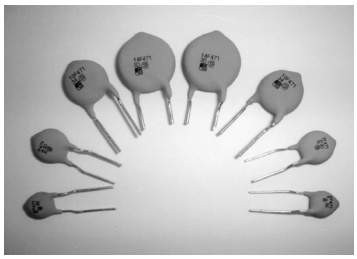
FUJI Ceramic Surge Absorbers

Z-TRAP

ENF series

220 to 680V (Varistor voltage)



■ Features

- Flame-resistant
  Suppress combustion and smoking after a malfunction caused by larger surge than the specified value
- Environment-friendly materials
  Adopts newly developed halogen-free resin mold and the Pb-free plated lead wires
- High reliability
  Greatly improved heat-cycle resistance
- Small size and high performance
- Ratings and specifications are same as the conventional ENE series.

■ Ratings and characteristics

Device type	Maximum rating					Characteristics					
	Applied voltage *1		Transient			Nominal varistor voltage *4			Max. clamping *5 voltage @test current (8/20μs)		Typical capaci-tance
	RMS 50Hz/60Hz	DC	Energy *2	Average power dissipation	Peak *3 current (8/20μs)		Tolerance				
	Vacm [Volts]	Vdcm [Volts]	Wtm [Joules]	Ptam [Watts]	Itm [Amps]	Vnom [Volts]	Min. [Volts]	Max [Volts]	Vc [Volts]	Ip [Amps]	f=1kHz [pF]
ENF221D05A	140	180	6.5	0.1	700	220	198	242	380	5	170
ENF221D07A			13.5	0.25	1350				360	10	350
ENF221D10A			28.0	0.4	2750				360	25	700
ENF221D14A			55.0	0.6	5500				360	50	1400
ENF241D05A	150	200	7.5	0.1	700	240	216	264	415	5	170
ENF241D07A			15.0	0.25	1350				395	10	350
ENF241D10A			30.0	0.4	2750				395	25	700
ENF241D14A			60.0	0.6	5500				395	50	1300
ENF271D05A	175	225	8.0	0.1	700	270	247	303	475	5	150
ENF271D07A			17.0	0.25	1350				455	10	300
ENF271D10A			35.0	0.4	2750				455	25	600
ENF271D14A			70.0	0.6	5500				455	50	1200
ENF471D05A	300	385	15.0	0.1	700	470	423	517	810	5	80
ENF471D07A			30.0	0.25	1350				775	10	170
ENF471D10A			60.0	0.4	2750				775	25	350
ENF471D14A			125.0	0.6	5500				775	50	700
ENF511D10A	320	410	67.0	0.4	2500	510	459	561	845	25	300
ENF511D14A			136.0	0.6	4500				845	50	650
ENF621D10A	385	505	67.0	0.4	2500	620	558	682	1025	25	270
ENF621D14A			136.0	0.6	4500				1025	50	550
ENF681D10A	420	560	67.0	0.4	2500	680	612	748	1120	25	250
ENF681D14A			136.0	0.6	4500				1120	50	500

Operating ambient temperature: -40°C to +85°C Storage temperature: -40°C to +125°C

*1 The waveform of the maximum DC applied voltage is flat.
When a ripple voltage as from a rectifier source is applied, make sure that the peak voltage is within the Vdcm rating.
The AC applied voltage (50/60Hz) is a sine waveform.
When waveform distortion is extensive, make sure that the peak voltage is less than $\sqrt{2}$ times the Vacm rating.

