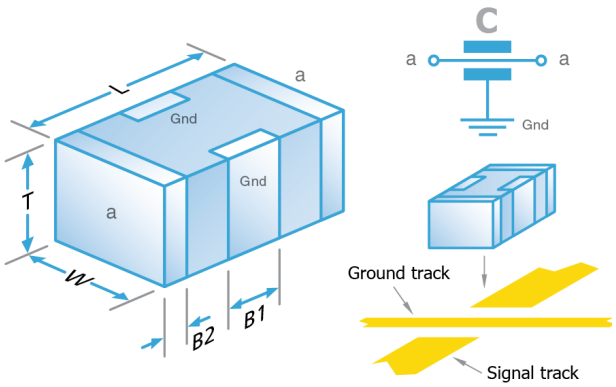
Multilayer Ceramic Chip Capacitor

Part Number: 0805Y1000222MXTE01

Description: 0805 100Vdc 2.2nF ±20% X7R (2R1) (CTI ≥ 600)

A range of ceramic MLCC feedthrough 'C' filters. Internal electrodes conduct signals through the MLCC body, with the capacitance formed to ground pads on the side of the chip, providing low inductance and high performance. Available with a variety of termination options including FlexiCap™ (on X7R), the world's first commercially available flexible termination.



Mechanical Specification

Size Code	0805
Length (L1) in mm (")	2.0 +0.40/-0.30 (0.079 +0.016/-0.012)
Width (W) in mm (")	1.25 ± 0.20 (0.049 ± 0.008)
Thickness (T) in mm (")	1.0 ± 0.15 (0.039 ± 0.006)
Termination Bands (B2) in mm (")	0.30 ± 0.15 (0.012 ± 0.006)
Center (Ground) Band (B1) in mm (")	0.60 ± 0.20 (0.024 ± 0.008)
Termination Material	FlexiCap™ Polymer termination, Nickel barrier, Sn Plated Solder (RoHS compliant)
Solderability	IEC-60068-2-58
Packaging	7" Reel Horizontal Orientation, 3000 per reel

General Electrical Specification

Rated Voltage	100Vdc
Rated DC Current	300mA
DC Resistance	0.4Ω
Nominal Capacitance Value	2.2nF
Capacitance Tolerance	±20%
Tangent of Loss Angle (Tan δ)	≤0.025
Capacitance and Tan δ Test Conditions	1.0Vrms @ 1kHz
Voltage Proof (Voltage applied for 5 secs max. @ 50mA max. charge current. 50% Max, RH)	250Vdc
Min Insulation Resistance (IR)	100.00GOhm @ 100Vdc
Dielectric Classification	X7R (2R1) (CTI ≥ 600)
Rated Temperature Range	-55°C / +125°C
Maximum Capacitance Change over Temperature Range	No DC Voltage ±15% Rated DC Voltage -
Climatic Category (IEC)	55/125/56
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.

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Multilayer Ceramic Chip Capacitor

Part Number: 0805Y1000222MXTE01

Description: 0805 100Vdc 2.2nF ±20% X7R (2R1) (CTI ≥ 600)

Environmental

RoHS Compliant to 2011/65/EC as amended by 2015/863/EU	Compliant
REACH Compliant	253 compliant
California Proposition 65	No exposure risk

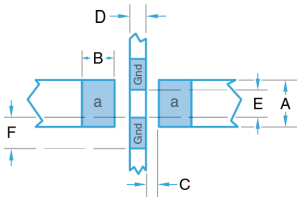
Board Layout

Knowles' conventional 3-terminal chip capacitors should be mounted using the pad design supplied.

It has been developed in conjunction with our customers over the years and has been shown to yield succesful soldering results. It incorporates factors that have been shown to reduce mechanical stress, such as reducing the pad width to less than the chip width, but the position of the chip on the board should also be considered.

Note that for optimum noise rejection the ground pads should be placed on the circuit board ground plane, or connected to the ground plane by the shortest and widest route possible.

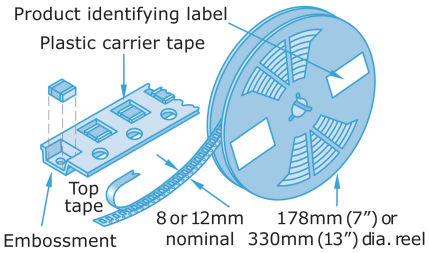
	0805	
A	0.95mm	0.037"
B	0.90mm	0.035"
C	0.30mm	0.012"
D	0.40mm	0.016"
E	0.75mm	0.030"
F	0.56mm	0.022"



Packaging

Tape packaging information for tape-and-reel parts:

Tape and reel packing of surface mounting chip capacitors for automatic placement are in accordance with IEC60286-3.

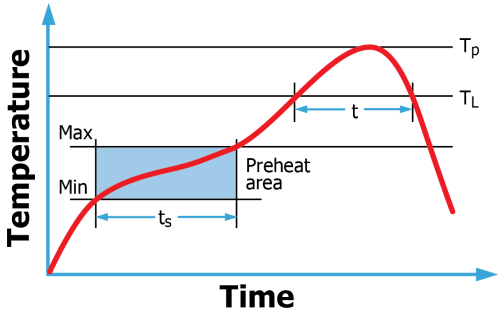


Soldering

Reflow solder in accordance with IPC-A-610. Recommended reflow profile as laid down in IPC/JEDEC J-STD-020.

Wave soldering is also possible, but care must be taken for case sizes 1210 and larger and component thickness >1.0mm. Trials are encouraged.

Hand soldering is not recommended and can lead to component damage through thermal shock.



Application notes with mounting and handling guidance are available on request.

Compex DLI Johanson MFG Novacap Syfer Voltronics

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