



Surge Absorbers

Ceramic Surge Absorbers

ENE series

130 - 300V AC (Ta=25°C)

Device type	Nominal varistor peak voltage Vnom* ¹ Volts	Maximum rating Applied voltage		Max. clamping voltage Vc* ²		Average power dissipation Watts	Energy Joules	Peak current* ³ (8/20 μs) Amps.	Package
		Volts ACrms	Volts DC	Volts	Ip(A)				
ENE201D-05A	200(185~225)	130	170	355	5	0.1	6.0	700	D05A
ENE201D-07A				340	10	0.25	12.5	1350	D07
ENE201D-10A				340	25	0.4	25.0	2750	D10A
ENE201D-14A				340	50	0.6	50.0	5500	D14A
ENE201D-20A				340	100	1.0	100.0	7000	D20A
ENE221D-05A	220(198~242)	140	180	380	5	0.1	6.0	700	D05A
ENE221D-07A				360	10	0.25	13.5	1350	D07
ENE221D-10A				360	25	0.4	28.0	2750	D10A
ENE221D-14A				360	50	0.6	55.0	5500	D14A
ENE221D-20A				360	100	1.0	110.0	7000	D20A
ENE241D-05A	240(216~264)	150	200	415	5	0.1	7.5	700	D05A
ENE241D-07A				395	10	0.25	15.0	1350	D07
ENE241D-10A				395	25	0.4	30.0	2750	D10A
ENE241D-14A				395	50	0.6	60.0	5500	D14A
ENE241D-20A				395	100	1.0	120.0	7000	D20A
ENE271D-05A	270(247~303)	175	225	475	5	0.1	8.0	700	D05A
ENE271D-07A				455	10	0.25	17.0	1350	D07
ENE271D-10A				455	25	0.4	35.0	2750	D10A
ENE271D-14A				455	50	0.6	70.0	5500	D14A
ENE271D-20A				455	100	1.0	135.0	7000	D20A
ENE361D-05A	360(324~396)	230	300	620	5	0.1	10.5	700	D05A
ENE361D-07A				595	10	0.25	21.0	1350	D07
ENE361D-10A				595	25	0.4	42.0	2750	D10A
ENE361D-14A				595	50	0.6	90.0	5500	D14A
ENE361D-20A				595	100	1.0	180.0	7000	D20A
ENE391D-05A	390(351~429)	250	320	675	5	0.1	11.0	700	D05A
ENE391D-07A				650	10	0.25	24.0	1350	D07
ENE391D-10A				650	25	0.4	48.0	2750	D10A
ENE391D-14A				650	50	0.6	100.0	5500	D14A
ENE391D-20A				650	100	1.0	195.0	7000	D20A
ENE431D-05A	430(387~473)	275	350	745	5	0.1	12.5	700	D05A
ENE431D-07A				710	10	0.25	28.0	1350	D07
ENE431D-10A				710	25	0.4	55.0	2750	D10A
ENE431D-14A				710	50	0.6	105.0	5500	D14A
ENE431D-20A				710	100	1.0	215.0	7000	D20A
ENE471D-05A	470(423~517)	300	385	810	5	0.1	15.0	700	D05A
ENE471D-07A				775	10	0.25	30.0	1350	D07
ENE471D-10A				775	25	0.4	60.0	2750	D10A
ENE471D-14A				775	50	0.6	125.0	5500	D14A
ENE471D-20A				775	100	1.0	250.0	7000	D20A

*¹ Indicates the varistor terminal voltage measured with 1mA DC applied.

(For 05A types, 0.1mA DC applied).

*² Indicates the peak terminal voltage measured with 8/20 μs impulse current applied.

*³ The peak current rating, I_{tm}, is based on 8/20 μs test impulse waveform.

This peak current is the maximum peak current at which the nominal varistor voltage shift does not exceed ±10% when the test impulse is applied twice at a 5-minute interval

• UL recognized (UL1449) File No. E123894

• UL recognized (UL1414) File No. E66188

• CSA recognized File No. LR98228

Ceramic Surge Absorbers

ENC series 14 - 40V AC (Ta=25°C)

