



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



AT-CUT CRYSTAL UNIT (SMD • Ceramic Package)

RoHS Compliant Standard

CS20

2000pcs/reel

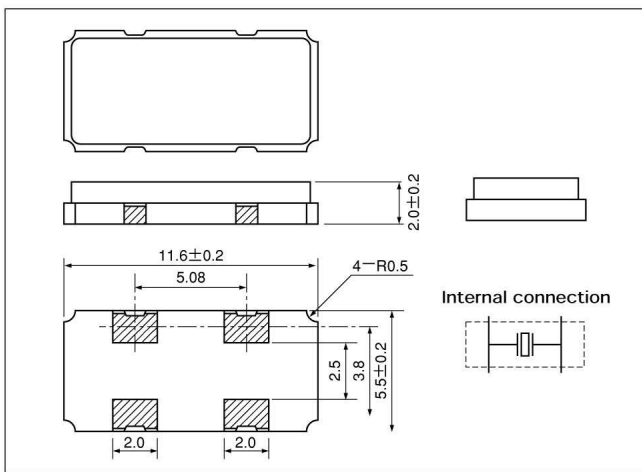


Discontinued

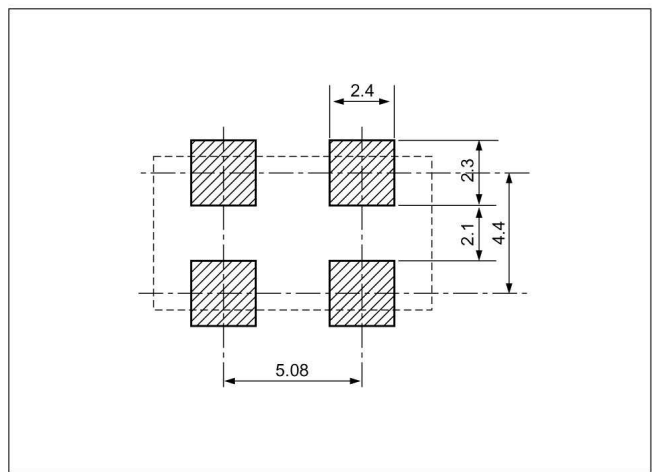
FEATURES

- 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]



STANDARD SPECIFICATIONS

Item	Model	CS20	Conditions
Nominal Frequency	f_0	3.5MHz~30.0MHz (Fundamental)	Need to contact us for the available frequency
Frequency Tolerance	$\Delta f/f_0$	$\pm 30\text{ppm}$	at 25°C
Frequency Tolerance over Operating Temperature Range	$\Delta f/f_0$	$\pm 50\text{ppm}$	-10°C ~ +60°C
Operating Temperature Range	T_{OPR}	-40°C ~ +85°C	
Storage Temperature Range	T_{STR}	-55°C ~ +125°C	
Motional (series) resistance	R_1	Refer to the following table	at 25°C
Load capacitance	C_L	18.0pF	Need to specify your requirement
Shunt capacitance	C_0	7.0pF Max.	
Level of drive	D_L	100 μ W.	
Insulation Resistance	I_R	500M Ω Min.	DC100V \pm 15V
Aging (first year)	$\Delta f/f_0$	$\pm 5\text{ppm Max.}$	25°C \pm 3°C

MOTIONAL (SERIES) RESISTANCE (R_1)

Frequency Range	$3.5\text{MHz} \leq f_0 < 4.0\text{MHz}$	$4.0\text{MHz} \leq f_0 < 6.0\text{MHz}$	$6.0\text{MHz} \leq f_0 < 10\text{MHz}$	$10\text{MHz} \leq f_0 < 14\text{MHz}$	$14\text{MHz} \leq f_0 \leq 30\text{MHz}$
R_1	200 Ω Max.	150 Ω Max.	100 Ω Max.	80 Ω Max.	50 Ω Max.