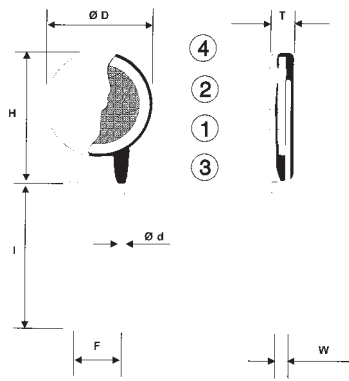


CIRCUIT PROTECTORS DISK TYPE VARISTORS PEAK CURRENT NV D_U



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. V _{1A} V _{5A}	Max. Energy E (J)	Max. Peak Current I _p (A)(2 times)	Clamping Vol. V _{2.5A} V _{10A}	Max. Energy E (J)	Max. Peak Current I _p (A)(2 times)	Clamping Vol. V _{5A} V _{25A}	Max. Energy E (J)	Max. Peak Current I _p (A)(2 times)	Clamping Vol. V _{10A} V _{50A}	Max. Energy E (J)	Max. Peak Current I _p (A)(2 times)	Clamping Vol. V _{100A}
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	—	—
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	—	—
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

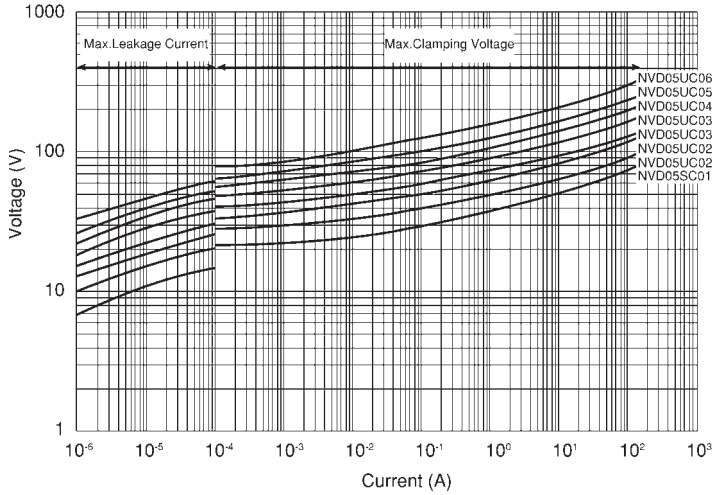
*2 Manufacturing range of NVD10UBC is varistor voltages 22...270. *3 NVD14C100 is applied.

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.

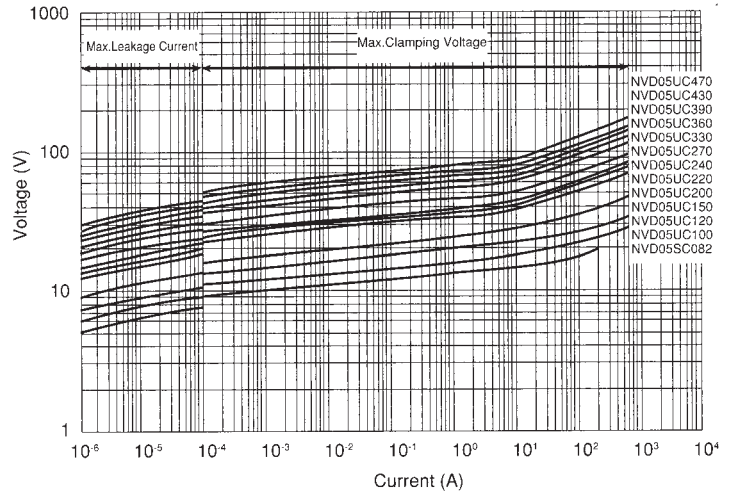
CIRCUIT PROTECTORS, DISK TYPE VARISTORS, PEAK CURRENT, NV D_U

CHARACTERISTICS (Ta = +25°C)