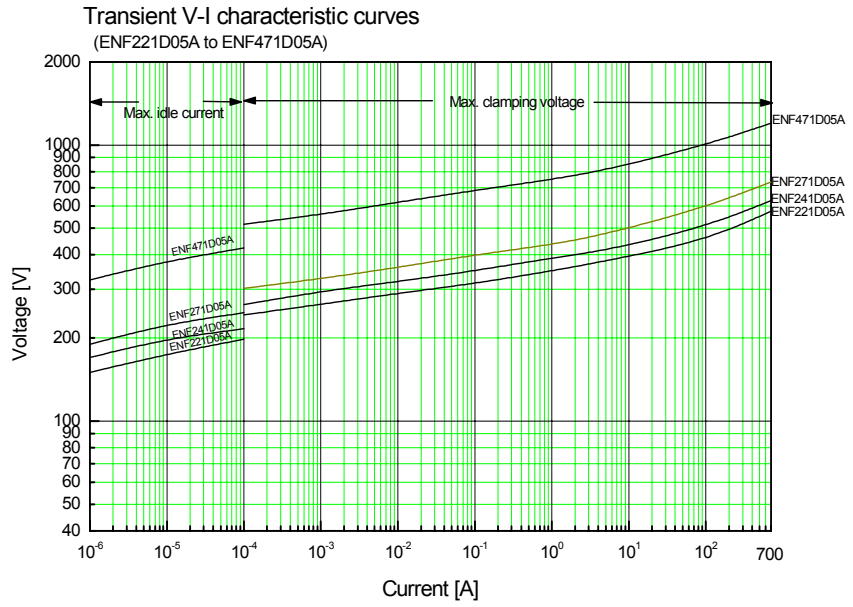
*2 Energy Wtm
Transient energy rating are given in the Wtm column in Joules (Watt-second). The rating is the maximum allowable energy of a single 2ms square-waveform impulse current continuously applied.
Energy ratings are based on a shift of Vnom of less than ±10% of the initial value.

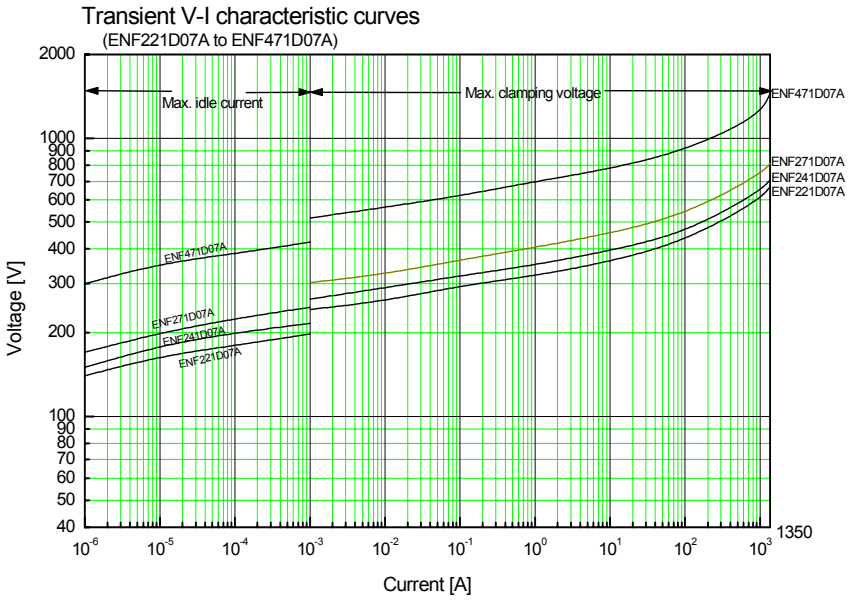
*3 Transient peak current (Itm)
The peak current rating, Itm, is based on 8/20μs test impulse wave form. This peak current is the maximum peak current at which the nominal varistor voltage shift dose not exceed ±10% when the test impulse is applied twice at a 5 minute interval.

