

Product Specification	Part
RF Power Chip Attenuators	CQA Chip Series

1. CQA Chip Attenuators

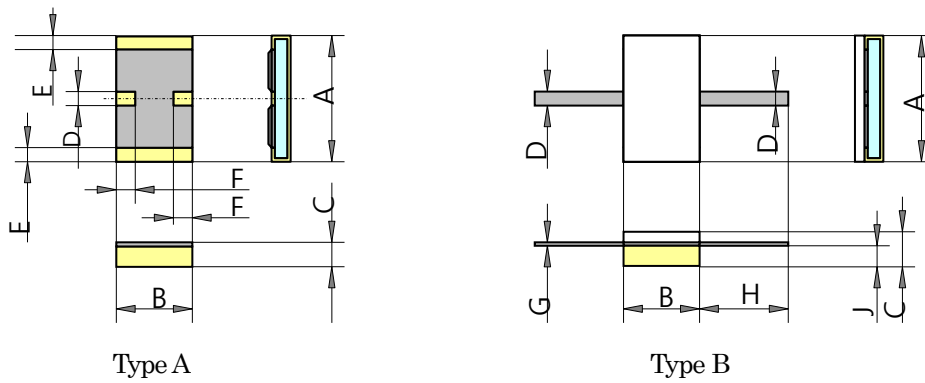
This type is designed to RF device

2. Dimensional specifications are detailed per the following draft of Type A, B

RF Power : 2W to 150W

Attenuation : 1dB to 45dB

Frequency : DC to 10GHz



2-1. Part Designations (Unit : mm)

Part	Type	A	B	C	D	E	F	G
CQA02S	A	5.60	4.50	0.80	1.30	0.60	1.30	
CQA05S	A	6.00	3.00	0.80	0.50	0.80	0.50	
CQA100S	A	8.90	5.80	1.00	1.10	0.30	1.50	
CQA100T	B	8.90	5.80	1.50	1.00	0.10	5.50	1.10
CQA150S	A	11.40	7.60	1.00	1.00	0.30	1.50	
CQA150T	B	11.40	7.60	2.00	1.00	0.10	6.30	1.20

2-2. Ordering Information

Part No.	RF Power	Frequency	Attenuation	Impedance	Package
CQA02S-10dB	2W	10GHz	10dB	50ohm	1000
CQA05S-10dB	5W	6GHz	10dB	50ohm	1000
CQA100S-10dB	100W	3GHz	10dB	50ohm	1000
CQA100T-10dB	100W	3GHz	10dB	50ohm	1000
CQA150S-10dB	150W	3GHz	10dB	50ohm	1000
CQA150T-10dB	150W	3GHz	10dB	50ohm	1000

3. Rating.

3-1. Rating Power with Heat Sink (Fig.1)

Resistors have power rating based on full load operation at terminals temperature from - 55C to + 155C. Operating power shall be derated as figure 2 in operating at excess of + 155C of terminal temperature.

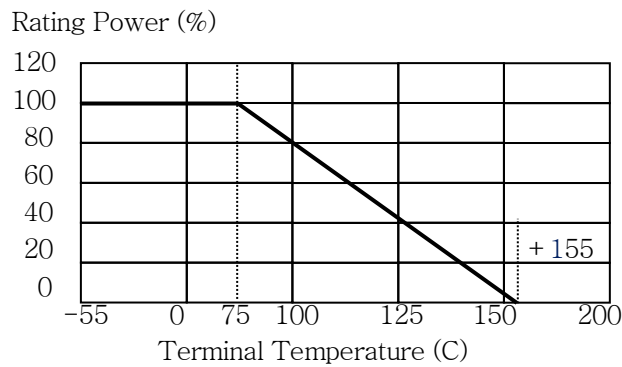


Fig.1

3-2. General Electrical Specifications

Items	Specification				Condition
	CQA02S	CQA05S	CQA100S	CQA150S	
Part	CQA02S	CQA05S	CQA100S	CQA150S	
Rating RF In Put power	2 W	5 W	100 W	150W	
Attenuations	0dB to 20dB	1dB to 10dB			±0.5dB
Attenuations			10, 20, 30dB	10, 20, 30dB	±1dB
Frequency	DC to 10GHz	DC to 6GHz	DC to 3GHz	DC to 3GHz	
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	
VSWR(DC to 2 GHz)	1.10 : 1	1.20 : 1	1.20 : 1	1.20 : 1	
VSWR(2GHz to 5GHz)	1.20 : 1	1.20 : 1	1.25 : 1	1.25 : 1	
VSWR(5GHz to 10GHz)	1.25 : 1	1.25 : 1			

4. Electrical and mechanical Specifications

Items	Specifications	Test Conditions
Operation Temp. Range	-55 to + 155 °C	
Storage Temp. Range	-55 to + 155 °C	
Withstanding Voltage	1,500 Volt	60 seconds.
Load Life	$\pm(1.0\% + 0.05 \text{ ohm})$	25°C 90min ON, 30min OFF, 1000hours.
Humidity	$\pm(1.0\% + 0.05 \text{ ohm})$	40°C 90-95% RH, DC 0.1W, 1000hours.
Temperature Cycle	$\pm(0.25\% + 0.05 \text{ ohm})$	-55°C 30min., + 155°C 30min., 5cycles.
Soldering Heat	$\pm(0.25\% + 0.05 \text{ ohm})$	350 \pm 5°C, 3seconds,
Solderability	Over 3/4 of surface	230 \pm 5°C, 3seconds.
Insulation Resistance	Over 1000 Mohm	Between terminals and resistor body.
Vibration	$\pm(0.25\% + 0.05 \text{ ohm})$	

5. Quality Assurance

Cqtel shall be assure to the CiTEL customers of the resistors quality. Receiving fault report from the customer, analyzing the cause of fault and reporting of QA to the customer shall be obligation of Cqtel, because brand of the attenuators and CQA series is right of CiTEL

6. Country of Origin

The attenuators are produced at KOREA main factory of CiTEL Co., Ltd.