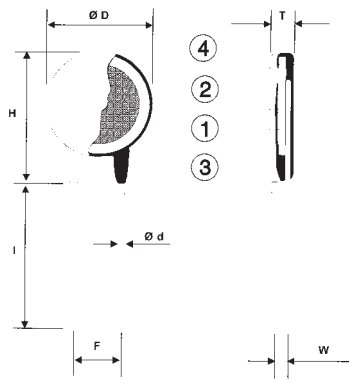


CIRCUIT PROTECTORS DISK TYPE VARISTORS PEAK CURRENT NV D_U



STRUCTURE

- 1 Disk of zinc oxide grains
- 2 Electrodes
- 3 Lead wire
- 4 Epoxy resin overcoating (UL94V-0)

IDENTIFICATION

PRODUCT CODE	COATING COLOR	MARKING
NV D_U	Dark Green	Black, Alpha Numeric (Abbreviation of P/N and Production Lot No.)

TYPE DESIGNATION (HOW TO ORDER)

Sn/Pb Part No.	NV	270	D	10	UB		TB2		
Pb-free Part No.	NV		D	10	UB	C	MHT	A	270
	PRODUCT CODE	VARISTOR VOLTAGE Unit: V Below 100V: 3 digits 22V → 022 Above 100V: real number 1800V → 1800	DISC TYPE	DISC DIAMETER 07 = 7mm 05, 07, 10, 14, 20	U-SERIES U = Power up S = Standard UB = Power up type (5mm pitch)	TERMINATION SURFACE MATERIAL C: SnCu	TAPING & FORMING "Blank": Bulk *Please see "PACKAGING"	PACKAGING A: Ammo	VARISTOR VOLTAGE Unit: V Below 100V: 3 digits 22V → 022 Above 100V: real number 1800V → 1800

FEATURES

- Varistors own two-way symmetries and can absorb positive and negative surges
- Able to withstand high current and high energy handling capability
- Wide operating voltage range
- Ideal for use as countermeasure for inductive lightning surges of equipment which is connected to DC and AC lines
- Absorption of surge voltages from inductive load of motors, relays etc. and protection of semiconductor elements from excessive voltage
- Flame retardant epoxy resin overcoating (UL94 V-0)
- Products (82V or over) of this series are recognized by UL1449 (File No. E79023)
- Products (200V or over) of this series are recognized by UL1414 (File No. E123805)
- Storage temperature range: -40°C...+125°C
- Operating temperature range: -40°C...+85°C

DIMENSIONS (mm)

TYPE (DISK ø)	ø D max.*	H max.*	T max.*	F	W*	ø d	I
D 05 U	7 or 7.5	10 or 10.5	4.3 to 5.9	5 ± 1	1.4 to 2.4	0.6	30 min.
D 07 U	9 or 9.5	12 or 12.5	4.3 to 5.9	5 ± 1	1.0 to 2.4	0.6	
D 10 U	12 to 13.5	15 to 16.5	4.3 to 14.4	7.5 ± 1	1.0 to 1.1	0.8	
D 10 UB	12	15	4.3 to 5.3	5 ± 1	1.0 to 2.3	0.6	
D 14 U	16 to 17	20.5 to 21.5	4.3 to 14.4	7.5 ± 1	1.0 to 11.6	0.8	
D 20 U	23 to 24	24.5 or 22.5	5.8 to 10.8	10 ± 1	2.1 to 5.9	1.0	

* Dimensions vary according to the varistor voltage.

