



Leaded varistor

Disk Type

Series/Type:	L32K460PK49
Ordering code:	B72232M0461K149
Date:	2007-10-04
Version:	c

Applications

Overvoltage protection

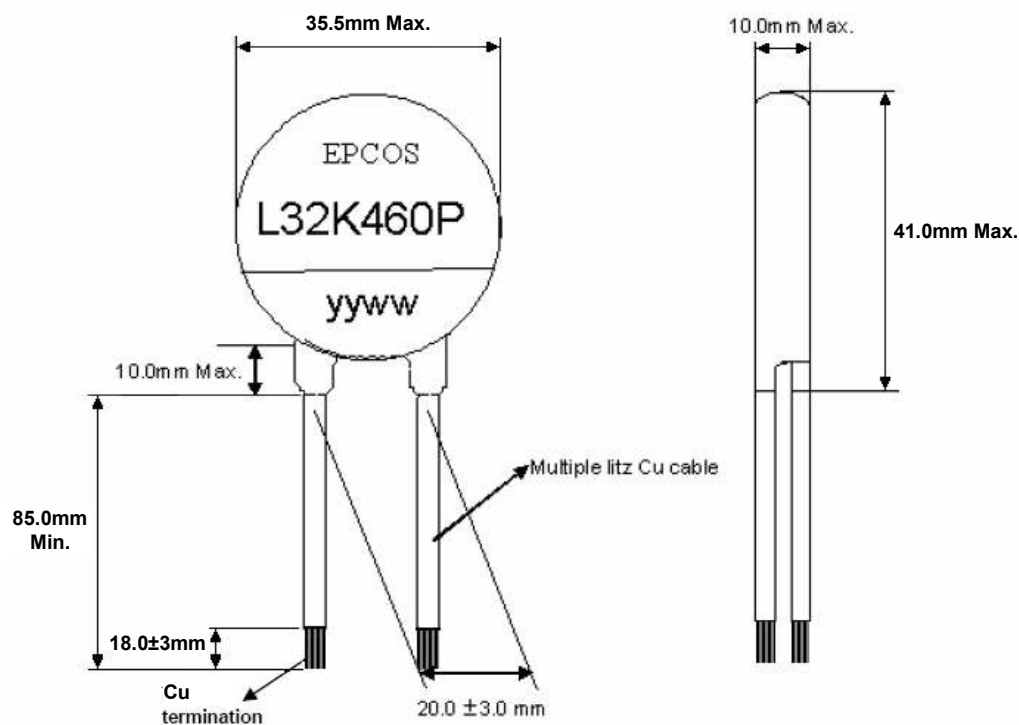
Features

- High peak surge current rating of 25 kA

Nomenclature

L	=	Disk type, metallized
32	=	Rated disk diameter
K	=	Tolerance of V_V at 1 mA: $\pm 10\%$
460	=	Max. AC voltage
P	=	Epoxy resin coating
K49	=	Customized cable leads

Dimensional drawings in mm



Electrical data

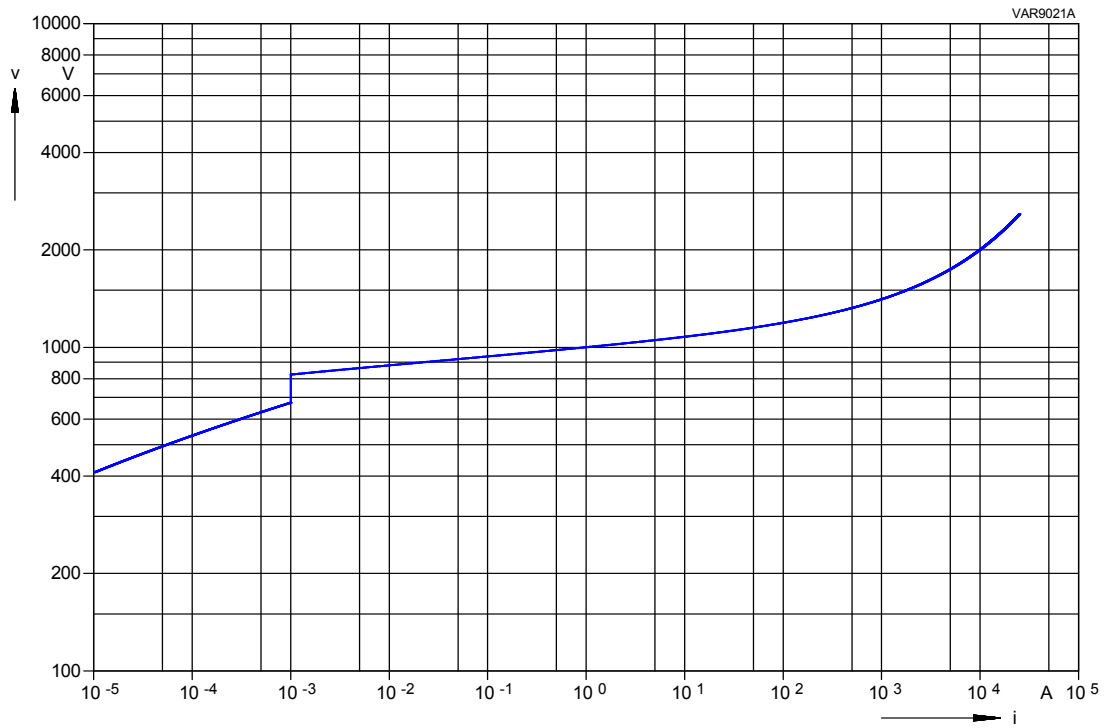
Maximum ratings (85 °C)

