HAT Models: L = low range (DC to 500 MHz) M = mid range (DC to 1000 MHz) U = upper range (DC to 2000 MHz)

MODEL PREFIX	FREQUENCY (MHz)	ATTENUATION (dB)		VSWR (:1)	POWER (mW)	DC CURRENT (AMPS)	DC BREAKDOWN (Volts)
		Nom.	Flatness, Max.				
TYPE-N (NAT) DC Passing 50 Ω							
NAT-3DC	200-2500	3±0.5	±0.8	1.25	500	1	60
NAT-6DC	200-2500	6±0.5	±0.8	1.40	375	1	60
NAT-10DC	200-2500	10±0.3	±1.0	1.60	600	4	125
NAT-20DC	500-2300	20±0.5	±1.2	1.80	400	4	125
NAT-3DC-1A	650-3500	3±0.5	±0.7	1.6	1000	1	50
NAT-3DC-2A	1000-3500	3±0.5	±0.8	1.7	1000	2	50
NAT-3DC-3A	1700-3300	3±0.7	±0.7	1.6	1000	3	50
NAT-6DC-1A	600-4000	6±0.7	±0.8	1.7	1000	1	50
NAT-6DC-2A	1000-3750	6±0.7	±0.8	1.6	1000	2	50
NAT-6DC-3A	1700-3500	6±0.5	±0.8	1.5	1000	3	50
NAT-10DC-1A	600-4000	10±0.6	±0.6	1.6	1000	1	50
NAT-10DC-1.5A	1000-4000	10±0.5	±0.6	1.6	1000	1.5	50
NAT-10DC-2.5A	1700-4000	10±0.5	±0.6	1.6	1000	2.5	50
NAT-15DC-1A	650-4000	15±0.7	±0.8	1.7	1000	1	50
NAT-15DC-1.5A	950-4000	15±0.7	±0.6	1.6	1000	1.5	50
NAT-15DC-2.5A	1700-4000	15±0.8	±0.6	1.5	1000	2.5	50

ELECTRICAL SCHEMATIC DC PASSING





ATTENUATORS, FIXED PRECISION

50 Ω

DC to 18 GHz, 1 to 40 dB



BW-SW2 Case FF658/FF659
SMA, 2 W



BW-S50W2 Case FF1048
SMA, 2 W



BW-SW5 Case DC737
SMA, 5 W



BW-NW5 Case DC736
Type N, 5 W



BW-40N100W Case GH986
Type N, 100 W

MODEL PREFIX	FREQUENCY RANGE (MHz) f_L - f_U	ATTENUATION (dB)		VSWR (:1) Max.		
		Nominal	Accuracy	L	M	U

SMA 2 W

BW-S1W2	DC-18000	1	±0.40	1.20	1.25	1.30
BW-S2W2	DC-18000	2	±0.40	1.20	1.25	1.30
BW-S3W2	DC-18000	3	±0.40	1.20	1.25	1.30
BW-S4W2	DC-18000	4	±0.40	1.20	1.25	1.30
BW-S5W2	DC-18000	5	±0.40	1.20	1.25	1.30
BW-S6W2	DC-18000	6	±0.40	1.20	1.25	1.30
BW-S7W2	DC-18000	7	-0.4, +0.9	1.20	1.25	1.30
BW-S8W2	DC-18000	8	±0.60	1.20	1.25	1.30
BW-S9W2	DC-18000	9	-0.4, +0.8	1.20	1.25	1.30
BW-S10W2	DC-18000	10	±0.60	1.20	1.25	1.30
BW-S12W2	DC-18000	12	±0.60	1.20	1.25	1.30
BW-S15W2	DC-18000	15	±0.60	1.20	1.25	1.30
BW-S20W2	DC-18000	20	-0.5, +0.8	1.20	1.25	1.30
BW-S30W2	DC-18000	30	±0.85	1.20	1.25	1.30
BW-S40W2	DC-18000	40	-1.0, +1.5	1.20	1.25	1.30
BW-S50W2	DC-18000	50	±0.15	1.15	1.20	1.25

SMA 5 W

BW-S1W5	DC-18000	1	±0.40	1.20	1.25	1.30
BW-S2W5	DC-18000	2	±0.40	1.20	1.25	1.30
BW-S3W5	DC-18000	3	±0.40	1.20	1.25	1.30
BW-S4W5	DC-18000	4	±0.40	1.20	1.25	1.30
BW-S5W5	DC-18000	5	±0.40	1.20	1.25	1.30
BW-S6W5	DC-18000	6	±0.40	1.20	1.25	1.30
BW-S7W5	DC-18000	7	-0.4, +0.9	1.20	1.25	1.30
BW-S8W5	DC-18000	8	±0.60	1.20	1.25	1.30
BW-S9W5	DC-18000	9	-0.4, +0.8	1.20	1.25	1.30
BW-S10W5	DC-18000	10	±0.60	1.20	1.25	1.30
BW-S12W5	DC-18000	12	±0.60	1.20	1.25	1.30
BW-S15W5	DC-18000	15	±0.60	1.20	1.25	1.30
BW-S20W5	DC-18000	20	-0.5, +0.8	1.20	1.25	1.30
BW-S30W5	DC-18000	30	±0.85	1.20	1.25	1.30
BW-S40W5	DC-18000	40	-1.0, +7.5	1.20	1.25	1.30

TYPE-N 5 W

BW-N1W5	DC-18000	1	±0.40	1.20	1.25	1.30
BW-N2W5	DC-18000	2	±0.40	1.20	1.25	1.30
BW-N3W5	DC-18000	3	±0.40	1.20	1.25	1.30
BW-N4W5	DC-18000	4	±0.40	1.20	1.25	1.30
BW-N5W5	DC-18000	5	±0.40	1.20	1.25	1.30
BW-N6W5	DC-18000	6	±0.40	1.20	1.25	1.30
BW-N7W5	DC-18000	7	-0.4, +0.9	1.20	1.25	1.30
BW-N8W5	DC-18000	8	±0.60	1.20	1.25	1.30
BW-N9W5	DC-18000	9	-0.4, +0.8	1.20	1.25	1.30
BW-N10W5	DC-18000	10	±0.60	1.20	1.25	1.30
BW-N12W5	DC-18000	12	±0.60	1.20	1.25	1.30
BW-N15W5	DC-18000	15	±0.60	1.20	1.25	1.30
BW-N20W5	DC-18000	20	-0.5, +0.8	1.20	1.25	1.30
BW-N30W5	DC-18000	30	±0.85	1.20	1.25	1.30
BW-N40W5	DC-18000	40	-1.0, +1.5	1.20	1.25	1.30

L = low range (DC to 4000 MHz)

M = mid range (4000 to 8000 MHz)

U = upper range (8000 to 12400 MHz)

TYPE-N 100 W

BW-40N100W	DC-4000	40	±1.6	1.15	1.35	1.40
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L = low range (DC to 500 MHz)

M = mid range (500 to 2000 MHz)

U = upper range (2000 to 4000 MHz)