RATING

Type	Varistor Vol. (V)	Max. Allowable Circuit Vol.		NVD05UC			NVD07UC			NVD10UC·NVD10UBC※2			NVD14UC※3			NVD20UC		
		a.c.r.m.s (V)	d.c.(V)	Max. Energy E (J)	Max. Peak Current I _{p(A)} (2 times)	Clamping Vol.		Max. Energy E (J)	Max. Peak Current I _{p(A)} (2 times)	Clamping Vol.	Max. Energy E (J)	Max. Peak Current I _{p(A)} (2 times)	Clamping Vol.	Max. Energy E (J)	Max. Peak Current I _{p(A)} (2 times)	Clamping Vol.	Max. Energy E (J)	Max. Peak Current I _{p(A)} (2 times)
						V _{1A}	V _{5A}											
NVD□SC018	16~22	11	14	0.3	50	40	—	—	—	—	—	—	—	—	—	—	—	—
NVD□UC022	20~27	14	18	0.5	—	48	—	1.1	—	43	—	2.6	—	43	—	5.3	—	—
NVD□UC027	25~32	17	22	0.7	—	60	—	1.3	—	53	—	3.2	—	53	—	6.5	—	—
NVD□UC033	30~39	20	26	0.8	—	73	—	1.6	—	65	—	4.0	—	65	—	7.9	—	—
NVD□UC039	37~47	25	31	0.9	125	86	—	1.9	250	73	—	4.4	500	77	—	9.4	1000	—
NVD□UC047	45~54	30	38	1.1	—	104	—	2.3	—	93	—	5.7	—	93	—	11.0	—	—
NVD□UC056	52~62	35	45	1.3	—	123	—	2.7	—	110	—	6.7	—	110	—	13.0	—	—
NVD□UC068	60~76	40	56	1.6	—	150	—	3.3	—	135	—	8.2	—	135	—	16.0	—	—
NVD□UC082	74~90	50	65	1.7	200	—	145	3.5	600	—	135	8.0	1250	—	135	14.0	2500	—
NVD□UC100※3	90~110	60	85	3.0	—	—	175	6.0	—	—	165	12.0	—	—	165	18※	—	—
NVD□UC120	108~132	75	100	3.5	—	—	210	7.0	—	—	200	14.5	—	—	200	30.0	—	—
NVD□UC150	135~165	95	125	4.5	—	—	260	9.0	—	—	250	18.0	—	—	250	37.5	—	—
NVD□UC200	185~225	130	170	6.0	—	—	355	12.5	—	—	340	25.0	—	—	340	50.0	5000	—
NVD□UC220	198~242	140	180	6.5	—	—	380	13.5	—	—	360	27.5	—	—	360	55.0	—	—
NVD□UC240	216~264	150	200	7.5	—	—	415	15.0	—	—	395	30.0	—	—	395	60.0	—	—
NVD□UC270	247~303	175	225	8.0	600	—	475	17.0	1250	—	455	35.0	—	—	455	70.0	—	—
NVD□UC330	297~363	210	270	9.5	—	—	570	20.0	—	—	545	42.0	—	—	545	80.0	—	—
NVD□UC360	342~396	230	300	11.0	—	—	620	23.0	—	—	595	45.0	—	—	595	90.0	—	—
NVD□UC390	367~429	250	320	12.0	—	—	675	25.0	—	—	650	50.0	—	—	650	100.0	—	—
NVD□UC430	407~473	275	350	13.5	—	—	745	27.5	—	—	710	55.0	—	—	710	110.0	—	—
NVD□UC470	437~517	300	385	15.0	—	—	810	30.0	—	—	775	60.0	—	—	775	125.0	—	—
NVD□UC510	474~561	320	410	—	—	—	—	—	—	—	—	—	—	—	845	—	—	—
NVD□UC620	577~682	380	505	—	—	—	—	—	—	—	—	—	—	—	1025	136.0	4500	—
NVD□UC680	637~748	420	560	—	—	—	—	—	—	—	—	—	—	—	1120	—	—	—
NVD□UC750	697~825	460	615	—	—	—	—	—	—	—	—	—	—	—	1240	—	—	—
NVD□UC780	737~858	485	640	—	—	—	—	—	—	—	—	—	—	—	1290	150.0	—	—
NVD□UC820	767~902	510	670	—	—	—	—	—	—	—	—	—	—	—	1355	165.0	—	—
NVD□UC910	857~1000	550	745	—	—	—	—	—	—	—	—	—	—	—	1500	180.0	—	—
NVD□UC1100	1070~1210	680	895	—	—	—	—	—	—	—	—	—	—	—	1815	—	—	—
NVD□UC1800	1700~1980	1000	1465	—	—	—	—	—	—	—	—	—	—	—	2970	360.0	—	—

□ Enter disc diameter

*2 Manufacturing range of NVD10UBC is varistor voltages 22...270. *3 NVD14C100 is applied.