Max. operating AC voltage		V_{RMS}	=	460 V
Max. operating DC voltage		V_{DC}	=	615 V
Surge current (8/20 μs)	1 time	I_{max}	=	25000 A
Energy absorption (2 ms)		E_{max}	=	660 J
Average power dissipation		P_{max}	=	1.2 W

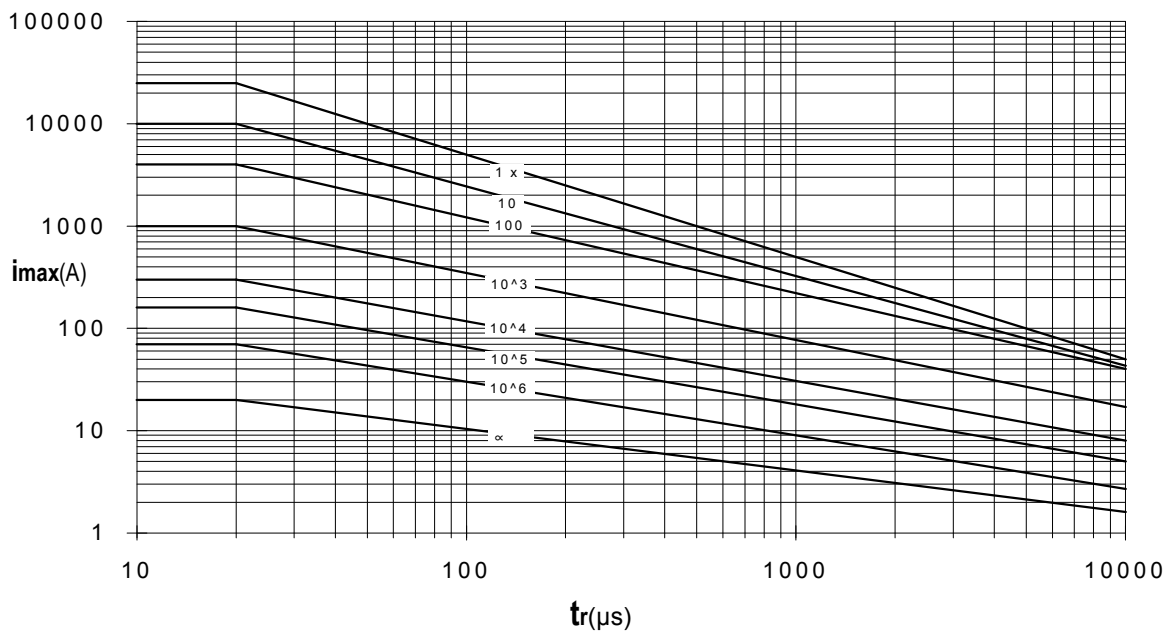
Characteristics (25 °C)

Varistor voltage at 1 mA		V_V	=	750 V $\pm 10\%$
Clamping voltage at 200 A (8/20 μs)		V_{cmax}	=	1240 V
Typ. capacitance at 1 kHz		C	=	1200 pF

v/i characteristic



Derating



Special electrical data for use in accordance with TRMSCAAP2 REV 2

Maximum continuous operating voltage (U_c)	440 V_{RMS}
Rated voltage (U_r)	480 V_{RMS}
Nominal lightning discharge current I_n (8/20 μs)	5 kA
Peak residual voltage for 8/20 μs current impulse of the following impulse:	
1 kA	
5 kA	2500 V_{peak} max.
10 kA	
steep current impulse residual voltage	2500 V_{peak} max.
virtual front time T_1 : 2 $\mu s \pm 10\%$	
virtual time to half value	
of the tail:	<20 μs
peak value of current :	5 kA $\pm 5\%$
long duration current impulse withstand test	
peak current	75 A
virtual duration of peak	1000 μs
rectangular pulse shape in accordance with IEC 60-1	
number of groups of applications	4
number of impulses per group	5
interval between groups	25 - 30 minutes
interval between impulses	50 - 60 seconds
visual examination: no visible damage	
electrical measurement: change of varistor voltage less than 10 %	

operating duty test

initial measurement: residual voltage at $I_n = 5$ kA (8/20 μs)	
conditioning:	20 impulses at $I_n = 5$ kA (8/20 μs) in 4 groups of 5 impulses;
	interval between impulses: 50 - 60 seconds
	interval between groups: 25 - 30 minutes
	superimposed on continuous operating voltage +20%
	($1.2 \cdot U_c = 528 V_{RMS}$)

Special electrical data for use in accordance with TRMSCAAP2 REV 2 (cont'd)

high current impulse 4/10 μ s :

1 impulse at $I_{max} = 30$ kA

preheat to $60\text{ }^{\circ}\text{C} \pm 3\text{ }^{\circ}\text{C}$

1 impulse at $I_{max} = 30$ kA

rated voltage $U_r = 480$ V for 10 seconds

continuous operating voltage $U_c = 440$ V for 30 minutes

cool to ambient , $20\text{ }^{\circ}\text{C} \pm 15\text{ }^{\circ}\text{C}$

requirement: power dissipation decreases at least during
the last 15 minutes of U_c application

measurement: residual voltage at $I_n = 5$ kA (8/20 μ s)

requirement: change of residual voltage less 10 %
no visible damage

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