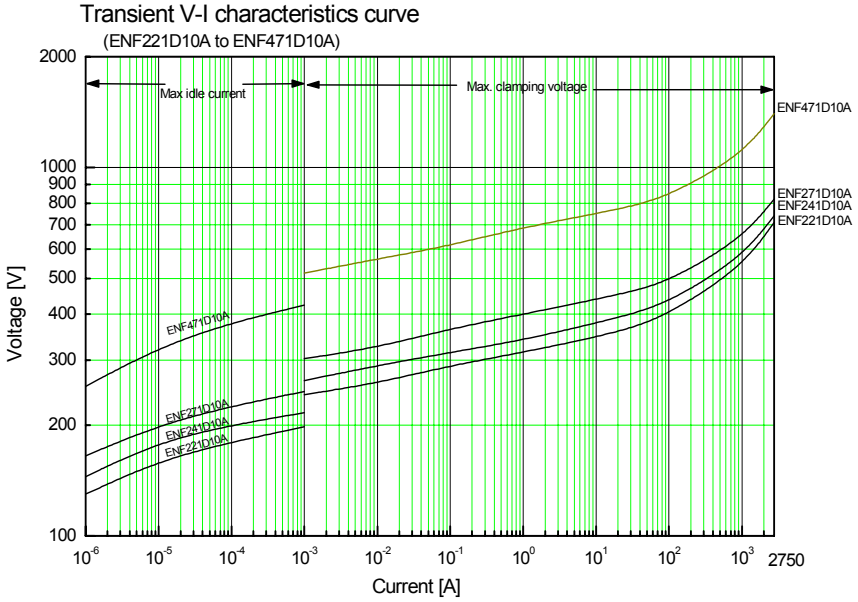
*4 Nominal varistor voltage: Vnom
Indicates the varistor terminal voltage measured with 1mA DC applied. 05A type 0.1mA DC

*5 Maximum clamping voltage: Vc
Indicates the peak terminal voltage measured with 8/20μs impulse current applied.

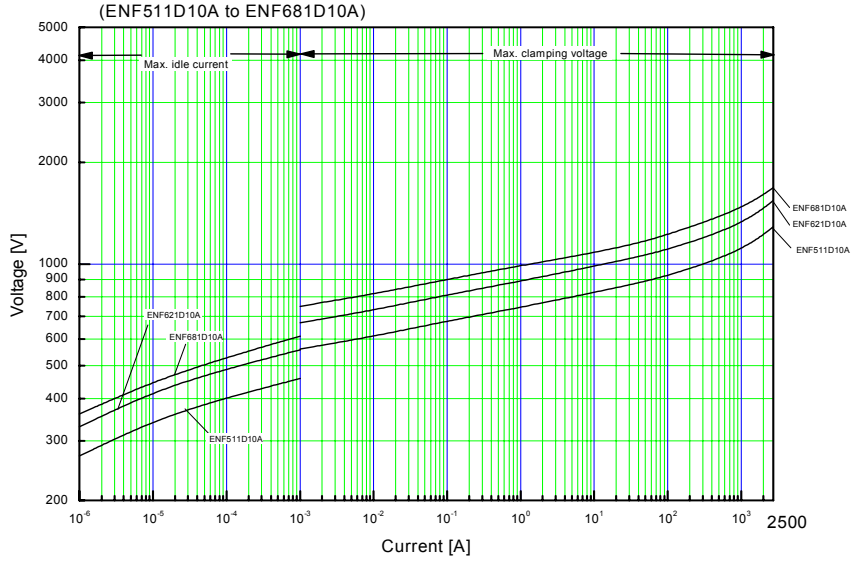
■ Characteristic curves (Typical)