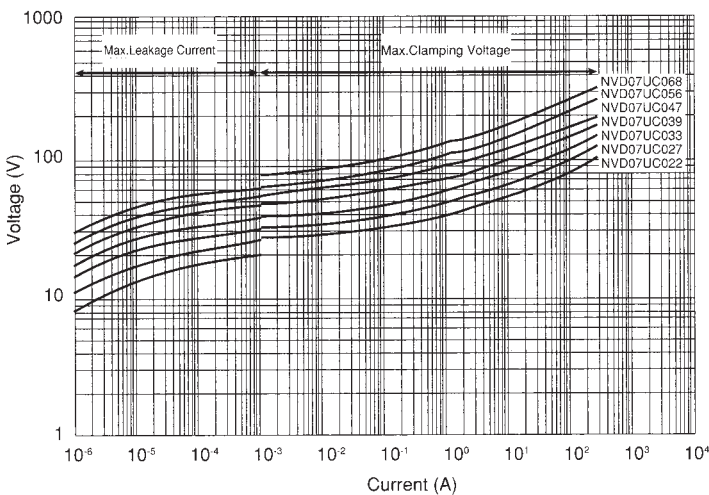
VOLTAGE vs. CURRENT (NVD05: 18V...68V)



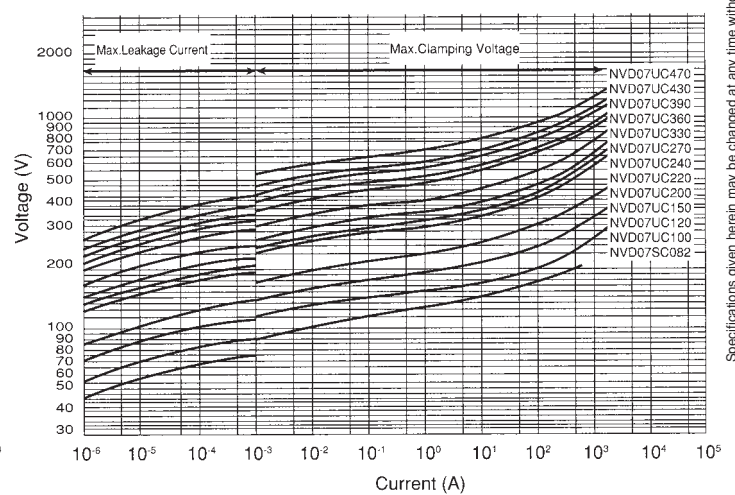
VOLTAGE vs. CURRENT (NVD05: 82V...470V)



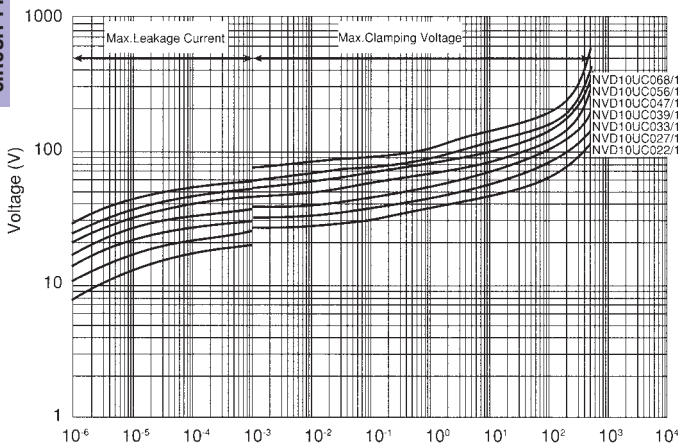
VOLTAGE vs. CURRENT (NVD07UC: 22V...68V)



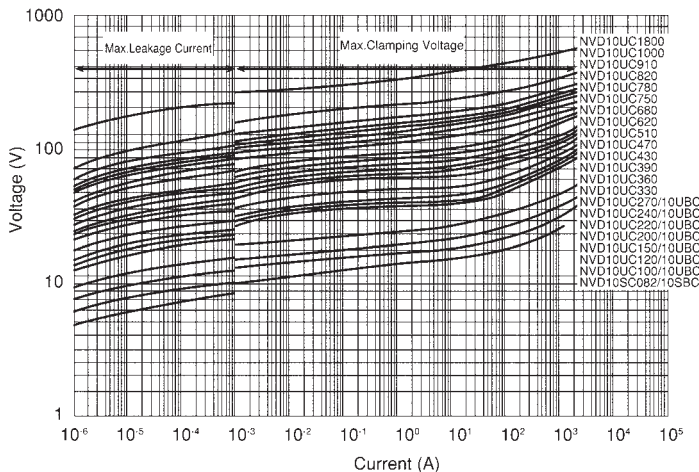
VOLTAGE vs. CURRENT (NVD07: 82V...470V)



