

AEC-Q200 Qualified X1/Y2 Safety Capacitor for Automotive Applications



KEY BENEFITS

- AEC-Q200 qualified
- X1, Y2 according to IEC 60384-14.3
- High electrical and mechanical robustness suitable for automotive applications

APPLICATIONS

- AC line filtering
- On-board chargers and battery management of e-cars and PHEVs
- Also ideally suited for high-quality industrial applications

RESOURCES

- Datasheet: AY2 Series - www.vishay.com/doc?28550
- For technical questions contact cdc@vishay.com
- Material categorization: for definitions, please see www.vishay.com/doc?99912



AEC-Q200 Qualified X1/Y2 Safety Capacitor for Automotive Applications



QUICK REFERENCE DATA				
DESCRIPTION	VALUE			
Ceramic Class	1		2	
Ceramic Dielectric	U2J	U2J	Y5S, Y5U	Y5S, Y5U
Voltage (V _{AC})	300	440	300	440
Min. Capacitance (pF)	10		68	
Max. Capacitance (pF)	47		4700	
Mounting	Radial			

OPERATING TEMPERATURE RANGE

-55 °C to +125 °C

TEMPERATURE CHARACTERISTICS

See Ordering Information table

CLIMATIC CATEGORY

40/125/21 according to EN 60068-1

COATING

According to UL 94 V-0
Epoxy resin, isolating, flame retardant

APPROVALS

IEC 60384-14.3
UL 60384-14
DIN EN 60384-14
CSA E60384-1:03, CSA E60384-14:09

PACKAGING

Bulk, tape and reel, taped ammpack

FEATURES

- AEC-Q200 qualified
- Temperature cycle: 1000 cycles (-55 °C to +125 °C)
- Complies with IEC 60384-14, 3rd edition
- High reliability
- Straight leads
- Singlelayer AC Disc capacitors
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
Available

APPLICATIONS

- X1, Y2 according to IEC 60384-14.3
- Application as Y capacitors for AC line filter and primary-secondary coupling on battery chargers for PHEV/EV
- Application as a filter capacitors on DC/DC converters for PHEV/EV and HEV

DESIGN

The capacitors consist of a ceramic disc both sides of which are silver-plated. Connection leads are made of tin plated copper-clad steel having a diameter of 0.6 mm.

The capacitors may be supplied with straight leads having a lead spacing of 5 mm, 7.5 mm and 10.0 mm. Encapsulation is made of flammable resistant epoxy resin in accordance with "UL 94 V-0".

CAPACITANCE RANGE

10 pF to 4700 pF

RATED VOLTAGE U_R

IEC 60384-14.3:
(X1): 440 V_{AC}, 50 Hz
(Y2): 300 V_{AC}, 50 Hz

TEST VOLTAGE

Component test (100 %):
2600 V_{AC}, 50 Hz, 2 s
Random sampling test (destructive test):
2600 V_{AC}, 50 Hz, 60 s
Voltage proof of coating (destructive test):
2600 V_{AC}, 50 Hz, 60 s

INSULATION RESISTANCE

10 000 MΩ minimum

TOLERANCE OF CAPACITANCE

± 20 % (code M); ± 10 % (code K)

DISSIPATION FACTOR

2.5 % maximum

Revision 06-May-14