Use the varistor within the specified values as there is a risk of destruction of the varistor when the impulse power over the maximum energy is applied.

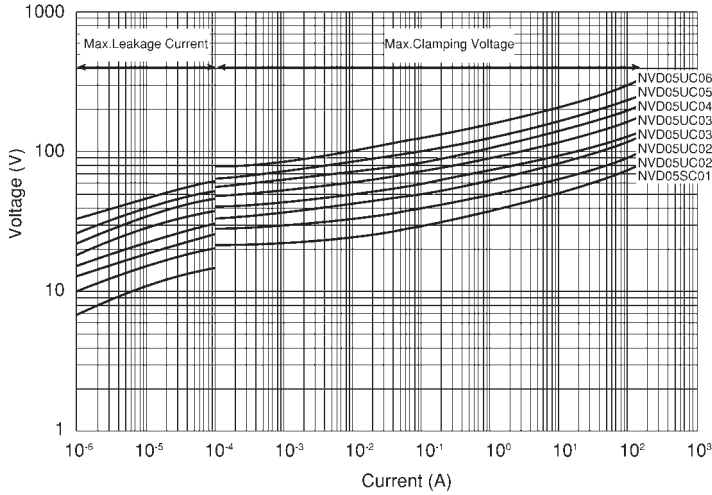
Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

THERMAL SENSORS
CIRCUIT PROTECTORS

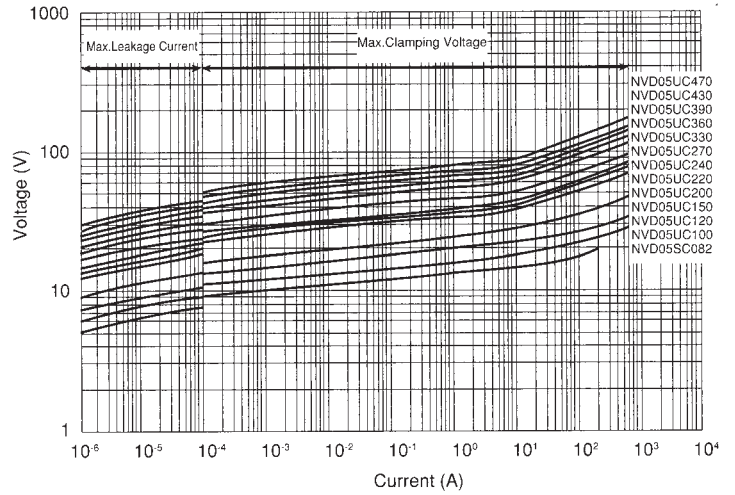
CIRCUIT PROTECTORS, DISK TYPE VARISTORS, PEAK CURRENT, NV D_U

CHARACTERISTICS (Ta = +25°C)

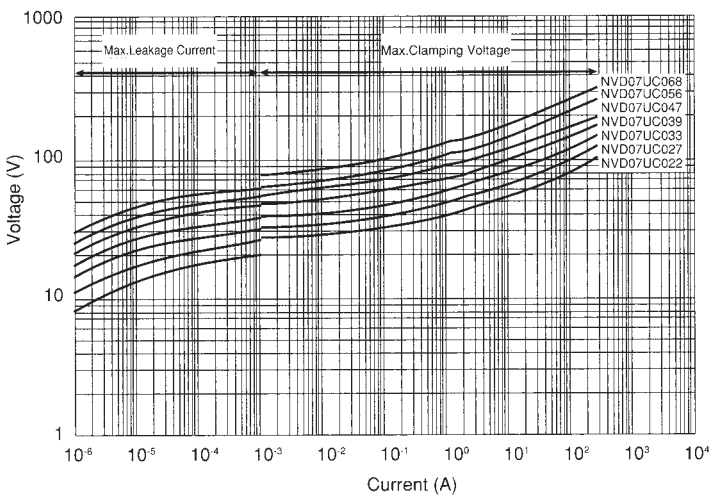
VOLTAGE vs. CURRENT (NVD05: 18V...68V)



