



3225 Ceramic SMD Crystals

■ Holder Type: C7 (4 pads 3.2×2.5)

Frequency Range:

8.00MHz to 150.00MHz

Features:

- High Reliability & Low Cost Unit
- Tight Stability & Extended Temperature Available
- Lead-free Type
- For automotive applications, please contact our sales representative



Actual Size



QUARTZ
CRYSTALS

■ Standard Specifications

Item	Value
Frequency Range	8.00 to 150.00MHz
Frequency Tolerance	±30ppm (tighter tolerance also available)
Frequency Tolerance over Temperature range	±50ppm (tighter tolerance also available)
Operating Temperature Range	-10 °C to +60 °C (other operating range also available)
Operable Temperature Range	-40 °C to +85 °C
Equivalent Series Resistance (ESR)	Please refer to the ESR Table
Drive Level	50µW Typ. (200µW Max.)
Load Capacitance	8pF (3pF, 4.5pF, 6pF and series also available)
Ageing	±5ppm/year

■ ESR Table

Frequency Range (MHz)	Mode	Standard ESR (Ohm)
8 to 11	AT Cut Fund.	500
11 to 12	AT Cut Fund.	300
12 to 13	AT Cut Fund.	200
13 to 16	AT Cut Fund.	150
16 to 20	AT Cut Fund.	80
20 to 22	AT Cut Fund.	60
22 to 54	AT Cut Fund.	50
60 to 150	3rd Overtone	300

Note:

1. Manufacturer reserves the right to change the specification and content of this product for improvement without notification.
2. Custom specification is welcome. Please contact our sales representative for further details.
3. If the crystal is intended for applications which have direct impact on human life and properties, and require a high degree of reliability and safety concerns, customers must provide full information such as but not limit to the application, electrical and reliability specification at the inquiry beginning stage.
4. Customers have to agree to the "Guideline for handling crystal units" and "Standard Terms and Condition of Sales" which is printed in this catalog before placing orders to our company or our distributors. There are also unpredictable factors such as applied condition, oscillation margin and etc and customers must check them beforehand. In case of queries, please do not fail to send inquiry to our company before ordering.

<http://www.hongkongcrystal.com>
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 HongKong/Overseas: inquiry@hongkongcrystal.com

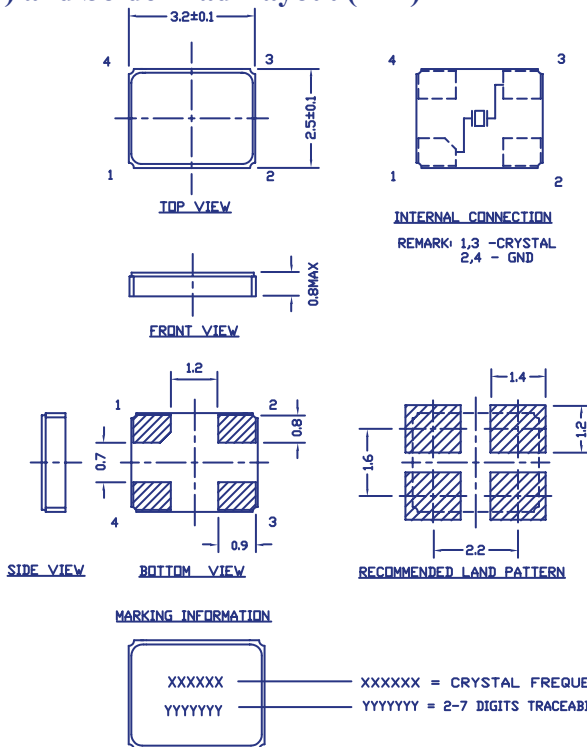
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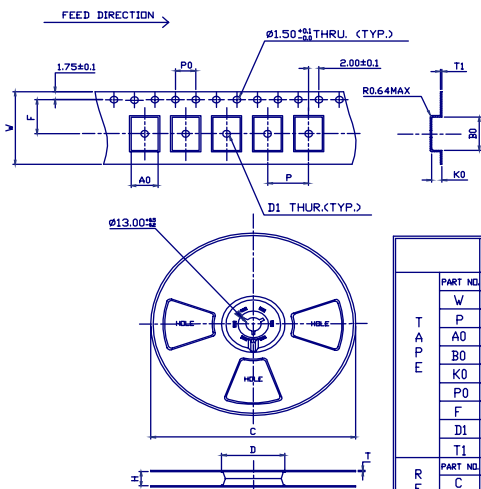


■ Dimensions (mm) and Solder Pad Layout (mm)



Note: #2 & #4 are connected with the cover

■ Tape & Reel (mm)



	8x4.5 SMD	7x5 SMD	6x3.5 SMD	5x3.2 SMD	4x2.5 SMD	3.2x2.5 SMD	2.5x2.0 SMD
T A P E	PART NO	48065002	48065001	48060036	48065023	48065018	48065024
	W	16.00 ± 0.1	16.00 ± 0.1	16.00 ± 0.1	12.00 ± 0.1	12.00 ± 0.1	8.00 ± 0.1
	P	8.00 ± 0.1	8.00 ± 0.1	8.00 ± 0.1	8.00 ± 0.1	8.00 ± 0.1	4.00 ± 0.1
	A0	4.80 ± 0.1	5.40 ± 0.1	3.75 ± 0.1	3.50 ± 0.1	2.70 ± 0.1	2.80 ± 0.1
	B0	8.30 ± 0.1	7.40 ± 0.1	6.20 ± 0.1	5.40 ± 0.1	4.20 ± 0.1	3.60 ± 0.1
	K0	1.70 ± 0.1	1.65 ± 0.1	1.20 ± 0.1	1.50 ± 0.1	1.00 ± 0.1	1.25 ± 0.1
	P0	4.00 ± 0.1	4.00 ± 0.1	4.00 ± 0.1	4.00 ± 0.1	4.00 ± 0.1	4.00 ± 0.1
	F	7.50 ± 0.1	7.50 ± 0.1	7.50 ± 0.1	5.50 ± 0.1	5.50 ± 0.1	3.50 ± 0.1
	D1	1.50 ± 0.05	1.50 ± 0.05	1.50 ± 0.05	1.50 ± 0.05	1.50 ± 0.05	1.00 ± 0.05
	T1	0.30 ± 0.05	0.30 ± 0.05	0.30 ± 0.05	0.30 ± 0.05	0.30 ± 0.05	0.20 ± 0.05
R E E L	PART NO	48060024	48060050	48065020	48065026	48065020	48065015
	C	$\phi 178.0 \pm 1$	$\phi 330 \pm 1$	$\phi 178 \pm 1$	$\phi 330 \pm 1$	$\phi 178 \pm 1$	$\phi 178 \pm 1$
	D	$\phi 500 \pm 0.5$	$\phi 1000 \pm 1$	$\phi 600 \pm 0.5$	$\phi 1000 \pm 1$	$\phi 600 \pm 0.5$	$\phi 600 \pm 0.5$
	H	16.5 ± 0.5	16.5 ± 0.5	13.1 ± 0.2	12.5 ± 0.5	13.1 ± 0.2	12.5 ± 0.5
	T	1.50 ± 0.2	2.3 ± 0.3	1.2 ± 0.2	2.3 ± 0.3	1.2 ± 0.2	2.3 ± 0.3
	STANDARD PACKING QTY/REEL	1000PCS	4000PCS	1000PCS	5000PCS	2000PCS	5000PCS
	MAXIMUM PACKING QTY/REEL	1300PCS	1800PCS	1400PCS	5500PCS	2100PCS	3500PCS