Crystal unit

## THIN SMD LOW/MEDIUM-FREQUENCY CRYSTAL UNIT

## **MC-206**

- High-density mounting-type SMD of max. 2.0mm thickness.
- Small packaging area and light weight.
- High heat resistance allows reflow soldering.
- Excellent shock resistance and environmental capability.
- Most suitable for small communications devices.



## Specifications (characteristics) http://www.zhaoxiandz.com

Item		Symbol	Specifications		Remarks	
Nominal frequency		f	32.768 kHz	32.000 kHz to 100.000 kHz		
Temperature range	Storage temperature	Tstg	-55°C to +125°C			
	Operating temperature	Topr	-40°C to +85°C			
Maximum drive level		GL	1.0µW max.			
Soldering condition		Tsol	Twice at under 260°C within 10 sec. or under 230°C within 3 min.			
Frequency tolerance (standard)		$\Delta f/f$	±20ppm, ±50ppm	±50ppm, ±100ppm	Ta=25 <sup>-</sup> C, DL=0.1μW	
Peak temperature (frequency)		θT	25°C ±5°C			
Temperature coefficient (frequency)		а	-0.04ppm/ <sup>•</sup> C <sup>2</sup> max.			
Load capacitance		C∟	6pF to ∞		Please specify	
Series resistance		R1	55 k $\Omega$ max.	50 k $\Omega$ to 20 k $\Omega$	As per below table	
Motional capacitance		C1	1.8fF typ.	3.0fF max.		
Shunt capacitance		Co	0.9pF typ.	1.5pF max.		
Insulation resistance		IR	500 MΩ min.			
Aging		fa	±3ppm/year max.	±5ppm/year max.	Ta=25°C ±3°C, first year	
Shock resistance		S.R.	±5ppm max.		Three drops on a hard board from 75 cm or excitation test with 3000G x 0.3ms x 1/2 sine wave x 3 directions	

Metal may be exposed on the top of this product. This won't affect any quality, reliability or electrical spec.

## Series resistance

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Frequency (kHz)	32 ≤ f < 38	38 ≤ f < 65.536	65.536 ≤ f < 75	75 ≤ f ≤100	
Series resistance (Ω)	50k $\Omega$ max.	40k Ω max.	25k Ω max.	20k $\Omega$ max.	
External dimensi	ons	(Unit: mm)	(Unit: mm) <b>Recommended soldering pattern</b> (		

