

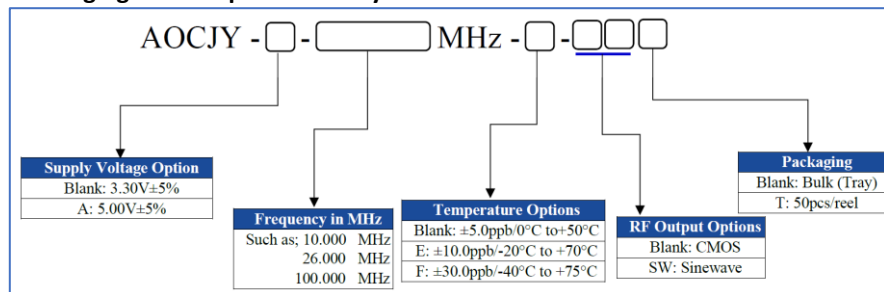
ECN/PCN No.: 4327

For Manufacturer			
Product Description: Oven Controlled Crystal Oscillator	Abracon Part Number / Part Series: AOCJY	<input type="checkbox"/> Documentation only	<input checked="" type="checkbox"/> Series
		<input checked="" type="checkbox"/> ECN	<input type="checkbox"/> Part Number
		<input type="checkbox"/> EOL	
Affected Revision: H	New Revision: I	Application:	<input type="checkbox"/> Safety
			<input checked="" type="checkbox"/> Non-Safety

Prior to Change:

Part Number Builder:

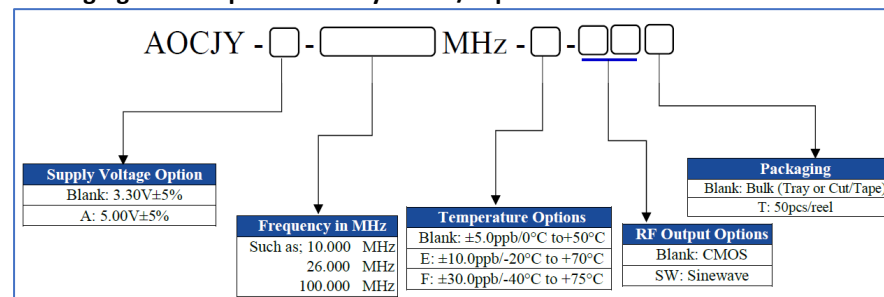
-Packaging for Bulk product= Tray



After Change:

Part Number Builder:

-Packaging for Bulk product= Tray or Cut/Tape



Cause/Reason for Change:

Standard product series review and upgrade. Updated packing method for higher volume quantities.

Change Plan

Effective Date: 06/24/2022	Additional Remarks: N/A	
Change Declaration: This change does not affect the electrical nor mechanical performance of this product.		
Issued Date: 06/24/2022	Issued By: Brooke Cushman Product Engineer	Issued Department: Engineering
Approval: Thomas Culhane Engineering Director	Approval: Reuben Quintanilla Quality Director	Approval: Ying Huang Purchasing Director

For Abracon EOL only		
Last Time Buy (if applicable): <div style="text-align: right; color: blue;">N/A</div>	Alternate Part Number / Part Series: <div style="text-align: right; color: blue;">N/A</div>	
Additional Approval: <div style="text-align: right; color: blue;">N/A</div>	Additional Approval: <div style="text-align: right; color: blue;">N/A</div>	Additional Approval: <div style="text-align: right; color: blue;">N/A</div>
Customer Approval (If Applicable)		
Qualification Status: <div style="text-align: center;"> <input type="checkbox"/> Approved <input type="checkbox"/> Not accepted </div> <p style="font-size: small; color: blue;"><i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i></p>		
Customer Part Number:	Customer Project:	
Company Name:	Company Representative:	Representative Signature:
Customer Remarks:		

brand	affected part numbers	series	eco#	datasheet link	ecn notification link
abracon	AOCJY-10.000MHZ	AOCJY	4315	https://abracon.com/Precisiontiming/AOCJY.pdf	???
abracon	AOCJY-10.000MHZ-E	AOCJY	4315	https://abracon.com/Precisiontiming/AOCJY.pdf	???
abracon	AOCJY-10.000MHZ-E-SW	AOCJY	4315	https://abracon.com/Precisiontiming/AOCJY.pdf	???
abracon	AOCJY-10.000MHZ-F	AOCJY	4315	https://abracon.com/Precisiontiming/AOCJY.pdf	???
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Oven Controlled Crystal Oscillator

