Radial Wire Leaded Multilayer Ceramic Chip Capacitor

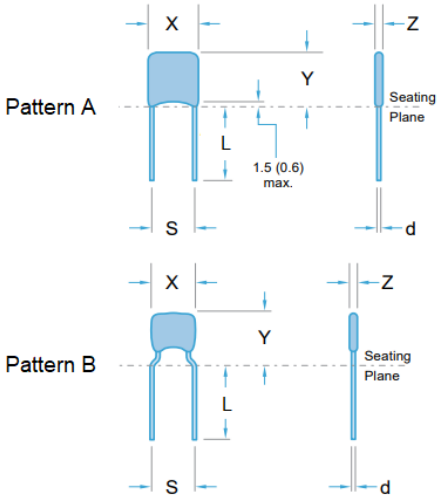
Part Number: 8131M0500335MXC42

Description: 8131M 50Vdc 3.3uF ±20% X7R (2R1)

A range of X7R MLC capacitors to suit a variety of applications, and supplied with radial leads to allow mounting on plated through-hole circuit boards.

Offered in a wide selection of chip sizes, rated voltages and lead styles, including tin and tin/lead finish options.

Two lead patterns are available for parts in this range - Pattern A (straight legs) and Pattern B (formed legs). Refer to Size Code below for more information.



Mechanical Specification

Size Code	8131M - Pattern A (Pattern B may be substituted at KPD discretion)
Width (X) in mm (")	7.62 max (0.30 max)
Height (Y) in mm (")	9.12 max (0.36 max)
Thickness (Z) in mm (")	3.81 max (0.15 max)
Lead Space (S) in mm (")	5.08 ± 0.40 (0.2 ± 0.016)
Lead Length (L) in mm (")	5.0 min, 25.4 typ (0.2 min, 1.0 typ)
Lead Diameter (d) in mm (")	0.5 ± 0.05 (0.02 ± 0.002)
Solderability	IEC-60068-2-58
Packaging	Bulk
Lead Material / Finish	Tin plated steel

General Electrical Specification

Rated Voltage	50Vdc
Nominal Capacitance Value	3.3uF
Capacitance Tolerance	±20%
Tangent of Loss Angle (Tan δ)	≤0.025
Capacitance and Tan δ Test Conditions	0.5Vrms @ 1kHz
Voltage Proof (Voltage applied for 5 secs max. @ 50mA max. charge current. 50% Max, RH)	125Vdc
Min Insulation Resistance (IR)	303.03MOhm @ 50Vdc
Dielectric Classification	X7R (2R1)
Rated Temperature Range	-55°C / +125°C
Maximum Capacitance Change over Temperature Range	No DC Voltage ±15% Rated DC Voltage -
Climatic Category (IEC)	55/125/21
Ageing Characteristic	<2% per decade (nominal capacitance is 1000 hour value)

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This datasheet is for a standard item and is confirmed valid on the date generated, the latest published data for this part may differ and is available at http://www.knowlescapacitors.com or by contacting us.

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Data is correct to the best of our knowledge, errors and omissions excepted.

Date: Friday, June 05, 2026

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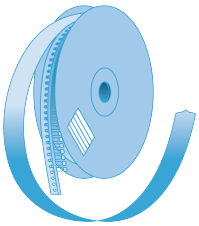
Environmental

RoHS Compliant to 2011/65/EC as amended by 2015/863/EU	Compliant
REACH Compliant	250 compliant
California Proposition 65	No exposure risk

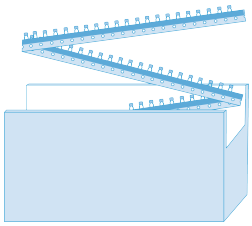
Packaging

Radial parts are available in bulk, reel or ammo pack according to the selected suffix code.

Bandoliered Reels



Bandoliered Ammo Packing

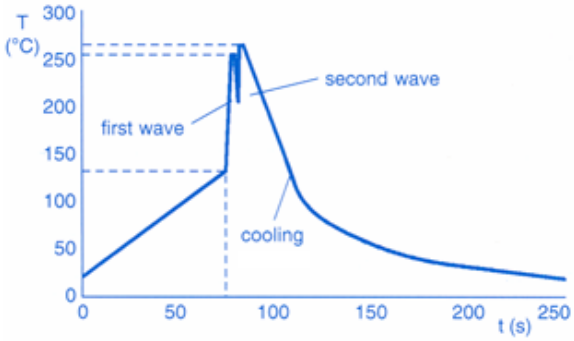


Soldering

Radial leaded parts are suitable for wave soldering and we recommend a profile of the general shape shown (a single wave of the same general shape is also acceptable).

All temperatures refer to the wave side of the board. The encapsulated capacitor body must always be on the top of the board and must never be immersed in the wave.

Components can also be hand soldered into boards using soldering irons, provided care is taken not to touch the body of the capacitor with the iron tip. Soldering should be carried out on the opposite side of the board from the capacitor body to minimise the risk of damage.



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