



**DB LECTRO**  
COMPOSANTS ÉLECTRONIQUES  
ELECTRONIC COMPONENTS

VARISTORS

TVS 1210 SMD

Multilayer Ceramic Transient Voltage Suppressor Standard Capacity

Specifications

Packaging  
Tape and Reel  
T 7 inch reel (2.000 pcs.)  
Material  
Body: Ceramic (ZnO)  
Terminals: Ni/Sn plated (code "P")  
Ag/Pt/Pd non plated (code "N" on request)  
Operating Temperature  
-55 to +125°C  
Solderability  
acc. to IEC 60068-2-58  
235°C, 2s  
Soldering Heat Resistance  
260°C, 10 sec. (IEC 60068-2-58)  
280°C, 5 sec. (IEC 60068-2-58)  
Response Time  
<0.5ns  
Temperature coefficient ( $\alpha V$ ) of clamping voltage ( $V_C$ ) @ specified test current  
<0.01%/°C  
Power dissipation  
0.15W max.  
Standards  
IEC 61000-4-2  
MIL-STD-883C

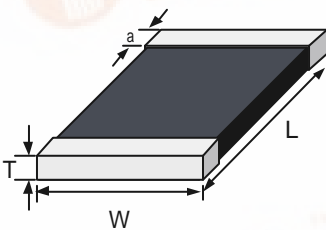
Features

Thin layer, high precise techniques  
Lead free  
Bi-directional clamping  
Standard capacity  
Available with Nickel/Tin end termination

Applications

Circuit board and ESD, EFT  
Protection of:  
• I/O ports  
• Keyboards  
• LCD's  
• Sensors

Dimensions



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
T	-	0.071	-	1.80
a	0.010	0.030	0.25	0.75
L	0.114	0.138	2.90	3.50
W	0.110	0.087	2.20	2.80

Maximum Ratings (125°C)

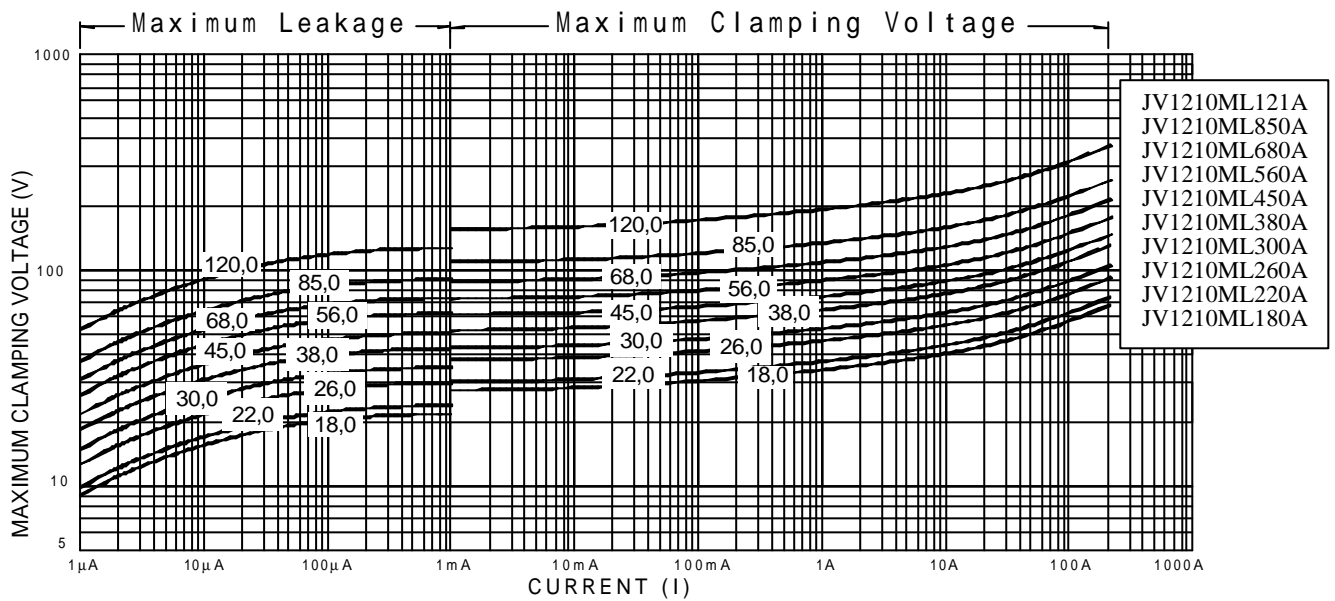
Type	max. cont. working voltage		max. non-repetitive surge current (8/20 $\mu$ s)	max. non-repetitive surge energy (10/1000 $\mu$ s)	max. clamping voltage at spec. current (8/20 $\mu$ s)	nominal voltage at 1mA (DC) test current		typ. capacitance		typ. inductance
	$V_{M(DC)}$ (V)	$V_{M(AC)}$ (V)				$I_{TM}$ (A)	$W_{TM}$ (J)	$V_C$ (V@A)	$V_{N(DC)min.}$ (V)	
JV1210ML180A	18,0	14,0	400	1,50	40,0 @ 10	22,0	28,0	3230	2800	1,8
JV1210ML220A	22,0	17,0	300	1,70	44,0 @ 10	24,3	30,0	2350	2050	1,8
JV1210ML260A	26,0	20,0	300	1,90	54,0 @ 10	29,5	38,0	1750	1480	1,8
JV1210ML300A	30,0	25,0	280	1,20	62,0 @ 10	35,0	43,0	1330	1150	1,8
JV1210ML380A	38,0	30,0	250	2,00	78,0 @ 10	42,3	51,7	1130	950	1,8
JV1210ML450A	45,0	35,0	250	2,00	90,0 @ 10	50,0	61,0	850	715	1,8
JV1210ML560A	56,0	40,0	250	2,30	110,0 @ 10	61,2	74,0	595	500	1,8
JV1210ML680A	68,0	50,0	250	1,50	135,0 @ 10	74,0	90,0	430	370	1,8
JV1210ML850A	85,0	60,0	250	1,50	165,0 @ 10	91,0	115,0	230	200	1,8
JV1210ML121A	120,0	107,0	125	1,50	230,0 @ 10	135,0	165,0	75	65	1,8