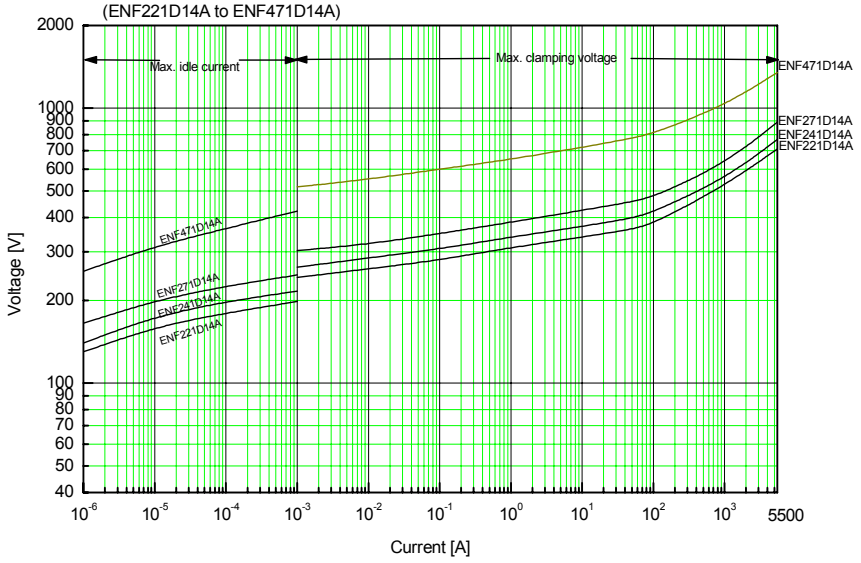




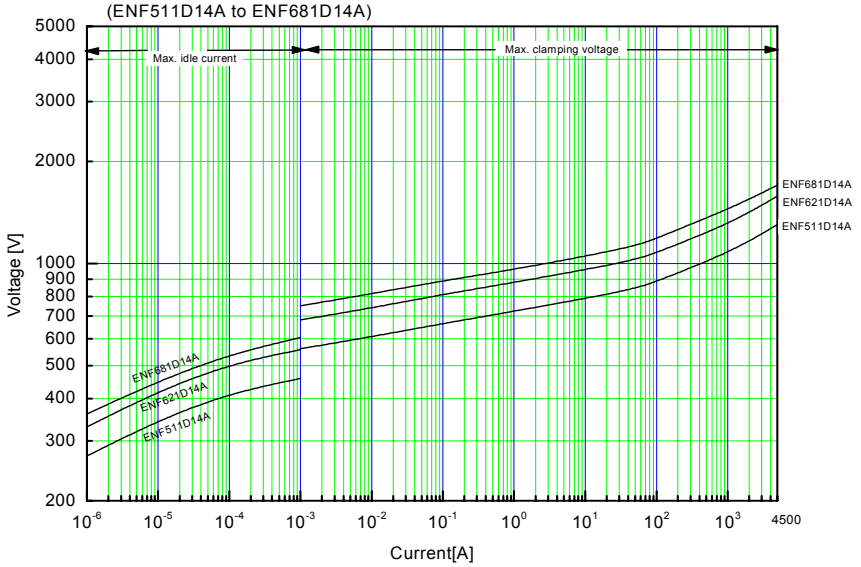
Transient V-I characteristic curves
(ENF511D10A to ENF681D10A)



Transient V-I characteristic curves
(ENF221D14A to ENF471D14A)

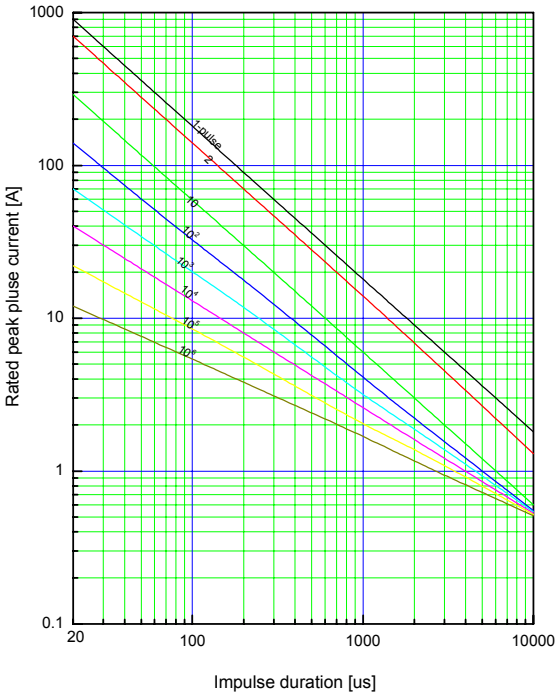


Transient V-I characteristic curves
(ENF511D14A to ENF681D14A)

