Multilayer Ceramic Chip Capacitors

C3216X7R1E225K160AA

Product Status Production (NRND)

Recommended Alternate Part No. : C3216X7R1H225K160AB
(Interchangeability is not guaranteed.)

TDK Item Description C3216X7R1E225KT****

Applications Commercial Grade
Please refer to Part No. CGA5L2X7R1E225K160AA for Automotive use.

Feature General (Up to 75V)

Series C3216 [EIA 1206]

Brand TDK

Environmental Compliance RoHS, REACH, Halogen Free, Lead Free



Images are for reference only and show example products.

Catalog
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Tech Info

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

TECHNICAL SUPPORT TOOLS
- Parts Selection Tool TDK Meister
- S-parameter
- SPICE Netlist (Simple)
- SPICE Netlist (Precision)
- Equivalent Circuit Model
- DC Bias / Superimpostion Model (HSpice)
- DC Bias / Superimpostion Model (LTSpice)
- DC Bias / Superimpostion Model (PSpice)

3RD PARTY ECAD MODELS
- SnapMagic (symbol, footprint, 3D model)

Size

Length(L)	3.20mm ±0.20mm
Width(W)	1.60mm ±0.20mm
Thickness(T)	1.60mm ±0.20mm
Terminal Width(B)	0.20mm Min.
Terminal Spacing(G)	1.00mm Min.
Recommended Land Pattern (PA)	2.10mm to 2.50mm(Flow Soldering) 2.00mm to 2.40mm(Reflow Soldering)
Recommended Land Pattern (PB)	1.10mm to 1.30mm(Flow Soldering) 1.00mm to 1.20mm(Reflow Soldering)
Recommended Land Pattern (PC)	1.00mm to 1.30mm(Flow Soldering) 1.10mm to 1.60mm(Reflow Soldering)

Electrical Characteristics

Capacitance	2.2μF ±10%
Rated Voltage	25VDC
Temperature Characteristic	X7R(±15%)
Dissipation Factor (Max.)	3%
Insulation Resistance (Min.)	227MΩ

Other

Operating Temp. Range	-55 to 125°C
Soldering Method	Wave (Flow) Reflow
AEC-Q200	NO
Packing	Embossed (Plastic)Taping [180mm Reel]
Package Quantity	2000pcs
FIT (Failure In Time)	This will be displayed when you login to myTDK

Related articles



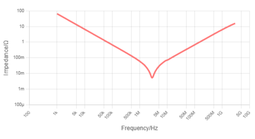
Replacing Electrolytic Capacitor with MLCC, Revised Guide
Traditionally, aluminum electrolytic capacitors and tantalum electrolytic capacitors

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Characteristic Graph

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

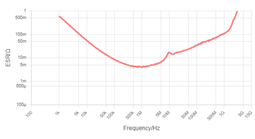
Impedance



C3216X7R1E225K160AA

GRAPH SETTINGS

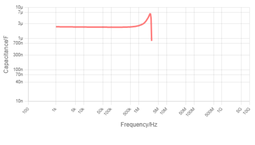
ESR



C3216X7R1E225K160AA

GRAPH SETTINGS

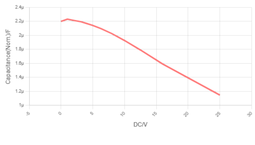
Capacitance



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GRAPH SETTINGS

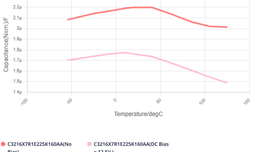
DC Bias Characteristic



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GRAPH SETTINGS

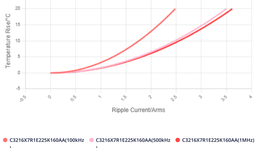
Temperature Characteristic



C3216X7R1E225K160AA(No Bias) C3216X7R1E225K160AA(DC Bias = 12.5V)

GRAPH SETTINGS

Ripple Temperature Rising



C3216X7R1E225K160AA(100kHz) C3216X7R1E225K160AA(500kHz) C3216X7R1E225K160AA(1MHz)

GRAPH SETTINGS

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MULTILAYER CERAMIC CHIP CAPACITORS
C0603X5R1A224M030BB
Capacitance=0.22μF
Edc=10V
T.C.=X5R
LxWxT:0.6x0.3x0.3mm
General



MULTILAYER CERAMIC CHIP CAPACITORS
C1005X5R1A104K050BA
Capacitance=0.1μF
Edc=10V
T.C.=X5R
LxWxT:1x0.5x0.5mm
General



MULTILAYER CERAMIC CHIP CAPACITORS
C2012C0G1H332J125AA
Capacitance=3.3nF
Edc=50V
T.C.=C0G
LxWxT:2x1.25x1.25mm
General

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