

# AT-CUT CRYSTAL UNIT (SMD · Ceramic Package)

**RoHS Compliant Standard** 

**CS20** 

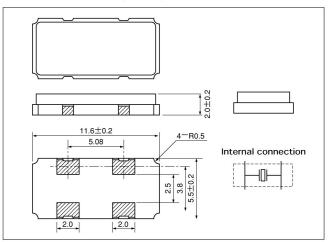
2000pcs/reel



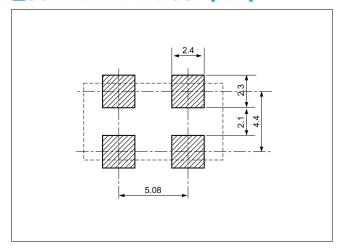
#### **FEATURES**

- Reliable ceramic package and excellent environmental characteristics.
- Available for wide range of frequency.
- Suitable for various applications such as communication devices, AV devices, automotive devices and measuring instruments.

## **■DIMENSION** [mm]



## **SOLDER PAD LAYOUT [mm]**



#### **ISTANDARD SPECIFICATIONS**

ltem Model		CS20	Conditions	
Nominal Frequency	fo	3.5MHz~30.0MHz (Fundamental)	Need to contact us for the available frequency	
Frequency Tolerance	△f/fo	±30ppm	at 25°C	
Frequency Tolerance over Operating Temperature Range	△f/fo	±50ppm	−10°C~+60°C	
Operating Temperature Range	TOPR	−40°C∼+85°C		
Storage Temperature Range	Tstr	−55°C~+125°C		
Motional (series) resistance	R <sub>1</sub>	Refer to the following table	at 25°C	
Load capacitance	CL	18.0pF	Need to specify your requirement	
Shunt capacitance	Co	7.0pF Max.		
Level of drive	DL	100 μW.		
Insulation Resistance	lR	500M Ω Min.	DC100V±15V	
Aging (first year)	△f/fo	±5ppm Max.	25℃±3℃	

## **■MOTIONAL (SERIES) RESISTANCE (R1)**

Frequency Range	3.5MHz≦f <sub>0</sub> <4.0MHz	4.0MHz≦fo<6.0MHz	6.0MHz≦fo<10MHz	10MHz≦fo<14MHz	14MHz≦fo≦30MHz
R <sub>1</sub>	200 Ω Max.	150 Ω Max.	100 Ω Max.	80 Ω Max.	50 Ω Max.