AOCJY

Request Samples



Check Inventory



ESD Sensitive



25.4 x 22.1 x 12.7 mm
RoHS/RoHS II Compliant
 MSL Level = 1

Features

- 25.4 x 22.1 x 12.7 mm True SMT- RoHS Compliant Reflowable Package
- SC-Cut, High “Q” resonator-based design
- Either Sinewave or CMOS RF output
- Available with ± 30 ppb over -40°C to $+75^{\circ}\text{C}$ operating temperature Range
- Tighter Stabilities to ± 5.0 ppb over 0°C to $+50^{\circ}\text{C}$ also available
- Exceptional long-term Aging of ± 500 ppb over 10-Year Product Life
- Excellent close-in phase noise (-135 dBc/Hz Typical @100 Hz offset from 10MHz carrier)

Applications

- Cellular Infrastructure
- Radar Systems
- Test & Measurement Equipment
- GPS Tracking with precision hold-over accuracy
- WiMax / WLAN

Key Electrical Specifications

Parameters	Minimum	Typical	Maximum	Units	Notes
RF Output					
Frequency	10.00		100.00	MHz	CMOS output
	10.00		100.00	MHz	Sinewave output
Standard Available Frequencies	10.00, 12.80, 13.00, 16.384, 20.00, 26.00, 38.40, 38.88, 40.00, 100.00 MHz				
Operable Temperature Range	0		50	$^{\circ}\text{C}$	See Stability Options
Frequency Stability Options					
0°C to $+50^{\circ}\text{C}$			± 5.00	ppb	Default Spec.
-20°C to $+70^{\circ}\text{C}$			± 10.00	ppb	Option “E”
-40°C to $+75^{\circ}\text{C}$			± 30.00	ppb	Option “F”
Frequency Stability vs. Supply Voltage (Vdd $\pm 5\%$)			± 20.00	ppb	
Warm-Up @ 25 $^{\circ}\text{C}$			± 100.00	ppb	In < 3-minutes
Power Consumption @ turn on			3.60	Watts	
Power Consumption Steady State			1.40	Watt	
Supply Voltage (Vdd)	3.135	3.30	3.465	Volts	See Options
Reference Voltage (Vref) (available as an output to facilitate oscillator tuning)	2.60	2.80	3.00	Volts	For Vdd= $+3.3\text{V}$ version
	4.30	4.50	4.70	Volts	For Vdd= $+5.0\text{V}$ version
Aging					
Daily aging (after 30 days)			± 1.0	ppb	
Yearly			± 100	ppb	
10-Years			± 500	ppb	

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25.4 x 22.1 x 12.7 mm
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Parameters	Minimum	Typical	Maximum	Units	Notes
Waveform	LVC MOS				
Level "1" (Logic High)	0.9*Vdd			Volts	
Level "0" (Logic Low)			0.1*Vdd	Volts	
Load		15		pf	
Rise & Fall Time			5.0	ns	
Duty Cycle	45		55	%	
Waveform	Sinewave				
Peak Power	2.00			dBm	
Output Load		50		Ω	
Spectral Content					
Spurious Response			-70	dBc	
Phase Noise @ 10MHz Carrier (Vdd=3.3V)					
@ 1 Hz offset			-90	dBc / Hz	
@ 10 Hz offset			-120	dBc / Hz	
@ 100 Hz offset			-135	dBc / Hz	
@ 1,000 Hz offset			-145	dBc / Hz	
@ 10,000 Hz offset			-150	dBc / Hz	
@ 100,000 Hz offset			-150	dBc / Hz	
@ 1,000,000 Hz offset			-150	dBc / Hz	
Electrical Frequency Adjustment					
Control Voltage Range (Vc)	0.0		Vdd	Volts	
Frequency Pull Range	± 0.7			ppm	
Frequency Pull Slope		Positive			
Control Voltage Port Impedance	10			k Ω	
Center Control Voltage	(Vdd/2) -0.5	Vdd/2	(Vdd/2) +0.5	Volts	

