

Product Specification	Part
RF Power Chip Resistors	CQR20S Chip Series

1. CQR20S Chip Resistors

This type is designed to fulfill multiband RF splitter

2. Dimensional specifications are detailed per the following draft of Fig.1

RF Power : 1/4W to 20W
 Resistance : 100 to 600 ohm
 Frequency : DC to 4GHz

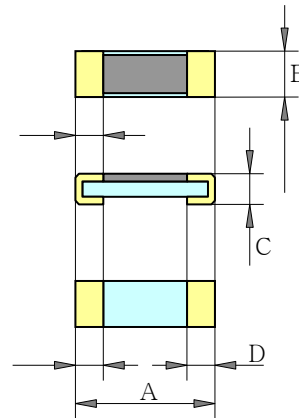


Fig 1

2-1. Part Designations (Unit : mm)

Part	A	B	C	D
CQR20SA	5.00	2.00	0.80	1.00
CQR20SB	7.00	2.00	0.80	1.00
CQR20SC	5.00	2.50	0.55	0.55
CQR20SD	3.20	1.60	0.45	0.45
CQR20SE	2.00	1.20	0.40	0.40
CQR20SF	1.60	0.80	0.30	0.30

2-2. Ordering Information

Part No.	RF Power	Frequency	TCR	Resistance	Tolerance	Package
CQR20SA-101NI	20W	DC to 3GHz	±200ppm/°C	100 ohm	±1%, 3%	1000
CQR20SB-101NI	20W	DC to 3GHz	±200ppm/°C	100 ohm	±1%, 3%	1000
CQR20SC-101NI	2W	DC to 4GHz	±200ppm/°C	100 ohm	±1%, 5%	4000
CQR20SD-101NI	1W	DC to 4GHz	±200ppm/°C	100 ohm	±1%, 5%	5000
CQR20SE-101NI	1/2W	DC to 4GHz	±200ppm/°C	100 ohm	±1%, 5%	5000
CQR20SF-101NI	1/4W	DC to 4GHz	±200ppm/°C	100 ohm	±1%, 5%	10000

3. Note

Additional Process Code Terminal conductor, solder plated Ni

4. Rating

4-1. Rating Power with Heat Sink (Fig.2)

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

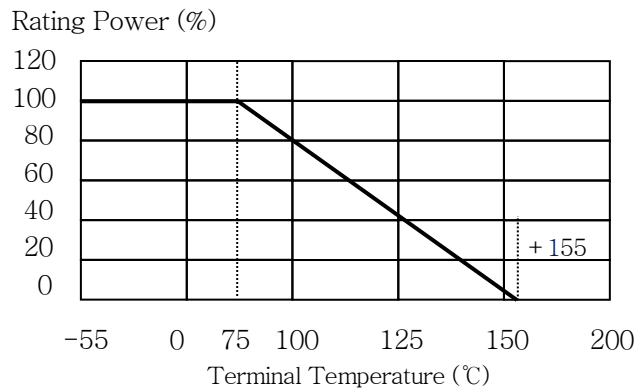


Fig.2

4-2. General Electrical Specifications

Items	Specification	Condition
Part	CQR20S Chip Series	
Rating RF power for dividing	1/4W to 20W	4-1
Frequency	DC to 4GHz	
Resistance Values	100, 150, 200, 250, 300, 350, 400, 600 ohm	Standard
VSWR(Max)	1.20 : 1	
Temp. Coefficient of Resistance.	±200ppm/°C	-55 to + 155°C
Tolerance of Resistance	±1% , 3%, 5%	
Equivalent Parallel Capacitance	1.0 pF Max.	

Note: Other resistance values and tolerances available upon request.

5. 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	$\pm(0.25\% + 0.05 \text{ ohm})$	

6. 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 resistor and CQR20S Chip series is right of CiTEL

7. Country of Origin

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