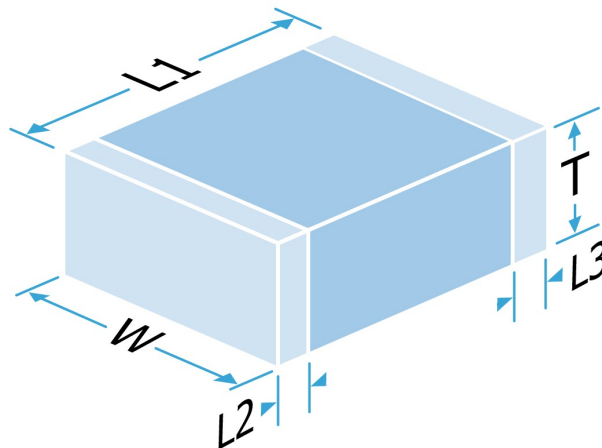


Part Number: 1210J1K00470KFT

Description: 1210 1000Vdc 47pF $\pm 10\%$ C0G/NP0 (1B)

A range of MLC capacitors approved to IECQ-CECC QC32100 to support demanding applications such as aerospace or military. Available in 0603 to 2220 chip sizes with capacitance values up to 6.8 μ F as standard. A variety of termination options are available including FlexiCap™, the world's first commercially available flexible termination.



Mechanical Specification

Size Code	1210
Length (L1) in mm (")	3.2 $\pm$ 0.20 (0.126 $\pm$ 0.008)
Width (W) in mm (")	2.5 $\pm$ 0.20 (0.098 $\pm$ 0.008)
Thickness (T) in mm (")	2.0 Max (0.08 Max)
Minimum Termination Band (L2,L3) in mm (")	0.25 (0.010)
Maximum Termination Band (L2,L3) in mm (")	0.75 (0.030)
Termination Material	Nickel Barrier, Sn Plated Solder (RoHS compliant)
Solderability	IEC-60068-2-58
Packaging	7" Reel Horizontal Orientation, 2000 per reel

General Electrical Specification

Rated Voltage	1000Vdc
Nominal Capacitance Value	47pF
Capacitance Tolerance	$\pm 10\%$
Tangent of Loss Angle (Tan δ)	≤ 0.00153
Capacitance and Tan δ Test Conditions	1.0Vrms @ 1MHz
Voltage Proof	1500Vdc
(Voltage applied for 5 secs max. @ 50mA max. charge current. 50% Max, RH)	
Min Insulation Resistance (IR)	100.00GOhm @ 100Vdc
Dielectric Classification	C0G/NP0 (1B)
Rated Temperature Range	-55°C / +125°C
Maximum Capacitance Change over Temperature Range	No DC Voltage 0 $\pm$ 30ppm/°C Rated DC Voltage -
Climatic Category (IEC)	55/125/56
Ageing Characteristic	Zero

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

Date: Thursday, October 01, 2026

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Part Number: 1210J1K00470KFT

Description: 1210 1000Vdc 47pF $\pm 10\%$ C0G/NP0 (1B)

Environmental

RoHS Compliant to 2011/65/EC as amended by 2015/863/EU

Compliant

REACH Compliant

253 compliant

California Proposition 65

No exposure risk

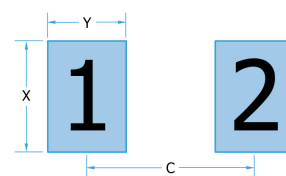
Board Layout

Knowles' conventional 2-terminal chip capacitors can generally be mounted using pad designs in accordance with international specification IPC-7351, Generic Requirements for Surface Mount Design and Land Pattern Standards, but there are some other factors that have been shown to reduce mechanical stress, such as reducing the pad width to less than the chip width. In addition, the position of the chip on the board should be considered.

Some high voltage parts may require modifications to the board layout and/or the addition of a conformal coating to prevent flashover, especially under high humidity conditions. Board cleanliness and environmental conditions can also impact this. Refer to application note AN0043 for further information.

IPC-7351 pad design

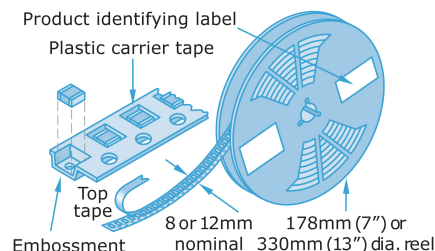
	1210	
C	3.00mm	0.118"
Y	1.15mm	0.045"
X	2.70mm	0.106"



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

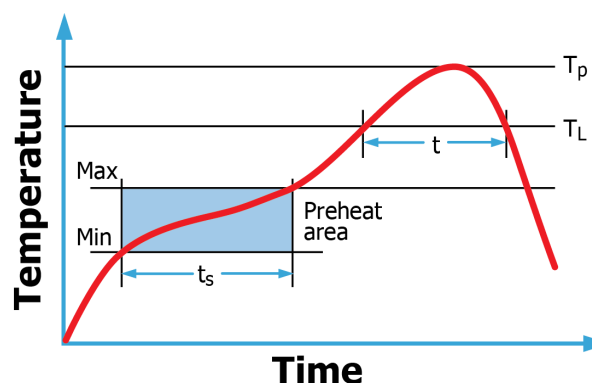
Reflow solder in accordance with IPC-A-610. Recommended reflow profile as laid down in IPC/JEDEC J-STD-020.

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

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

PdAg terminations are primarily intended for conductive epoxy attachment - they may be suitable for soldering but trials are recommended.

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



Compex

DLI

Johanson MFG

Novacap

Syfer

Voltronics

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