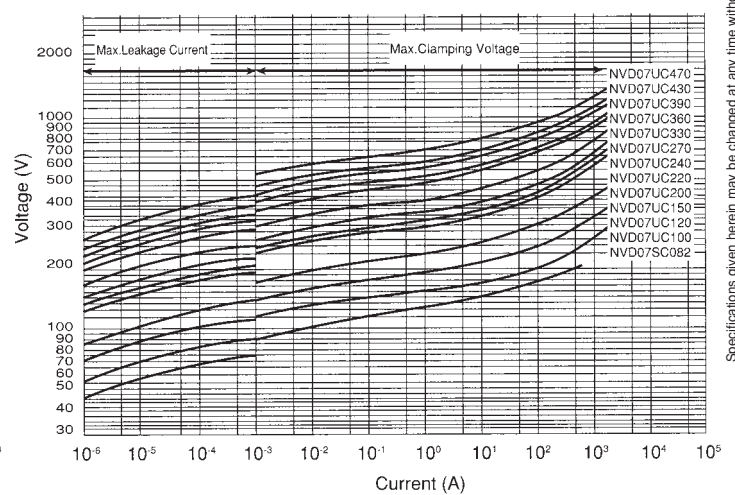
VOLTAGE vs. CURRENT (NVD05: 82V...470V)



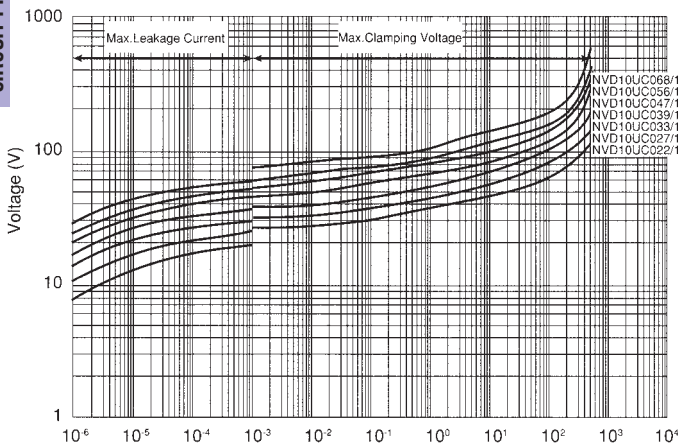
VOLTAGE vs. CURRENT (NVD07UC: 22V...68V)



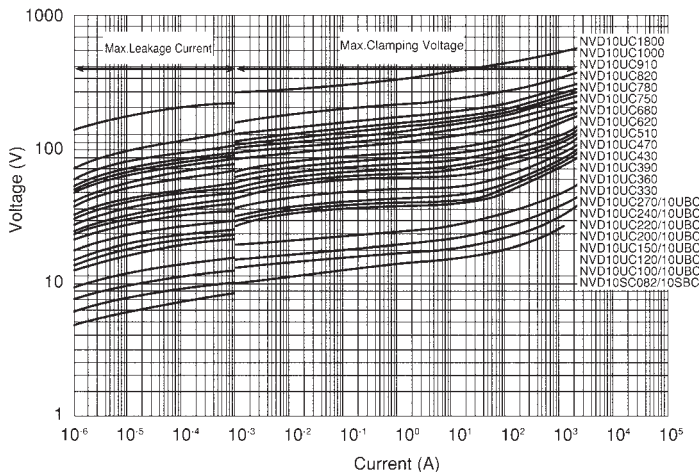
VOLTAGE vs. CURRENT (NVD07: 82V...470V)



VOLTAGE vs. CURRENT (NVD10U(B): 22V...68V)



VOLTAGE vs. CURRENT (NVD10U(B): 82V...1800V)



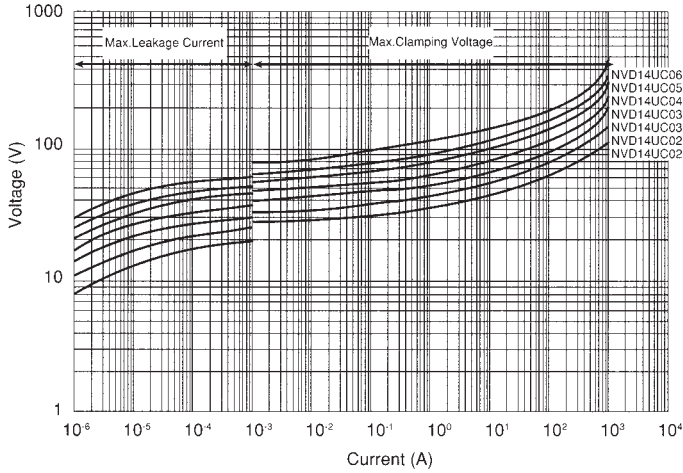
Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

