



2520 Crystal Clock Oscillator

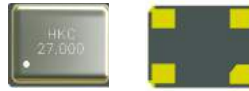
■ Holder Type: CM(2.5×2.0)

Frequency Range:

1.00MHz to 60.00MHz / 32.768kHz

Features:

- High Reliability & Low Cost Unit
- Tight Stability & Extended Temperature Available
- Lead-free Type



Actual Size



■ Standard Specifications

Item	Value		
Frequency Range	1.00 to 60.00MHz / 32.768kHz		
Frequency Tolerance @ 25 °C	±30ppm, ±50ppm, ±100ppm		
Operating Temperature Range	0 °C to +70 °C / -40 °C to +85 °C (other operating range also available)		
Operable Temperature Range	-55 °C to +125 °C		
Output Type	HCMOS		
Output Load	15pF Max		
Operating Voltage	1.8V / 3.3V / 5V ±10%		
Current Consumption (Max.)	1.8V: 1 - 16MHz: 5mA 17 - 60MHz: 12mA 32.768kHz: 0.2mA	3.3V: 1 - 16MHz: 7mA 17 - 60MHz: 20mA 32.768kHz: 0.2mA	5.0V: 1 - 16MHz: 10mA 17 - 60MHz: 35mA
Output Symmetry	HCMOS:40~60%(at 50% V _{DD}) 45~55% is available		
“High” Output Voltage	HCMOS: 90% V _{DD} Min		
“Low” Output Voltage	HCMOS: 10% V _{DD} Max		
Rise and Fall Time	1.8V / 3.3V 1 - 60MHz : 7ns Max 32.768kHz : 30ns Max	5.0V 1 - 60MHz : 10ns Max	
Tri-State	Yes		
Ageing	Max 5ppm / year		

* For special requirements not included in our standard datasheet, please contact sales representative.

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 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.

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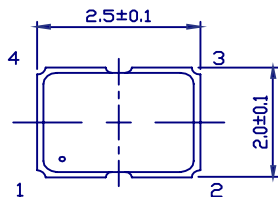


■ Dimensions (mm) and Solder Pad Layout (mm)

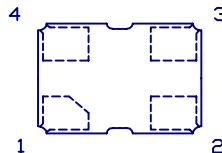
MARKING INFORMATION



XXXXXX = CRYSTAL FREQUENCY
 YYYYYY - 2~7 DIGITS TRACEABILITY CODE

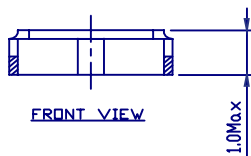


TOP VIEW



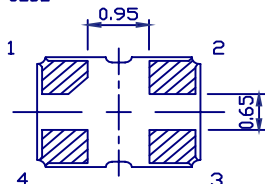
INTERNAL CONNECTION

1--INH
 2--GND
 3--OUTPUT
 4--VDD

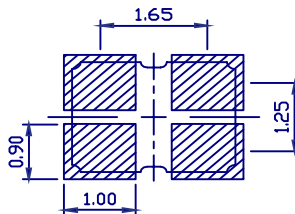


FRONT VIEW

INH	"H" Or Open	"L" (Standby)
OUTPUT	Enable	High Impedance

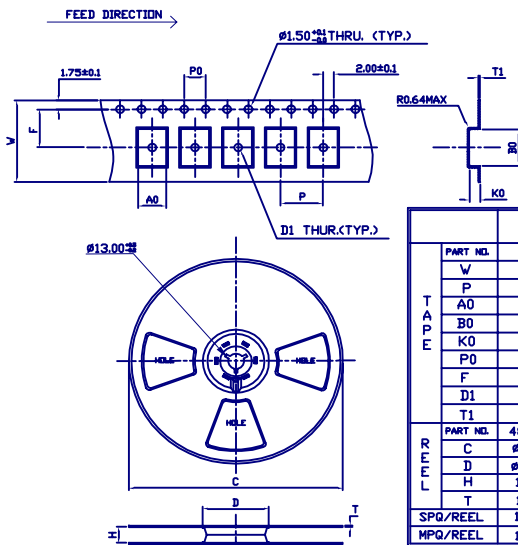


BOTTOM VIEW



RECOMMENDED LAND PATTERN

■ Tape & Reel (mm)



	7x5 QSC.	5x3.2 QSC.	3.2x2.5 QSC.	2.5x2.0 QSC.			
T A P E	PART NDL	48060041	48065023	48065011	48065024		
	W	16.00±0.05	12.00±0.05	8.00±0.05	8.00±0.05		
	P	8.00±0.1	8.00±0.10	4.00±0.10	4.00±0.10		
	A0	5.30±0.1	3.50±0.10	2.80±0.10	2.40±0.10		
	B0	7.80±0.1	5.40±0.10	3.60±0.10	2.85±0.10		
	K0	2.00±0.1	1.50±0.10	1.25±0.10	1.15±0.10		
	P0	4.00±0.1	4.00±0.10	4.00±0.10	4.00±0.10		
	F	7.50±0.1	5.50±0.10	3.50±0.10	3.50±0.10		
	D1	1.50±0.05	1.50±0.05	1.00±0.05	1.00±0.05		
	T1	0.30±0.05	0.30±0.05	0.20±0.05	0.25±0.05		
R E E L	PART NDL	48060024	48060050	48065020	48065026	48065015	
	C	Ø178.0±1	Ø330±1	Ø178±1	Ø330±1	Ø178±1	Ø178±1
	D	Ø50.0±0.5	Ø100.0±1	Ø60.0±0.5	Ø100.0±1	Ø60.0±0.5	Ø60.0±0.5
	H	16.5±0.5	16.5±0.5	13.1±0.2	12.5±0.5	9.5±0.8	9.5±0.8
	T	1.50±0.2	2.3±0.3	1.2±0.2	2.3±0.3	1.2±0.2	1.2±0.2
	SPQ/REEL	1000PCS	4000PCS	1000PCS	5000PCS	3000PCS	3000PCS
MPQ/REEL	1100PCS	4100PCS	1400PCS	5500PCS	3500PCS	3800PCS	