Device type	Nominal varistor peak voltage Vnom* ¹ Volts	Maximum rating Applied voltage		Max. clamping voltage Vc* ²		Average power dissipation Watts	Energy Joules	Peak current* ³ (8/20 μs) Amps.	Package
		Volts ACrms	Volts DC	Volts	Ip(A)				
ENC220D-05B	22(20 to 24)	14	18	48	1	0.01	0.4	125	D05
ENC220D-07B				43	2.5	0.02	0.9	250	D07
ENC220D-10B				43	5	0.05	2.0	500	D10
ENC220D-14B				43	10	0.1	4.0	1000	D14
ENC220D-20B				43	20	0.2	13.0	2000	D20
ENC270D-05B	27(24 to 30)	17	22	60	1	0.01	0.5	125	D05
ENC270D-07B				53	2.5	0.02	1.0	250	D07
ENC270D-10B				53	5	0.05	2.5	500	D10
ENC270D-14B				53	10	0.1	5.0	1000	D14
ENC270D-20B				53	20	0.2	15.0	2000	D20
ENC330D-05B	33(30 to 36)	20	26	73	1	0.01	0.6	125	D05
ENC330D-07B				65	2.5	0.02	1.2	250	D07
ENC330D-10B				65	5	0.05	3.0	500	D10
ENC330D-14B				65	10	0.1	6.0	1000	D14
ENC330D-20B				65	20	0.2	20.0	2000	D20
ENC390D-05B	39(35 to 43)	25	31	86	1	0.01	0.8	125	D05
ENC390D-07B				77	2.5	0.02	1.5	250	D07
ENC390D-10B				77	5	0.05	3.5	500	D10
ENC390D-14B				77	10	0.1	7.0	1000	D14
ENC390D-20B				77	20	0.2	24.0	2000	D20
ENC470D-05B	47(42 to 52)	30	38	104	1	0.01	1.0	125	D05
ENC470D-07B				93	2.5	0.02	1.8	250	D07
ENC470D-10B				93	5	0.05	4.5	500	D10
ENC470D-14B				93	10	0.1	8.5	1000	D14
ENC470D-20B				93	20	0.2	30.0	2000	D20
ENC560D-05B	56(50 to 62)	35	45	123	1	0.01	1.0	125	D05
ENC560D-07B				110	2.5	0.02	2.2	250	D07
ENC560D-10B				110	5	0.05	5.5	500	D10
ENC560D-14B				110	10	0.1	10.0	1000	D14
ENC560D-20B				110	20	0.2	35.0	2000	D20
ENC680D-05B	68(61 to 75)	40	56	150	1	0.01	1.2	125	D05
ENC680D-07B				135	2.5	0.02	2.5	250	D07
ENC680D-10B				135	5	0.05	6.5	500	D10
ENC680D-14B				135	10	0.1	12.0	1000	D14
ENC680D-20B				135	20	0.2	40.0	2000	D20

*¹ Indicates the varistor terminal voltage measured with 1mA DC applied. (For 05B types, 0.1mA DC applied).

*² Indicates the peak terminal voltage measured with 8/20μs impulse current applied.

*³ The peak current rating, I_{tm}, is based on 8/20μs test impulse waveform.

This peak current is the maximum peak current at which the nominal varistor voltage shift does not exceed ±10% when the test impulse is applied twice at a 5-minute interval.



Surge Absorbers

Ceramic Surge Absorbers

ENC series

50 - 230V AC (Ta=25°C)

