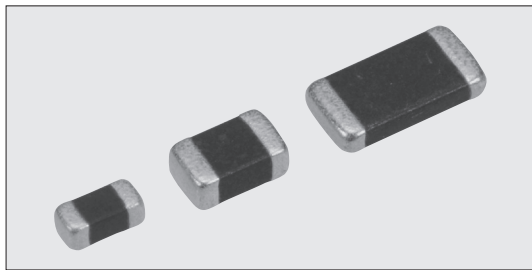
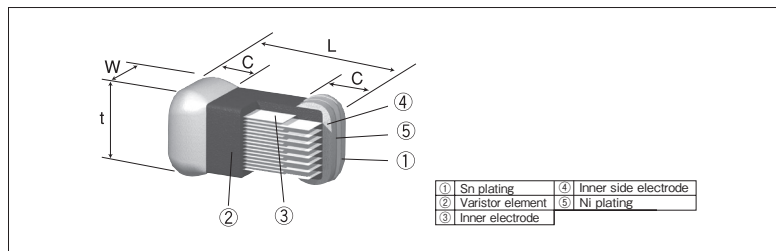


NV73DL Multilayer Type Metal Oxide Varistors (For Automotive)



Body color : Black

Construction



Features

- SMD type metal oxide varistors.
- Ideal for the countermeasure against ESD.
- AEC-Q200 Tested.
- Symmetrical non-linearity V-I characteristics absorb positive and negative surge.
- High maximum energy type.
- Operating temperatures up to 125°C.
- Low leakage current.
- High resistance to cyclic temperature stress.
- Suitable for both flow and reflow solderings.
- Products meet EU-RoHS requirements. EU-RoHS regulation is not intended for Pb-glass contained in electrode, varistor element and glass.

Applications

- Protection from surge to electronic device for automotive.
- Absorption of surge voltages occurred from inductive load of motors, relays, etc.
- Protection of semiconductor elements against over voltages.

Dimensions

Type (Inch Size Code)	Dimensions (mm)				Weight (g) (1000pcs)
	L	W	t Max.	c	
NV73DL 1J (0603)	1.6±0.15	0.8±0.15	1.0	0.4±0.15	3~6
NV73DL 2A (0805)	2.0±0.25	1.25±0.2	1.30	0.5±0.25	7~12
NV73DL 2B (1206)	3.2±0.3	1.6±0.3	1.45	0.55±0.3	17~27

Type Designation

Example					
NV73	DL	2A	T	TE	27
Product Code	Energy Code	Size	Termination Surface Material	Taping	Varistor Voltage
		1J : 1.6×0.8mm 2A : 2.0×1.2mm 2B : 3.2×1.6mm	T : Sn	TE : Plastic embossed BK : Bulk	

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.

For further information on taping, please refer to APPENDIX C on the back pages.

