Multilayer Ceramic Chip Capacitors

C2012X7R1A475K085AC

Product Status	Production (NRND) Recommended Alternate Part No. : C2012X7R1A475K125AC (Interchangeability is not guaranteed.)
TDK Item Description	C2012X7R1A475KT****
Applications	Commercial Grade Please refer to Part No. CGA4J3X7R1A475K125AB for Automotive use.
Feature	General General (Up to 75V)
Series	C2012 [EIA 0805]
Brand	TDK
Environmental Compliance	RoHS REACH Halogen Free Lead Free

Images are for reference only and show example products.

Catalog

Distributor Stock Info

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Tech Info

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DOCUMENTS
- Specification
- RoHS Certificate
- SVHC / REACH Certificate
- Sample Kits

TECHNICAL SUPPORT TOOLS
- S-parameter
- SPICE Netlist (Simple)
- SPICE Netlist (Precision)
- Equivalent Circuit Model
- DC Bias / Superimpotision Model (HSpice)
- DC Bias / Superimpotision Model (LTSpice)
- DC Bias / Superimpotision Model (PSpice)

3RD PARTY ECAD MODELS

SnapMagic Action Footprint, 3D model

Size

Length(L)	2.00mm ±0.20mm
Width(W)	1.25mm ±0.20mm
Thickness(T)	0.85mm ±0.15mm
Terminal Width(B)	0.20mm Min.
Terminal Spacing(G)	0.50mm Min.
Recommended Land Pattern (PA)	1.00mm to 1.30mm(Flow Soldering) 0.90mm to 1.20mm(Reflow Soldering)
Recommended Land Pattern (PB)	1.00mm to 1.20mm(Flow Soldering) 0.70mm to 0.90mm(Reflow Soldering)
Recommended Land Pattern (PC)	0.80mm to 1.10mm(Flow Soldering) 0.90mm to 1.20mm(Reflow Soldering)

Electrical Characteristics

Capacitance	4.7μF ±10%
Rated Voltage	10VDC
Temperature Characteristic	X7R(±15%)
Dissipation Factor (Max.)	10%
Insulation Resistance (Min.)	21MΩ

Other

Operating Temp. Range	-55 to 125°C
Soldering Method	Wave (Flow) Reflow
AEC-Q200	NO
Packing	Punched (Paper)Taping [180mm Reel]
Package Quantity	4000pcs
FIT (Failure In Time)	This will be displayed when you login to myTDK

Related articles

Replacing Electrolytic Capacitor with MLCC, Revised Guide

Traditionally, aluminum electrolytic capacitors and tantalum electrolytic capacitors have been widely used for...

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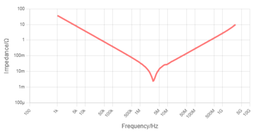
Characteristic Graph

This data is for reference only and does not guarantee product characteristics.

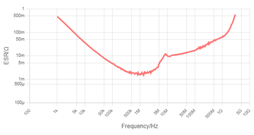
Impedance



C2012X7R1A475K085AC

GRAPH SETTINGS

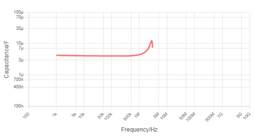
ESR



C2012X7R1A475K085AC

GRAPH SETTINGS

Capacitance



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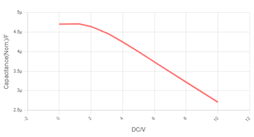
GRAPH SETTINGS

DC Bias Characteristic



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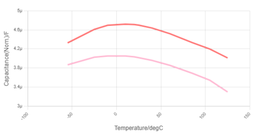
GRAPH SETTINGS

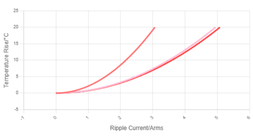
Temperature Characteristic



C2012X7R1A475K085AC(No Bias) C2012X7R1A475K085AC(DC Bias = 5)

GRAPH SETTINGS

Ripple Temperature Rising



C2012X7R1A475K085AC(100kHz) C2012X7R1A475K085AC(500kHz) C2012X7R1A475K085AC(1MHz)

GRAPH SETTINGS

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MULTILAYER CERAMIC CHIP CAPACITORS
C0603X5R0J224K030BB
Capacitance=0.22μF
Edc=6.3V
T.C.=X5R
LxWxT:0.6x0.3x0.3mm
General

MULTILAYER CERAMIC CHIP CAPACITORS
C0603X7S1A104K030BC
Capacitance=0.1μF
Edc=10V
T.C.=X7S
LxWxT:0.6x0.3x0.3mm
General

MULTILAYER CERAMIC CHIP CAPACITORS
C1005C0G1H150J050BA
Capacitance=15pF
Edc=50V
T.C.=C0G
LxWxT:1x0.5x0.5mm
General

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