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25.4 x 22.1 x 12.7 mm
RoHS/RoHS II Compliant
 MSL Level = 1

Options and Part Identification (left blank if standard):

AOCJY - - MHz - -

Supply Voltage Option
Blank: 3.30V±5%
A: 5.00V±5%

Frequency in MHz
Such as; 10.000 MHz
26.000 MHz
100.000 MHz

Temperature Options
Blank: ±5.0ppb/0°C to +50°C
E: ±10.0ppb/-20°C to +70°C
F: ±30.0ppb/-40°C to +75°C

RF Output Options
Blank: CMOS
SW: Sinewave

Packaging
Blank: Bulk (Tray or Cut/Tape)
T: 50pcs/reel

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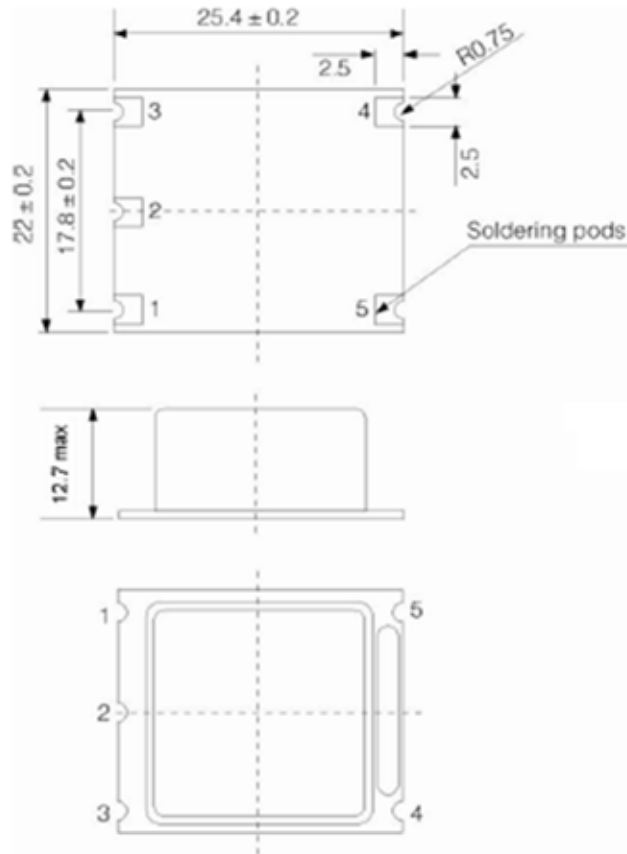


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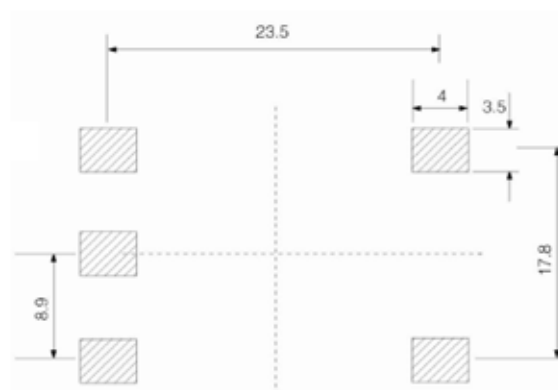
25.4 x 22.1 x 12.7 mm
RoHS/RoHS II Compliant
MSL Level = 1