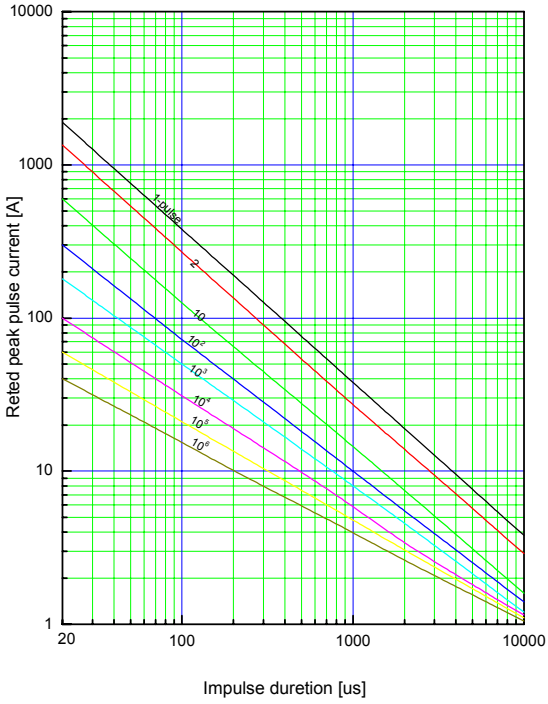


Pulse lifetime ratings

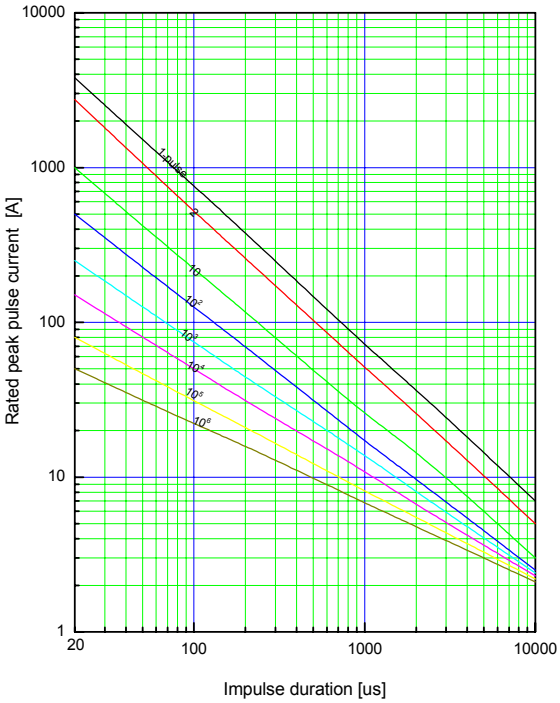
05A series (ENF221D05A to ENF471D05A)



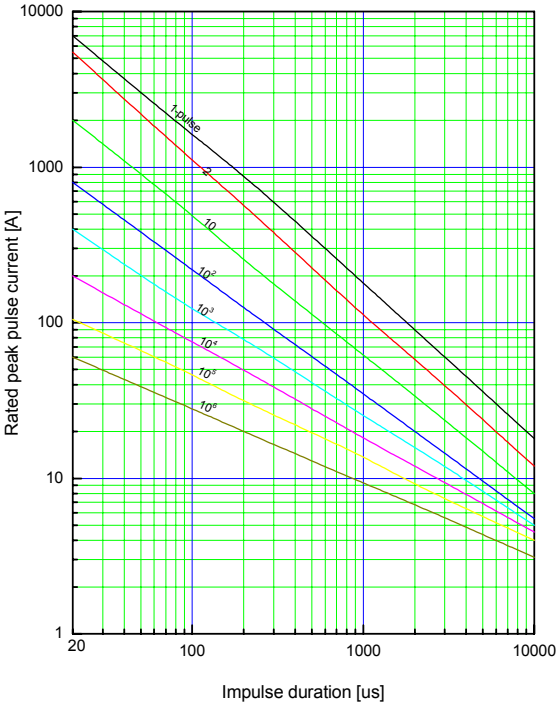
07A series (ENF221D07A to ENF471D07A)



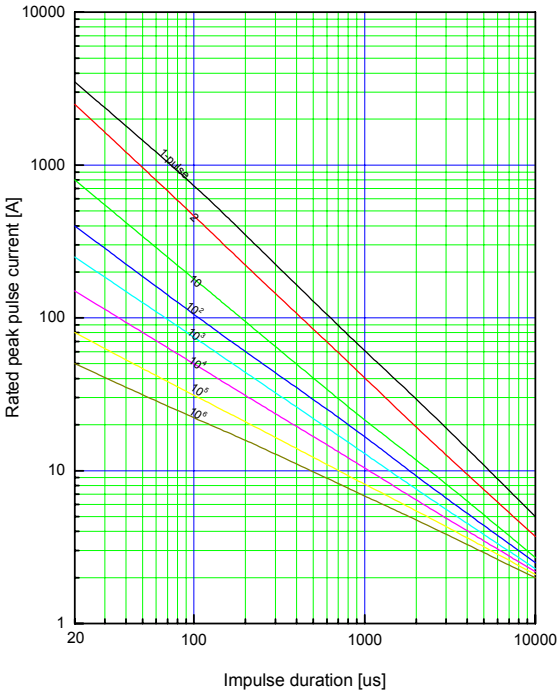
10A series (ENF221D10A to ENF471D10A)