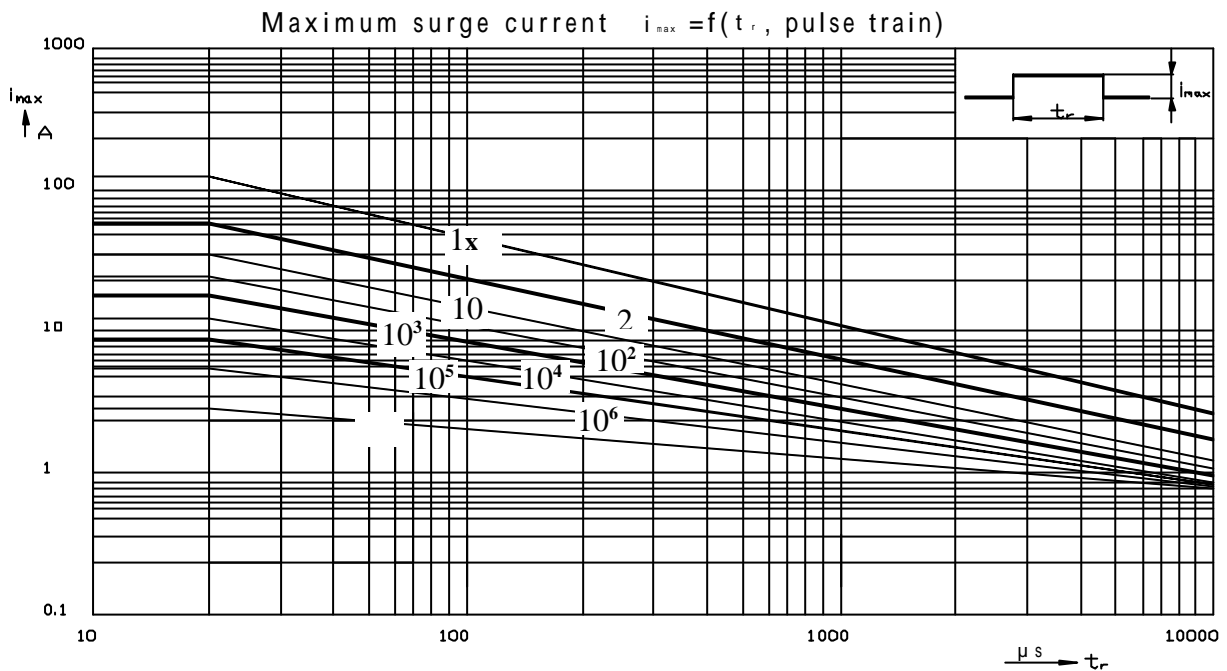
Qty.	Order-Number	Type	Terminal Code	Packaging
		JV 1210ML560	A P	T