Mechanical Dimensions



PIN	Function
1	Control Voltage
2	VREF
3	Supply Voltage
4	RF-output
5	Ground, Case

Recommended Land Pattern



Dimensions: mm



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Phone: 512-371-6159 | Fax: 512-351-8858
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Oven Controlled Crystal Oscillator

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RoHS/RoHS II Compliant
MSL Level = 1

Reflow Profile [JEDEC J-STD-020]

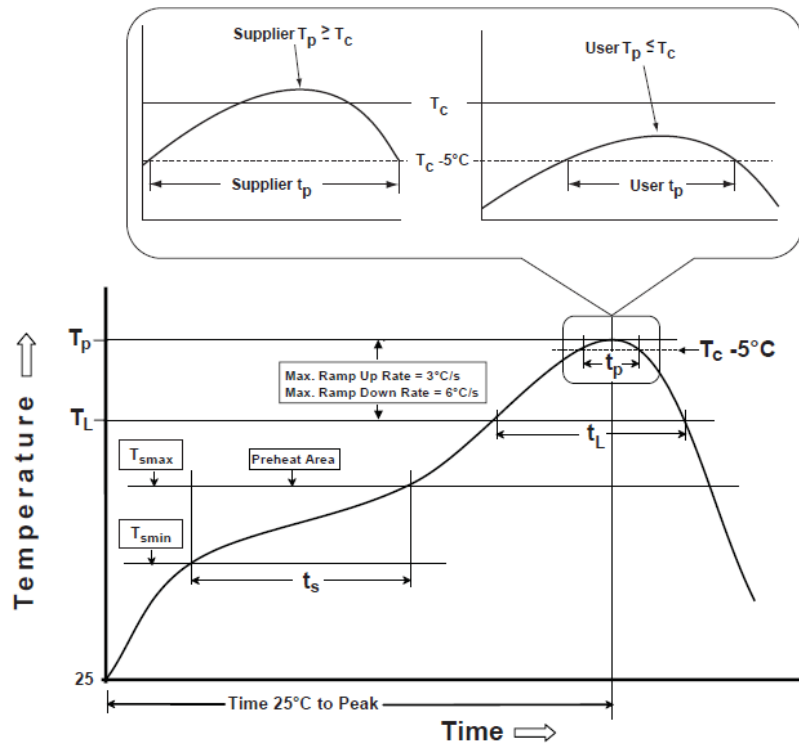


Table 1

SnPb Eutectic Process
Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ ≥350
<2.5 mm	235 °C	220 °C
≥2.5 mm	220 °C	220 °C

Table 2

Pb-Free Process
Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
<1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	250 °C	245 °C	245 °C

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat / soak		
Temperature minimum (T_{smin})	100°C	150°C
Temperature maximum (T_{smax})	150°C	200°C
Time (T_{smin} to T_{smax}) (t_s)	60 - 120 sec.	60 - 120 sec.
Average ramp-up rate (T_{smax} to T_p)	3°C/sec. max	3°C/sec. max
Liquidous temperature (T_L)	183°C	217°C
Time at liquidous (t_L)	60 - 150 sec.	60 - 150 sec.
Peak package body temperature (T_p)*	see Table 1	see Table 2
Time (t_p)** within 5°C of the specified classification temperature (T_c)	20 sec.	30 sec.
Ramp-down rate (T_p to T_{smax})	6°C/sec. max	6°C/sec. max
Time 25°C to peak temperature	6 min. max	8 min. max
Reflow cycles	2 max	2 max

*Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

**Tolerance for time at peak profile temperature (t_p) is defined as supplier minimum and a user maximum.

Oven Controlled Crystal Oscillator

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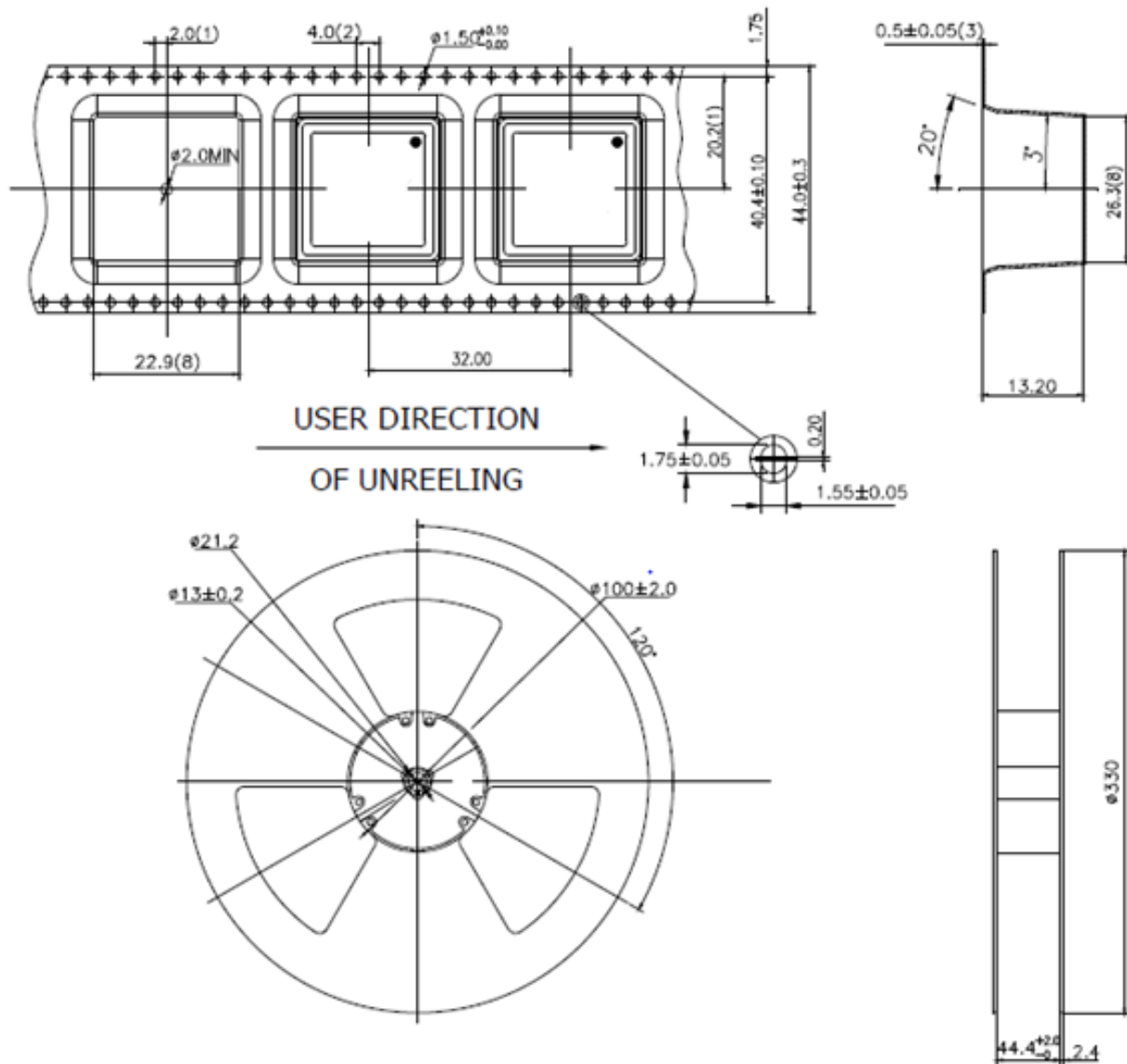
ESD Sensitive



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RoHS/RoHS II Compliant
MSL Level = 1

Packaging

Tape and Reel = 50 units (standard pack quantity)