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



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



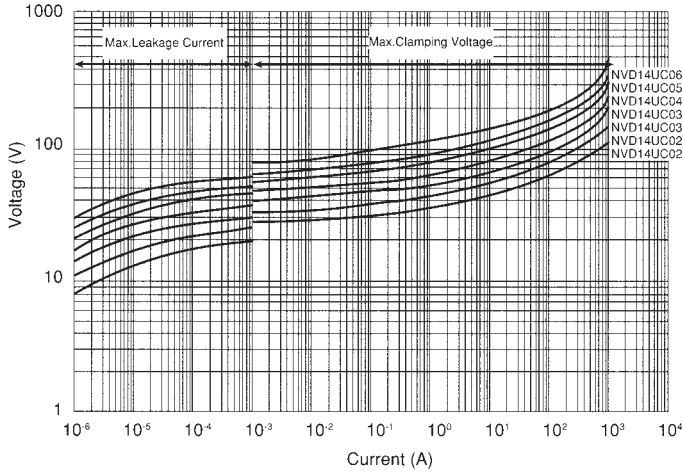
Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

THERMAL SENSORS
CIRCUIT PROTECTORS

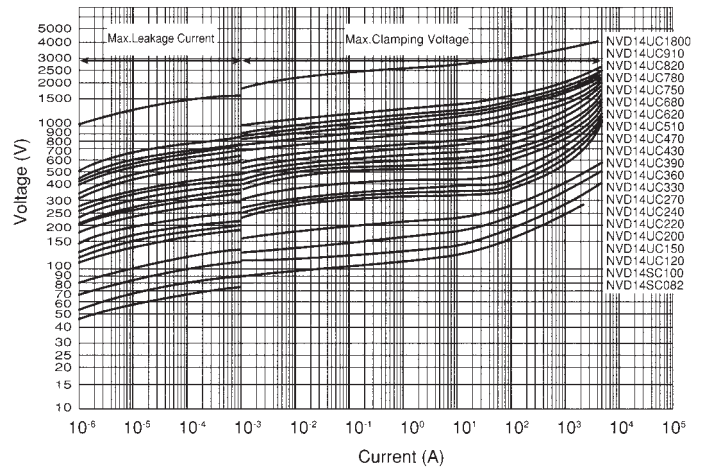
CIRCUIT PROTECTORS, DISK TYPE VARISTORS, PEAK CURRENT, NV D_U

CHARACTERISTICS (Ta = +25°C)

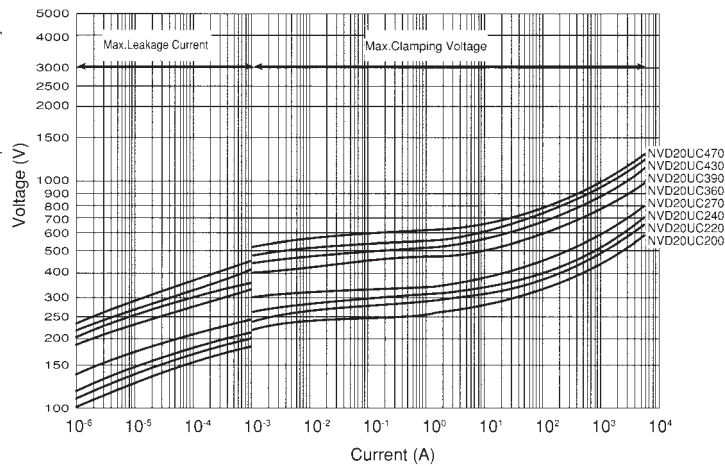
VOLTAGE vs. CURRENT (NVD14UC: 22V...68V)



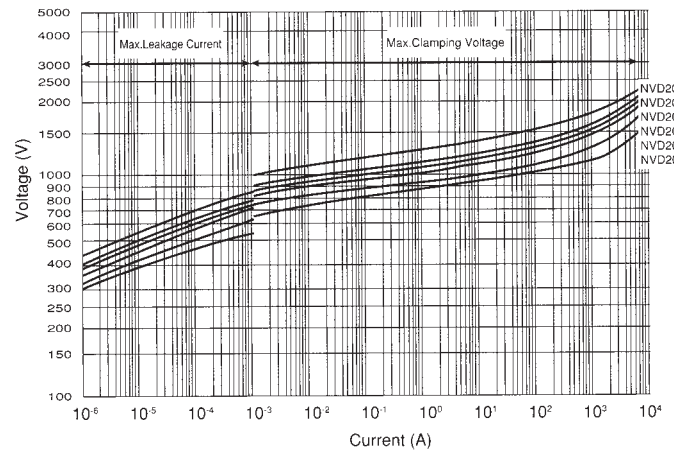
VOLTAGE vs. CURRENT (NVD14: 82V...1800V)



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



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



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