THERMAL SENSORS
CIRCUIT PROTECTORS

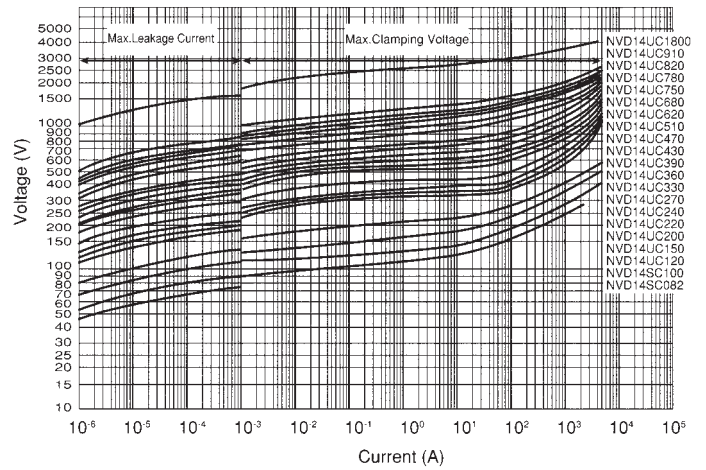
CIRCUIT PROTECTORS, DISK TYPE VARISTORS, PEAK CURRENT, NV D_U

CHARACTERISTICS (Ta = +25°C)

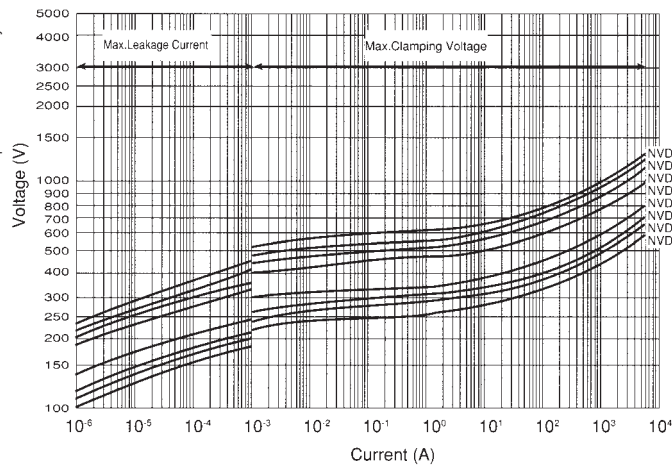
VOLTAGE vs. CURRENT (NVD14UC: 22V...68V)



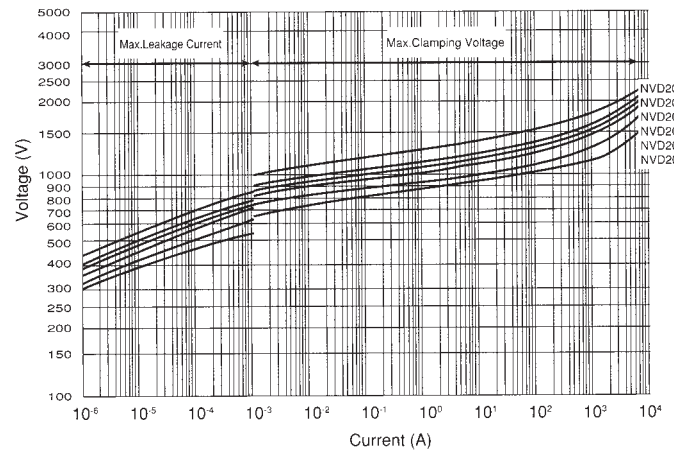
VOLTAGE vs. CURRENT (NVD14: 82V...1800V)



VOLTAGE vs. CURRENT (NVD20UC: 200V...470V)



VOLTAGE vs. CURRENT (NVD20UC: 620V...910V)



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