Device type	Nominal varistor peak voltage Vnom* ¹ Volts	Maximum rating Applied voltage		Max. clamping voltage Vc* ²		Average power dissipation Watts	Energy Joules	Peak current* ³ (8/20 µs) Amps.	Package
		Volts ACrms	Volts DC	Volts	Ip(A)				
ENC820D-05A	82(74 to 90)	50	65	145	5	0.1	1.7	250	D05
ENC820D-07A* ⁵				135	10	0.25	3.5	600	D07
ENC820D-10A* ⁵				135	25	0.4	8.0	1250	D10
ENC820D-14A* ⁵				135	50	0.6	14.0	2500	D14
ENC820D-20A* ⁵				135	100	1.0	27.0	4000	D20
ENC101D-05A	100(90 to 110)	60	85	175	5	0.1	2.0	250	D05
ENC101D-07A* ⁵				165	10	0.25	4.0	600	D07
ENC101D-10A* ⁵				165	25	0.4	10.0	1250	D10
ENC101D-14A* ⁵				165	50	0.6	18.0	2500	D14
ENC101D-20A* ⁵				165	100	1.0	30.0	4000	D20
ENC121D-05A	120(108 to 132)	75	100	210	5	0.1	2.5	250	D05
ENC121D-07A* ⁵				200	10	0.25	5.0	600	D07
ENC121D-10A* ⁵				200	25	0.4	12.0	1250	D10
ENC121D-14A* ⁵				200	50	0.6	20.0	2500	D14
ENC121D-20A* ⁵				200	100	1.0	40.0	4000	D20
ENC151D-05A	150(135 to 165)	95	125	260	5	0.1	3.0	250	D05
ENC151D-07A* ⁵				250	10	0.25	6.0	600	D07
ENC151D-10A* ⁵				250	25	0.4	16.0	1250	D10
ENC151D-14A* ⁵				250	50	0.6	25.0	2500	D14
ENC151D-20A* ⁵				250	100	1.0	50.0	4000	D20
ENC201D-05A* ⁴	200(185 to 225)	130	170	355	5	0.1	4.0	250	D05
ENC201D-07A* ^{4, 5}				340	10	0.25	10.0	600	D07
ENC201D-10A* ^{4, 5}				340	25	0.4	20.0	1250	D10
ENC201D-14A* ^{4, 5}				340	50	0.6	35.0	2500	D14
ENC201D-20A* ^{4, 5}				340	100	1.0	70.0	4000	D20
ENC221D-05A* ⁴	220(198 to 242)	140	180	380	5	0.1	4.5	250	D05
ENC221D-07A* ^{4, 5}				360	10	0.25	10.0	600	D07
ENC221D-10A* ^{4, 5}				360	25	0.4	23.0	1250	D10
ENC221D-14A* ^{4, 5}				360	50	0.6	40.0	2500	D14
ENC221D-20A* ^{4, 5}				360	100	1.0	75.0	4000	D20
ENC241D-05A* ⁴	240(216 to 264)	150	200	415	5	0.1	5.0	250	D05
ENC241D-07A* ^{4, 5}				395	10	0.25	10.0	600	D07
ENC241D-10A* ^{4, 5}				395	25	0.4	25.0	1250	D10
ENC241D-14A* ^{4, 5}				395	50	0.6	40.0	2500	D14
ENC241D-20A* ^{4, 5}				395	100	1.0	80.0	4000	D20
ENC271D-05A* ⁴	270(247 to 303)	175	225	475	5	0.1	6.0	250	D05
ENC271D-07A* ^{4, 5}				455	10	0.25	12.0	600	D07
ENC271D-10A* ^{4, 5}				455	25	0.4	30.0	1250	D10
ENC271D-14A* ^{4, 5}				455	50	0.6	50.0	2500	D14
ENC271D-20A* ^{4, 5}				455	100	1.0	90.0	4000	D20
ENC361D-05A* ⁴	360(324 to 396)	230	300	620	5	0.1	7.5	250	D05
ENC361D-07A* ^{4, 5}				595	10	0.25	15.0	600	D07
ENC361D-10A* ^{4, 5}				595	25	0.4	35.0	1250	D10
ENC361D-14A* ^{4, 5}				595	50	0.6	65.0	2500	D14
ENC361D-20A* ^{4, 5}				595	100	1.0	120.0	4000	D20

*¹ Indicates the varistor terminal voltage measured with 1mA DC applied.
(For 05A types, 0.1mA DC applied).

*² Indicates the peak terminal voltage measured with 8/20 µs impulse current applied.

*³ The peak current rating, I_{tm}, is based on 8/20 µs test impulse waveform.

This peak current is the maximum peak current at which the nominal varistor voltage shift does not exceed ±10% when the test impulse is applied twice at a 5-minute interval.

*⁴ UL recognized (UL1414) File No.E66188 UL recognized (UL1449) File No.E123894

*⁵ CSA recognized C22.2 No.1-M90

File No.LR98228

Ceramic Surge Absorbers

ENC series

250 - 1000V AC (Ta=25°C)

