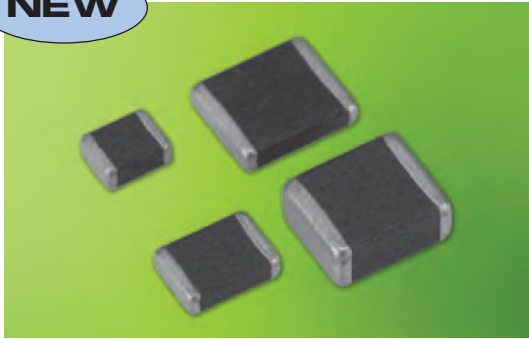


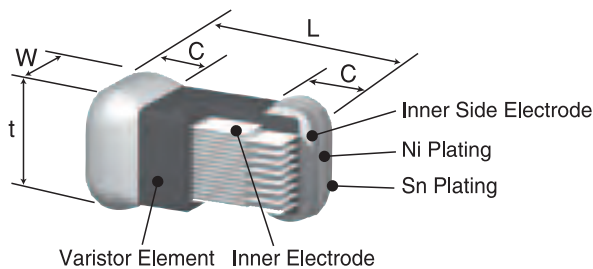
NEW



features

- Varistors own two-way symmetries and can absorb positive and negative surges
- Multilayer construction allows its small size to absorb a large surge
- Small space and high density mounting available due to the small package
- Suitable for both flow and reflow solderings
- Products meet EU RoHS requirements

dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm)			
	L	W	t	c
2E (1210)	.126±.012 (3.2±0.3)	.098±.012 (2.5±0.3)	.051±.012 (1.3±0.3)	.02±.010 (0.5±0.25)
2J (1812)	.177±.012 (4.5±0.3)	.126±.012 (3.2±0.3)	.051±.012 (1.3±0.3)	.024±.012 (0.6±0.3)
2L (2220)	.224±.012 (5.7±0.3)	.185±.012 (4.7±0.3)	.051±.012 (1.3±0.3)	.026±.014 (0.65±0.35)
2L H (2220)	.224±.012 (5.7±0.3)	.185±.012 (4.7±0.3)	.098±.012 (2.5±0.3)	.030±.014 (0.75±0.35)

ordering information

NV73	S	2L	T	TE	82	H
Type	Energy Code	Size	Termination Surface Material	Packaging	Varistor Voltage	Identification Code (only 2L H)
		2E: 1210 2J: 1812 2L: 2220	T: Sn	TE: Taping		

