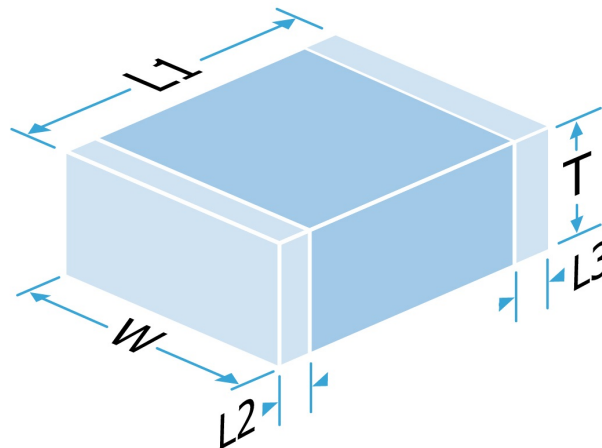


Multilayer Ceramic Chip Capacitor

Part Number: C11AH130G-9UN-X1T

Description: C11 250Vdc 13pF $\pm 2\%$ P90 Porcelain - Hi Q
Single-side marked

A range of high frequency, High Q capacitors for multiple challenging applications such as DC Blocking, Impedance Matching, Coupling, Bypass and Frequency Discrimination (Filtering). The AH range is targeted at temperature compensation applications.



Mechanical Specification

| | |
|--|--|
| Size Code | C11 (0505 package) |
| Length (L1) in mm (") | 1.477 ± 0.391 (0.059 \pm 0.016) |
| Width (W) in mm (") | 1.416 ± 0.451 (0.056 \pm 0.018) |
| Thickness (T) in mm (") | 1.334 Max (0.053 Max) |
| Minimum Termination Band (L2,L3) in mm (") | 0.193 (0.008) |
| Maximum Termination Band (L2,L3) in mm (") | 0.733 (0.029) |
| Termination Material | Nickel Barrier, Sn/Pb Plated Solder (Min 10% Lead, non RoHS) |
| Solderability | Per MIL-STD-202, Method 208 |
| Packaging | 7" Reel Horizontal Orientation, 3500 per reel |

General Electrical Specification

| | |
|---|--|
| Rated Voltage | 250Vdc |
| Nominal Capacitance Value | 13pF |
| Capacitance Tolerance | $\pm 2\%$ |
| Tangent of Loss Angle (Tan δ) | ≤ 0.0005 |
| Capacitance and Tan δ Test Conditions | 1.0Vrms @ 1MHz |
| Voltage Proof (Voltage applied for 5 secs max. @ 50mA max. charge current) | 625Vdc (375Vdc if marked) |
| Min Insulation Resistance (IR) | 1000.00GOhm @ 250Vdc |
| Dielectric Classification | P90 Porcelain - Hi Q |
| Rated Temperature Range | -55°C / +125°C |
| Maximum Capacitance Change over Temperature Range | No DC Voltage +90 \pm 20ppm/°C Rated DC Voltage - |
| Climatic Category (IEC) | - |
| Ageing Characteristic | Zero |

Knowles Precision Devices - Sales

Europe: KPD-Europe-sales@knowles.com

Asia: KPD-Asia-sales@knowles.com

USA: KPD-NA-sales@knowles.com

www.knowlescapacitors.com

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.

© The information contained on this drawing is confidential and may not be copied in whole or part in any form or disclosed to a third party without the consent of Knowles and any customer mentioned within this specification.

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

Date: Monday, October 18, 2021

20211018 140041351UTC

Multilayer Ceramic Chip Capacitor

Part Number: C11AH130G-9UN-X1T

Description: C11 250Vdc 13pF $\pm 2\%$ P90 Porcelain - Hi Q Single-side marked

Environmental

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

Non Compliant

REACH Compliant

Contains 0.1 to 1.0% w/w Lead (CAS 7439-92-1)

California Proposition 65

Risk of exposure to lead (CAS 7439-92-1)

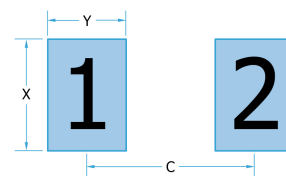
Board Layout

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. Refer to application note AN0043 for further information.

IPC-7351 pad design

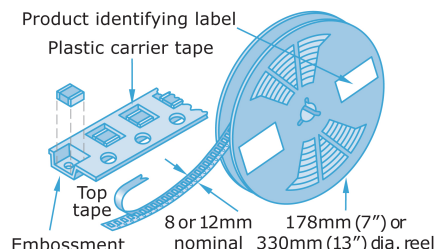
| | C11 (0505 package) | |
|---|--------------------|--------|
| C | 1.25mm | 0.049" |
| Y | 1.04mm | 0.041" |
| X | 1.88mm | 0.074" |



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

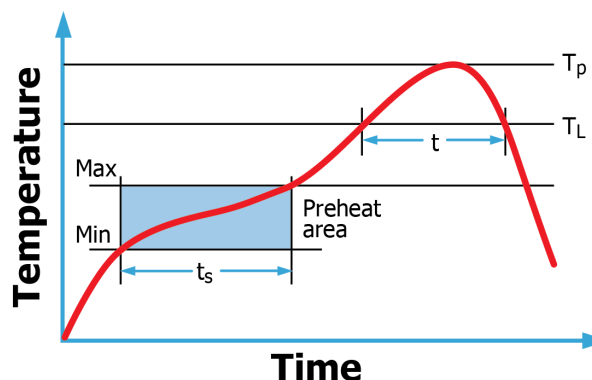
Reflow solder in accordance with IPC-A-610. Recommended reflow profile as laid down in IPC/JEDEC J-STD-020.

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.

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

Knowles Precision Devices - Sales

Europe: KPD-Europe-sales@knowles.com

Asia: KPD-Asia-sales@knowles.com

USA: KPD-NA-sales@knowles.com

www.knowlescapacitors.com

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.

© The information contained on this drawing is confidential and may not be copied in whole or part in any form or disclosed to a third party without the consent of Knowles and any customer mentioned within this specification.

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

Date: Monday, October 18, 2021

20211018 140041351UTC

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Knowles:

[C11AH130G-9UN-X1T](#)