



Vishay Intertechnology Launches Industry's First Automotive Grade Ceramic Capacitors With Y1 Rating in SMD Casing

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Devices Offer Y1 Rating of 500 VAC and 1500 VDC, High Capacitance to 4.7 nF, and High Humidity Robustness

MALVERN, Pa., Sept. 17, 2025 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today introduced a new series of Automotive Grade AC line rated ceramic disc safety capacitors that are the industry's first with a Y1 rating to be offered in a surface-mount casing. Combining their Y1 rating of 500 V_{AC} and 1500 V_{DC} with high capacitance to 4.7 nF, the Vishay BCcomponents [SMDY1 Automotive Series](#) devices are designed to provide EMI / RFI suppression and filtering in harsh, high humidity environments.

AEC-Q200 qualified with PPAP available, the capacitors released today will be used in on-board chargers (OBC), traction inverters, battery management systems (BMS), e-compressors, and AC/DC converters in electric (EV), hybrid electric (HEV), and plug-in hybrid electric (PHEV) vehicles. For these applications, the devices offer high humidity resistance with a Class IIB humidity grade (in accordance with IEC60384-14 annex I) and can withstand the 85 / 85 / 1000 h test.

Allowing for surface-mount assembly with a reflow soldering process, SMDY1 Automotive Series capacitors reduce production costs. Unlike leaded components, the devices offer a low, flat profile on the PCB to enable flat casings or backside PCB mounting without the clearance space required by through-hole capacitors.

RoHS-compliant and halogen-free, the components consist of a copper-plated ceramic disc and feature encapsulation made of flame-resistant epoxy resin in accordance with UL 94 V-0. The devices are available in two case sizes: the C case with a creepage distance of 10 mm and the D case with a creepage distance of 14.5 mm.

Device Specification Table:

Series	SMDY1 Automotive Series	
Ceramic class	2	
Ceramic dielectric	Y5U	
Voltage (V _{AC})	Y1: 500 (1500 V _{DC})	X1: 760
Min. capacitance (pF)	470	
Max. capacitance (pF)	4700	
Capacitance tolerance (%)	± 20	
Mounting	Surface-mount	

Samples and production quantities of the SMDY1 Automotive Series are available now, with lead times of 12 weeks.

Vishay manufactures one of the world's largest portfolios of discrete semiconductors and passive electronic components that are essential to innovative designs in the automotive, industrial, computing, consumer, telecommunications, military, aerospace, and medical markets. Serving customers worldwide, Vishay is **The DNA of tech.**[®] Vishay Intertechnology, Inc. is a Fortune 1000 Company listed on the NYSE (VSH). More on Vishay at www.Vishay.com.

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Link to product photo:

<https://www.flickr.com/photos/vishay/albums/72177720328910748>

Link to datasheet:

<http://www.vishay.com/ppg?28582> (SMDY1 Automotive Series)

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