Device type	Nominal varistor peak voltage Vnom* ¹ Volts	Maximum rating Applied voltage		Max. clamping voltage Vc* ²		Average power dissipation Watts	Energy Joules	Peak current* ³ (8/20 µs) Amps.	Package
		Volts ACrms	Volts DC	Volts	Ip(A)				
ENC391D-05A* ⁴	390(351 to 429)	250	320	675	5	0.1	8.0	250	D05
ENC391D-07A* ^{4, 5}				650	10	0.25	17.0	600	D07
ENC391D-10A* ^{4, 5}				650	25	0.4	40.0	1250	D10
ENC391D-14A* ^{4, 5}				650	50	0.6	70.0	2500	D14
ENC391D-20A* ^{4, 5}				650	100	1.0	130.0	4000	D20
ENC431D-05A* ⁴	430(387 to 473)	275	350	745	5	0.1	9.0	250	D05
ENC431D-07A* ^{4, 5}				710	10	0.25	20.0	600	D07
ENC431D-10A* ^{4, 5}				710	25	0.4	45.0	1250	D10
ENC431D-14A* ^{4, 5}				710	50	0.6	75.0	2500	D14
ENC431D-20A* ^{4, 5}				710	100	1.0	140.0	4000	D20
ENC471D-05A* ⁴	470(423 to 517)	300	385	810	5	0.1	10.0	250	D05
ENC471D-07A* ^{4, 5}				775	10	0.25	20.0	600	D07
ENC471D-10A* ^{4, 5}				775	25	0.4	45.0	1250	D10
ENC471D-14A* ^{4, 5}				775	50	0.6	80.0	2500	D14
ENC471D-20A* ^{4, 5}				775	100	1.0	150.0	4000	D20
ENC621D-10A* ^{4, 5}	620(558 to 682)	385	505	1025	25	0.4	45.0	1250	D10
ENC621D-14A* ^{4, 5}				1025	50	0.6	85.0	2500	D14
ENC621D-20A* ^{4, 5}				1025	100	1.0	150.0	4000	D20
ENC681D-10A* ^{4, 5}	680(612 to 748)	420	560	1120	25	0.4	45.0	1250	D10
ENC681D-14A* ^{4, 5}				1120	50	0.6	90.0	2500	D14
ENC681D-20A* ^{4, 5}				1120	100	1.0	160.0	4000	D20
ENC751D-10A* ^{4, 5}	750(675 to 825)	460	615	1240	25	0.4	50.0	1250	D10
ENC751D-14A* ^{4, 5}				1240	50	0.6	100.0	2500	D14
ENC751D-20A* ^{4, 5}				1240	100	1.0	175.0	4000	D20
ENC781D-10A* ^{4, 5}	780(702 to 858)	485	640	1290	25	0.4	50.0	1250	D10
ENC781D-14A* ^{4, 5}				1290	50	0.6	105.0	2500	D14
ENC781D-20A* ^{4, 5}				1290	100	1.0	180.0	4000	D20
ENC821D-10A* ^{4, 5}	820(738 to 902)	510	670	1355	25	0.4	55.0	1250	D10
ENC821D-14A* ^{4, 5}				1355	50	0.6	110.0	2500	D14
ENC821D-20A* ^{4, 5}				1355	100	1.0	190.0	4000	D20
ENC911D-10A* ^{4, 5}	910(819 to 1001)	550	745	1500	25	0.4	60.0	1250	D10
ENC911D-14A* ^{4, 5}				1500	50	0.6	120.0	2500	D14
ENC911D-20A* ^{4, 5}				1500	100	1.0	215.0	4000	D20
ENC102D-10A* ^{4, 5}	1000(900 to 1100)	625	825	1650	25	0.4	65.0	1250	D10
ENC102D-14A* ^{4, 5}				1650	50	0.6	130.0	2500	D14
ENC102D-20A* ^{4, 5}				1650	100	1.0	230.0	4000	D20
ENC112D-10A* ^{4, 5}	1100(990 to 1210)	680	895	1815	25	0.4	70.0	1250	D10
ENC112D-14A* ^{4, 5}				1815	50	0.6	140.0	2500	D14
ENC112D-20A* ^{4, 5}				1815	100	1.0	250.0	4000	D20
ENC182D-14A* ^{4, 5}	1800(1620 to 1980)	1000	1465	2970	50	0.6	240.0	2500	D14
ENC182D-20A* ^{4, 5}				2970	100	1.0	400.0	4000	D20

*¹ Indicates the varistor terminal voltage measured with 1mA DC applied. (For 05A types, 0.1mA DC applied).

*² Indicates the peak terminal voltage measured with 8/20 µs impulse current applied.

*³ The peak current rating, I_{tm}, is based on 8/20 µs test impulse waveform.

This peak current is the maximum peak current at which the nominal varistor voltage shift does not exceed ±10% when the test impulse is applied twice at a 5-minute interval.

*⁴ UL recognized (UL1414) File No.E66188

UL recognized (UL1449) File No.E123894

*⁵ CSA recognized C22.2 No.1-M90

File No.LR98228