circuit protection

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

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

3/29/24

applications and ratings

Part Designation	Varistor Voltage Vc	Maximum Allowable Voltage		Clamping Voltage				Maximum Energy E (J) (1 times)	Maximum Peak Current I _P (A) (2 times)	Operating Temp.	Storage Temp. Range
	I _c = 1mA (V)	a.c rms (V)	d.c (V)	V _{1A}	V _{1A}	V _{2A}	V _{2A}				
NV73S2ETTE15	12.8 - 17.3	8	11	30	—	—	—	1.1	800	-50°C to +125°C	-50°C to +150°C
NV73S2ETTE18	15.3 - 20.7	11	14	34	—	—	—	1.3			
NV73S2ETTE22	19.8 - 24.2	12	16.5	39	—	—	—	1.5			
NV73S2ETTE24	21.6 - 26.4	14	18	39	—	—	—	1.7			
NV73S2ETTE27	24.3 - 29.7	17	22	44	—	—	—	1.9			
NV73S2ETTE33	29.7 - 36.3	20	26	54	—	—	—	2.0			
NV73S2ETTE39	35.1 - 42.9	25	30	65	—	—	—	2.3			
NV73S2ETTE47	42.3 - 51.7	30	38	77	—	—	—	2.4			
NV73S2ETTE56	50.4 - 61.6	35	45	90	—	—	—				
NV73S2ETTE82	73.8 - 90.2	50	65	135	—	—	—	1.4			
NV73S2ETTE100	90.0 - 110.0	60	85	165	—	—	—				
NV73S2ETTE110	99.0 - 121.0	70	90	180	—	—	—	400			
NV73S2JTTE12	10.2 - 13.8	6	9	—	27	—	—	1.0	1,200		
NV73S2JTTE15	12.8 - 17.3	8	11	—	32	—	—	2.0			
NV73S2JTTE18	15.3 - 20.7	11	14	—	35	—	—	2.1			
NV73S2JTTE22	19.8 - 24.2	12	16.5	—	41	—	—	2.8			
NV73S2JTTE24	21.6 - 26.4	14	18	—	44	—	—	2.8			
NV73S2JTTE27	24.3 - 29.7	17	22	—	49	—	—	3.2			
NV73S2JTTE33	29.7 - 36.3	20	26	—	54	—	—	3.6			
NV73S2JTTE39	35.1 - 42.9	25	30	—	65	—	—	4.4			
NV73S2JTTE47	42.3 - 51.7	30	38	—	77	—	—	5.0			
NV73S2JTTE56	50.4 - 61.6	35	45	—	90	—	—				
NV73S2JTTE68	61.2 - 74.8	40	56	—	110	—	—	5.8			
NV73S2JTTE82	73.8 - 90.2	50	65	—	135	—	—	5.4	800		
NV73S2JTTE100	90.0 - 110.0	60	85	—	165	—	—				
NV73S2JTTE110	99.0 - 121.0	70	90	—	180	—	—				
NV73S2JTTE150	135.0 - 165.0	95	127	—	248	—	—	6.4	500		
NV73S2LTTE12	10.2 - 13.8	6	9	—	—	28	—	2.1	2,500		
NV73S2LTTE15	12.8 - 17.3	8	11	—	—	33	—	4.6			
NV73S2LTTE18	16.2 - 19.8	11	14	—	—	36	—	5.9			
NV73S2LTTE22	19.8 - 24.2	12	16.5	—	—	41	—	7.0			
NV73S2LTTE24	21.6 - 26.4	14	18	—	—	45	—				
NV73S2LTTE27	24.3 - 29.7	17	22	—	—	48	—	8.6			
NV73S2LTTE33	29.7 - 36.3	20	26	—	—	57	—	9.4			
NV73S2LTTE39	35.1 - 42.9	25	30	—	—	65	—	11.5			
NV73S2LTTE47	42.3 - 51.7	30	38	—	—	77	—	14.4			
NV73S2LTTE56	50.4 - 61.6	35	45	—	—	90	—	9.2			
NV73S2LTTE68	61.2 - 74.8	40	56	—	—	110	—	10.6			
NV73S2LTTE82	73.8 - 90.2	50	65	—	—	135	—	6.7	1,500		
NV73S2LTTE100	90.0 - 110.0	60	85	—	—	165	—				
NV73S2LTTE110	99.0 - 121.0	70	90	—	—	180	—				
NV73S2LTTE47H	42.3 - 51.7	30	38	—	—	—	77	15	6,000		
NV73S2LTTE82H	73.8 - 90.2	50	65	—	—	—	135	14	4,500		
NV73S2LTTE100H	90.0 - 110.0	65	85	—	—	—	165				