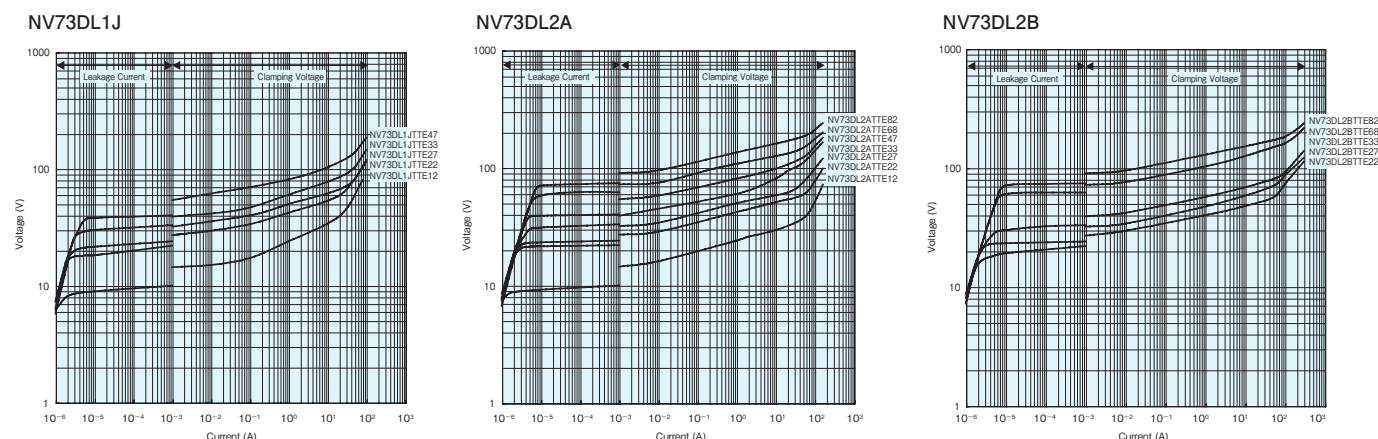
Ratings

Type	Varistor Voltage (Range) (V)	Maximum Allowable Voltage		Clamping Voltage (V)		Maximum Energy	Maximum Peak Current	Short-Time Applied Voltage (5min.)	Capacitance (Typ) 1kHz (pF)
	V _{1mA}	A.C. (V _{rms})	D.C. (V)	V _{1A}	V _{2A}	(J)	8/20μs (A) 1time	(V _{DC})	
NV73DL1JTTE12	10~14.4	6.1	8.6	24	—	0.1	80	10	630
NV73DL1JTTE22	22~27	14	16	42	—	0.2	100	24.5	390
NV73DL1JTTE27	24~32	17	22	50	—	0.2	100	24.5	320
NV73DL1JTTE33	33~39	20	26	60	—	0.3	100	24.5	200
NV73DL1JTTE47	40~54	30	34	81	—	0.3	100	42	130
NV73DL2ATTE12	10~14.4	6.1	8.6	24	—	0.1	120	10	1070
NV73DL2ATTE22	22~27	14	16	42	—	0.3	160	24.5	610
NV73DL2ATTE27	24~32	17	22	50	—	0.3	160	24.5	580
NV73DL2ATTE33	33~39	20	26	60	—	0.3	160	24.5	380
NV73DL2ATTE47	40~54	30	34	81	—	0.3	160	42	260
NV73DL2ATTE68	62~72	45	56	108	—	0.3	160	64	190
NV73DL2ATTE82	74~90	50	65	135	—	0.3	160	75	105
NV73DL2BTTE22	22~27	14	16	—	42	1	300	24.5	1600
NV73DL2BTTE27	24~32	17	22	—	50	1	300	24.5	1360
NV73DL2BTTE33	33~39	20	26	—	60	1	300	24.5	870
NV73DL2BTTE68	62~72	45	56	—	108	1.5	300	64	380
NV73DL2BTTE82	74~90	50	65	—	135	1.5	300	75	250

Operating Temperature Range : -40°C~+125°C Storage Temperature Range : -40°C~+150°C

Q'ty/Reel : 2,500pcs

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



Performance

Test Items	Performance Requirements $\Delta V_{1mA} \pm \%$	Test Methods
Varistor voltage	Within specified tolerance	Voltage between terminals when 1mA is flowed.
Resistance to soldering heat	10	260°C±5°C, 10s±0.5s
Solderability	95% coverage min	230°C±5°C, 5s±0.5s
Rapid change of temperature	10	-40°C (30min.) / +125°C (30min.) 1000cycles
Short-time applied voltage	10	Maximum value of D.C. voltage that can be applied for a short period of time. (5min.)
Maximum peak current	10	A single standard impulse current of 8/20μs is applied.
Maximum energy	10	A single standard impulse of 2ms, once
Electrostatic discharge	10	25kV (Non contact) (NV73DL1J12, NV73DL2A12 : 15kV (Non contact))
Vibration resistance	No visible damage. No remarkable mechanical damage	Vibration frequency : 10Hz~2000Hz Full amplitude : 1.5mm, 10Hz~2000Hz~10Hz 20min. XYZ direction 4hrs for each total 12hrs
High temperature & high humidity life with bias	10	85°C±2°C, 85%RH, 1000h Applied voltage : Varistor voltage (V1mA) ×0.85
High temperature life with d.c. bias	10	125°C±2°C, 1000h Applied voltage : Varistor voltage (V1mA) ×0.85
Thermal shock	10	-55°C (15min.) / +125°C (15min.) 300cycles
Shock	10	Half sine wave, Applied time : 1ms, Applied cycle : 500m/s ² , 5cycles
High temperature storage	10	+150°C, 1000h
Low temperature storage	10	-40°C, 1000h