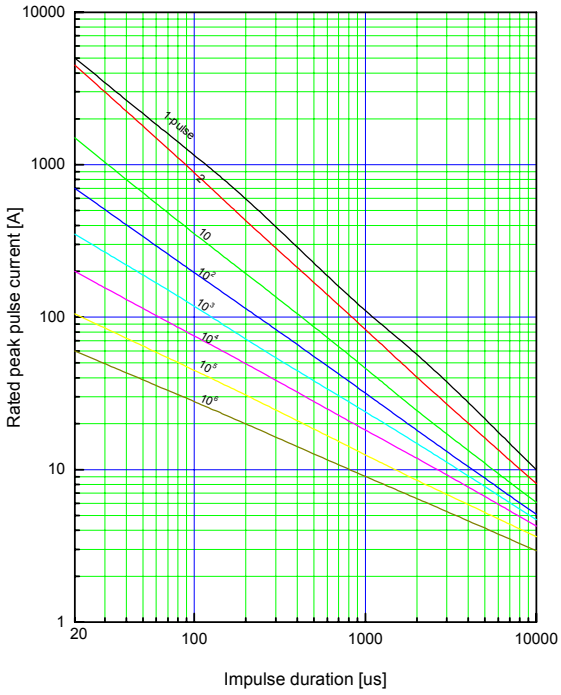
14A series (ENF221D14A to ENF471D14A)



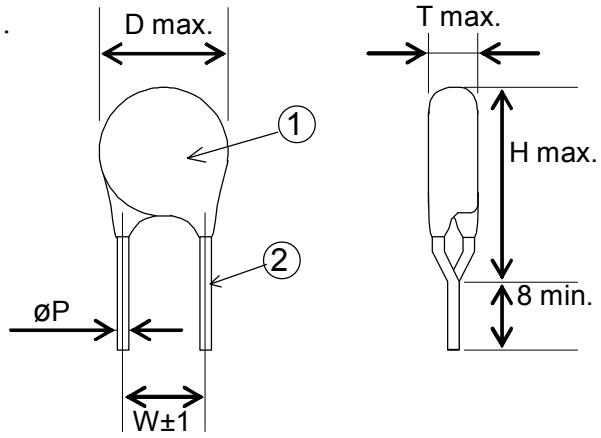
10A series (ENF511D10A to ENF681D10A)



14A series (ENF511D14A to ENF681D14A)



■ Dimensions, mm



Part	Name	Material
①	Outside resin (nonflammable resin)	Silicone resin (blue gray)
②	Lead (Pb- free)	Cu Surface conduct : Sn/Cu plated

Type number	D	H	W	T	P
ENF221D05A	7.5	14.0	5.0	4.7	0.6
ENF241D05A				4.8	
ENF271D05A				5.0	
ENF471D05A				6.0	
ENF221D07A	9.5	16.0	5.0	4.7	0.6
ENF241D07A				4.8	
ENF271D07A				5.0	
ENF471D07A				6.0	
ENF221D10A	12.0	19.0	7.5	4.9	0.8
ENF241D10A				5.0	
ENF271D10A				5.2	
ENF471D10A	13.0	20.0		6.2	
ENF511D10A				6.5	
ENF621D10A				7.1	
ENF681D10A				7.4	
ENF221D14A	16.0	23.0	7.5	4.9	0.8
ENF241D14A				5.0	
ENF271D14A				5.2	
ENF471D14A	16.5	24.0		6.2	
ENF511D14A				6.5	
ENF621D14A				7.1	
ENF681D14A				7.4	

WARNING

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   • Machine tools • Audiovisual equipment • Electrical home appliances • Personal equipment • Industrial robots etc.

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   • Submarine repeater equipment • Medical equipment

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