circuit protection

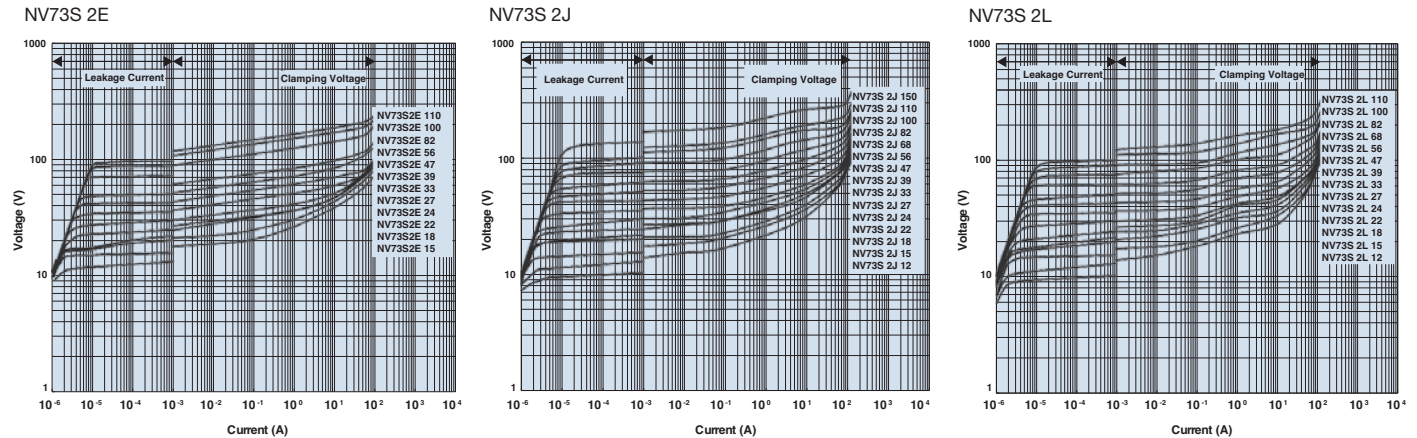
For further information on packaging, please refer to Appendix A.

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4/4/24

environmental applications

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



Performance Characteristics

Parameter	Requirement $\Delta V \pm \%$	Test Method
Varistor Voltage	Within specified tolerance	Voltage between terminals when 1mA is flowed
Clamping Voltage	Individual Vp or less	Voltage between terminals when a single standard impulse current of 8/20 μ s is applied. 2E: 2.5A 2J: 5A 2L: 10A 2LH: 100A
Resistance to Solder Heat	$\pm 10\%$	260°C $\pm 5^\circ\text{C}$, 10 seconds ± 0.5 second
Solderability	95% coverage minimum	230°C $\pm 5^\circ\text{C}$, 5 seconds ± 0.5 second
Rapid Change of Temperature	$\pm 10\%$ No mechanical damage (Cracks in solder fillets are not covered by warranty.)	-40°C (30 minutes)/ +125°C (30 minutes), 1000 cycles
Maximum Peak Current	$\pm 10\%$	A single standard impulse current of 8/20 μ seconds is applied
Maximum Energy	$\pm 10\%$	A single standard impulse of 2m second, once
Electrostatic Discharge	$\pm 10\%$	25kV (Non contact)
Vibration Resistance	No visible damage. No remarkable mechanical damage	Vibration frequency: 10Hz~2000Hz; Full amplitude: 1.5mm, 10Hz~2000Hz~10Hz 20 min. XYZ direction 4 hrs for each total 12 hrs
High Temperature Life with d.c. Bias	$\pm 10\%$	125°C $\pm 2^\circ\text{C}$, 1000h, Applied voltage: Varistor voltage (V1 _{ma}) x 0.85
High Temperature & High Humidity Life with Bias	$\pm 10\%$	85°C $\pm 2^\circ\text{C}$, 85% $\pm 3\%$ RH, 1000h, Applied voltage: Varistor voltage (V1 _{ma}) x 0.85
Thermal Shock	$\pm 10\%$ No mechanical damage (Cracks in solder fillets are not covered by warranty.)	-55°C (15 min.)/ +125°C (15 min.) 300 cycles
Shock	$\pm 10\%$ No mechanical damage	Half sine wave, Applied time: 1m second, Applied cycle: 500m/s ² , 5 cycles
High Temperature Storage Life	$\pm 10\%$	150°C $\pm 5^\circ\text{C}$, 1000h
Low Temperature Storage Life	$\pm 10\%$	-50°C $\pm 5^\circ\text{C}$, 1000h