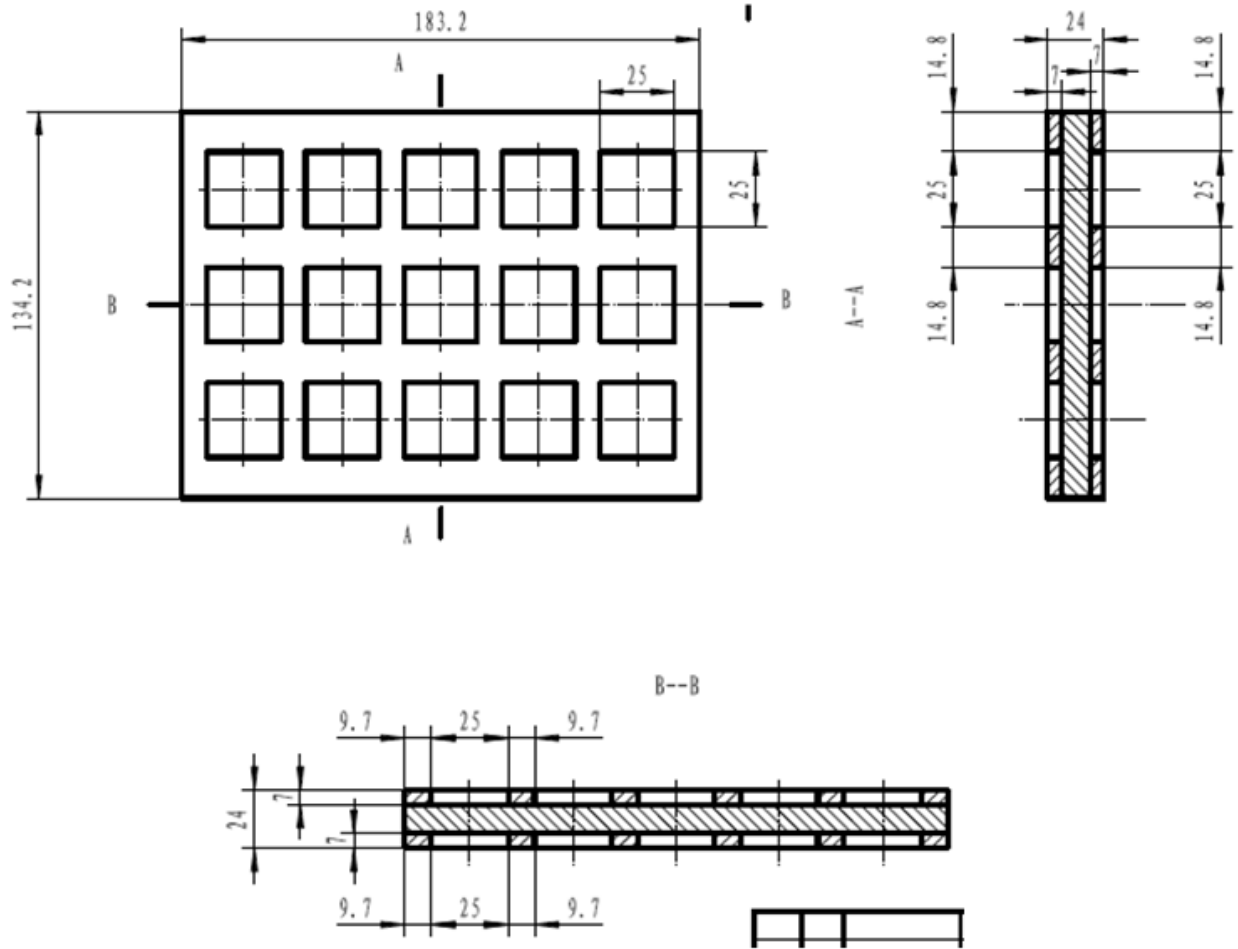


Oven Controlled Crystal Oscillator

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Packaging *continued*

Bulk packaging, 15 units per tray (standard pack quantity)



Dimensions: mm

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