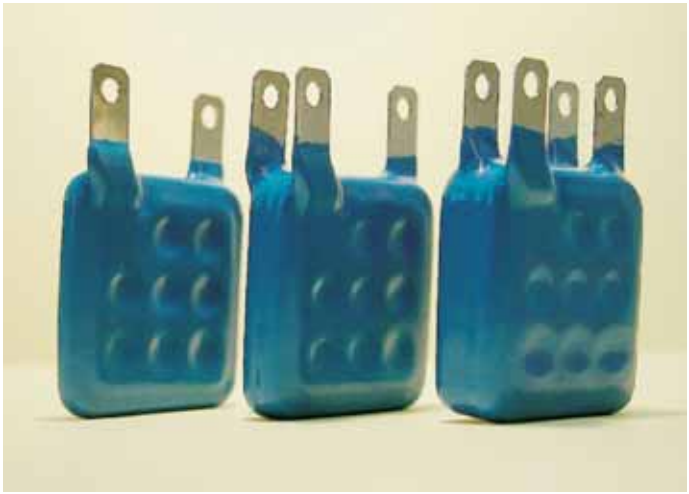
VARICON

STACKED HIGH ENERGY VARISTOR BLOCKS
ZOVS SERIES

Description



A stacked high energy varistor is formed to improve capability of standard ZOV or ZOVR high energy varistors. Such varistors provide much higher maximum pulse current and absorption energy capability in much smaller space in comparison to standard single ZOV or ZOVR varistors.

Stacked varistors are designed to provide secondary surge protection in the outdoor and service entrance environment. They provide high current (pulseshape 8/20 μs) as well as high energy (current pulseshpe 10/350 μs) handling capability suitable for Class B according to standard E DIN VDE 0675-6/A1:1996-03, SPD Class I according to IEC 61643-1:1998 and SPD Type 1 according to EN61643-11:2001.

Features

- *Operating voltage range V_{rms} .....75 V to 550 V.*
- *Different model sizes available.*
- *Broad range of current (pulse shape 8/20 μs) and energy (current pulse shape 10/350 μs) handling capabilities.*
- *Low limiting voltages @ I_{max} /2.*
- *+ 85 °C continuous operating temperature; higher operating temperatures are available upon request.*
- *In-house testing according to VDE 0675.*
- *Available in various versions and custom designed terminals.*

Surge Current Capability

Pulse Waveform 8/20 ms up to 150 kA.
Pulse Waveform 10/350 ms up to 25 kA.

KEKO

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Full Custom Parameter Designed High Energy Varistors

ZOV Series group of full custom parameter designed varistors consists of square or rectangular shaped varistors, available either as epoxy coated or as metallised varistor blocks. Other versions such as metallized blocks with rigid terminals, etc. or other coatings are also available.

The customer can specify varistor electrical properties and set the limits of size parameters following General Technical Data given below. The customer can also choose to have standard electrical parameters in non-standard varistor shape and size to suit best the available housing . The customer will have our full engineering support in realising his specific protection requirement.

In case ZOV varistor is used as metallized block without leads and coating, device ratings and characteristics are only valid for professionally soldered and coated components. Improper soldering and further manufacturing steps can lead to : change of characteristics such us reduced long term stability, reduced surge current and energy absorption capability, reduced adhesive strength of electrodes and low climatic strength. In case soldering method is dipping KEKO VARICON can minimise this problem by passivation of varistor block edges.

General Technical Data

Electrical Parameters		Value	Units
Varistor Threshold Voltage (V_n) Range at 1 mA		100 to 1100	V
Continuous :			
Steady State Applied Voltage :			
DC Voltage Range (V_{dc})		85 to 900	V
AC Voltage Range (V_{rms})		60 to 680	V
Transient :			
Peak Single Pulse Surge Current, 8/20 µs Waveform, (I_{max})		> 5500	A/cm^2
Single Pulse Surge Energy, 10/1000 µs Waveform (W_{max})		> 400	J/cm^3
Protective Level			
Clamping Voltage		< 1.9 x V_{dc}	V
Coefficient of nonlinearity α	minimum	45	
	typical	60	
Leakage Current Level	at 25 °C	0.5	$\mu A/cm^2$
	at 85 °C	10	$\mu A/cm^2$
Temperature behaviour			
Operating Ambient Temperature		-40 to +85	°C
Storage Temperature Range		-40 to +125	°C
Minimum Threshold Voltage Temperature Coefficient		+0.05	%/°C
Design			
Epoxy coated with rigid Terminals			
Metallized Block with solderable electrode finish			
Physical Parameters			
Maximum Size **L x W**		Custom design	
Shape		square, rectangular	