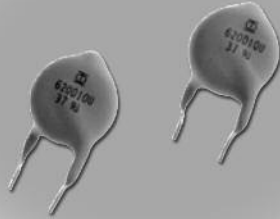
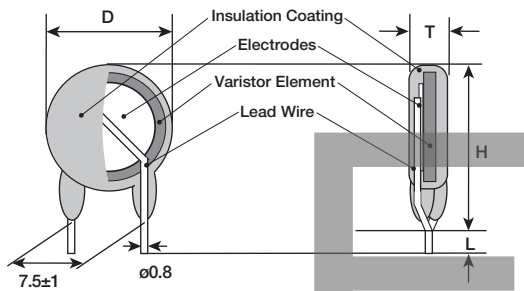


### features

- Varistors have two-way symmetries and can absorb positive and negative surges
- Flame retardant SILICONE (UL94V-0) outer coating (UL Registered Marking)
- Products meet EU RoHS requirements

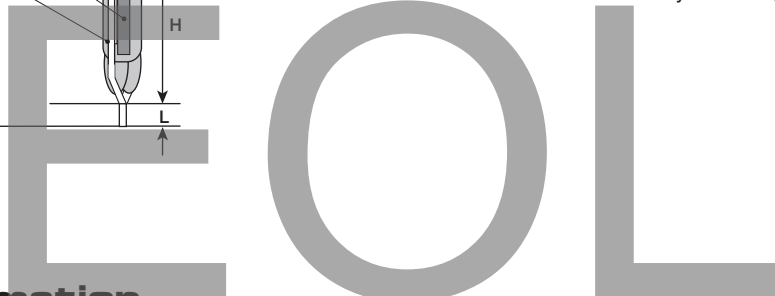


### dimensions and construction



Type	Dimensions inches (mm)			
	D (max.)*	T (max.)*	H (max.)	L
NVF10U	.591 - .630 (15.0 - 16.0)	.268 - .453 (6.8 - 11.5)	.866 (22.0)	.157±.004 (4.0 - 0.1)

\* D max. and t max. vary according to the varistor voltage



### ordering information

<b>NVF</b>	<b>10</b>	<b>U</b>	<b>C</b>	<b>D</b>	<b>F</b>	<b>470</b>
Type	Diameter of Element 10: ø10mm	Series U: U series	Termination Material C: Sn-Cu	Inner Connect Solder Material D: SnAg	Forming & Packaging F: L= 4.0mm	Varistor Voltage 470V 470

### applications and ratings

Part Designation	Varistor Voltage V <sub>1mA</sub> (V)	Maximum Allowable Voltage		Maximum Energy E (J) T= 2ms	Maximum Peak Current T= 8/20µs (A)		Clamping Volume V25A
		A.C.(V <sub>r.m.s.</sub> )	D.C.(V)		I <sub>p</sub> (1 time)	I <sub>p</sub> (10000 times)	
NVF10UCDF220	198~242	140	180	27.5	3500	150	360
NVF10UCDF240	216~264	150	200	30.0			395
NVF10UCDF270	247~303	175	225	35.0			455
NVF10UCDF430	387~473	275	350	55.0			710
NVF10UCDF470	423~517	300	385	60.0			775
NVF10UCDF510	459~561	320	410	67.0			845
NVF10UCDF620	558~682	385	505	67.0			1025
NVF10UCDF680	612~748	420	560	67.0			1120

Operating temperature range: -40°C to +85°C  
Storage temperature range: -40°C to +125°C

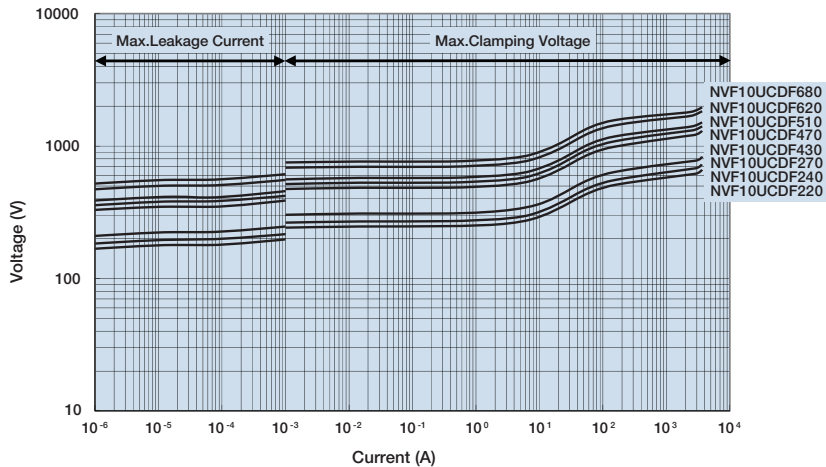
For further information on packaging, please refer to Appendix C.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

12/20/17

## environmental applications

### Voltage Current Curves (Ta = +25°C)



## Performance Characteristics

Parameter	Requirement $\Delta V1 \pm \%$	Test Method
Varistor Voltage	Within specified tolerance	Voltage between terminals when the specified current is flowed
Resistance to Solder Heat	$\pm 5\%$ no abnormality in appearance	$260^\circ\text{C} \pm 5^\circ\text{C}$ , 10 seconds $\pm 1$ second
Solderability	95% coverage minimum	$230^\circ\text{C} \pm 5^\circ\text{C}$ , 5 seconds $\pm 0.5$ second/ $250^\circ\text{C} \pm 5^\circ\text{C}$ , 5 seconds $\pm 0.5$ second (Pb free)
Rapid Change of Temperature	$\pm 5\%$ no abnormality in appearance	$-40^\circ\text{C}$ (30 minutes)/ $+125^\circ\text{C}$ (30 minutes), 50 cycles
Maximum Peak Current	$\pm 10\%$ no abnormality in appearance	Rated impulse current of ( $T=8/20\mu$ seconds), positive or negative applied once
Maximum Energy	$\pm 10\%$ no abnormality in appearance	A single standard impulse of ( $T=2m$ second), once
High Temperature Life with d.c. Bias	$\pm 10\%$ no abnormality in appearance	$85^\circ\text{C} \pm 5^\circ\text{C}$ , 1000h, Load: Maximum allowable circuit voltage (Vd.c.)
High Temperature & High Humidity Life with d.c. Bias	$\pm 10\%$ no abnormality in appearance	$85^\circ\text{C} \pm 5^\circ\text{C}$ , 85% RH, 1000h, Load: Maximum allowable circuit voltage (Vd.c.)
High Temperature & High Humidity Storage Life	$\pm 5\%$ no abnormality in appearance	$80^\circ\text{C} \pm 5^\circ\text{C}$ , 95% RH, 1000h
High Temperature Storage	$\pm 5\%$ no abnormality in appearance	$125^\circ\text{C} \pm 5^\circ\text{C}$ , 1000h
Low Temperature Storage	$\pm 5\%$ no abnormality in appearance	$-40^\circ\text{C} \pm 5^\circ\text{C}$ , 1000h
Peak Current Life	$\pm 10\%$ no abnormality in appearance	Rated impulse current of ( $T=8/20\mu$ seconds), 10,000 times, interval 10 seconds