Specifications are subject to change without notice

## TVS 1210 SMD

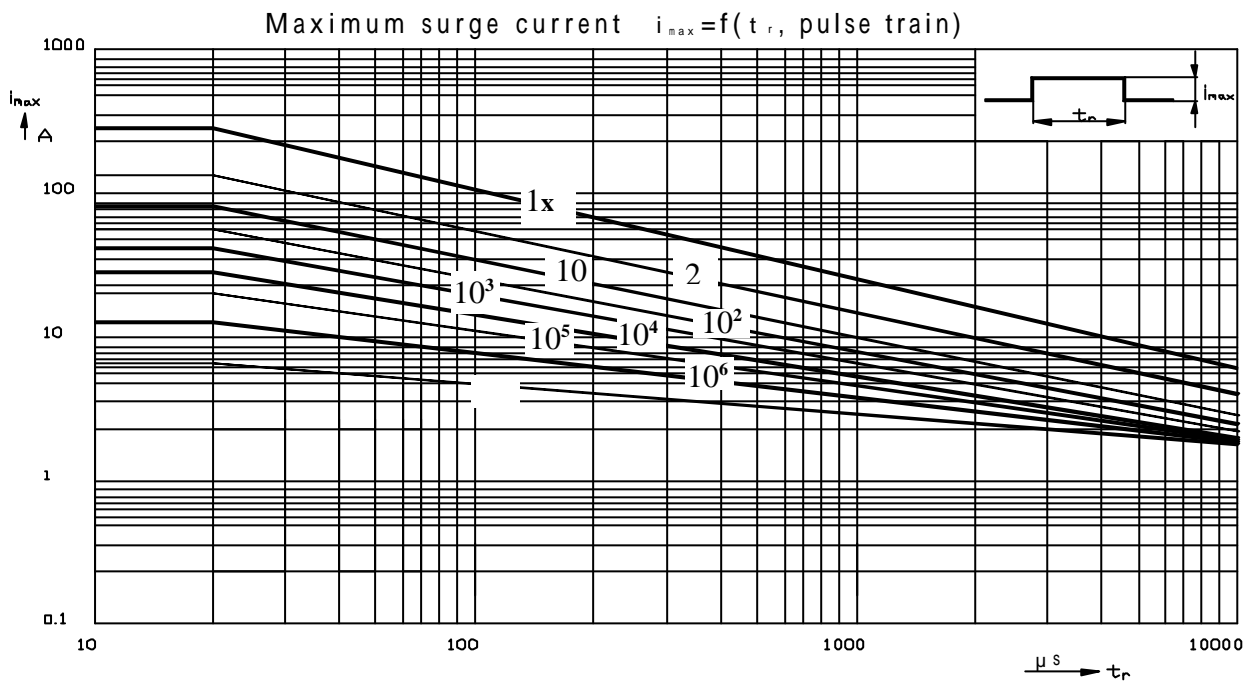


V/I Characteristics

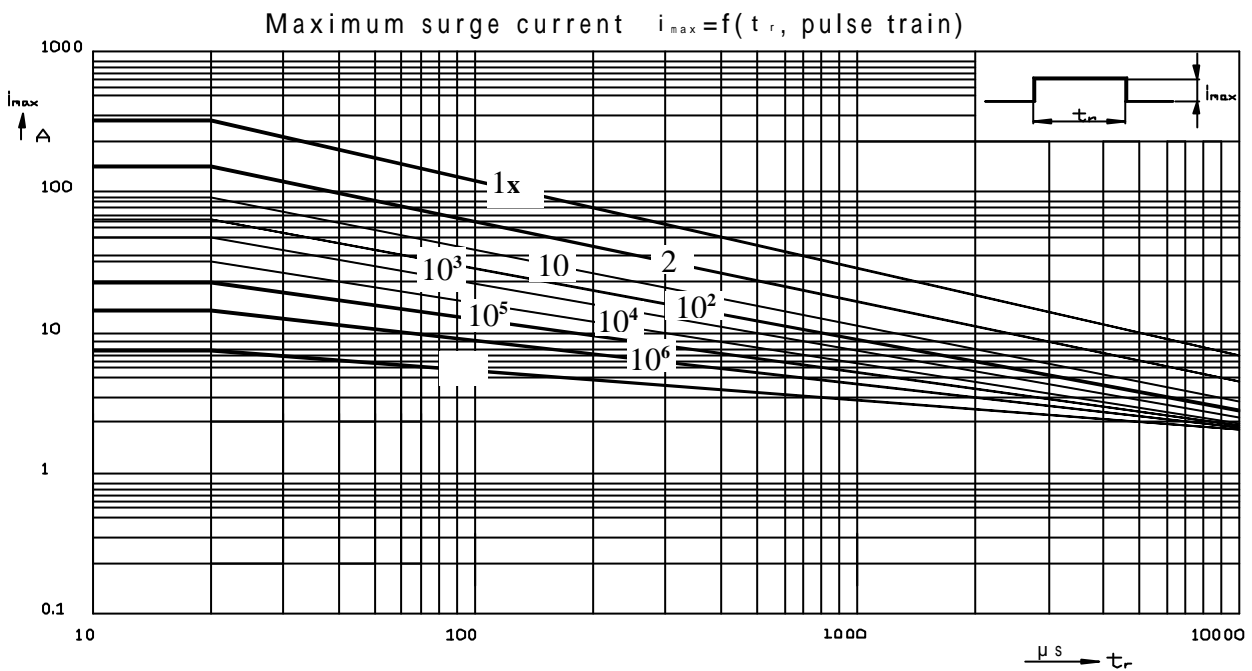


Maximum Surge Current: **JV1210ML121A**

## TVS 1210 SMD

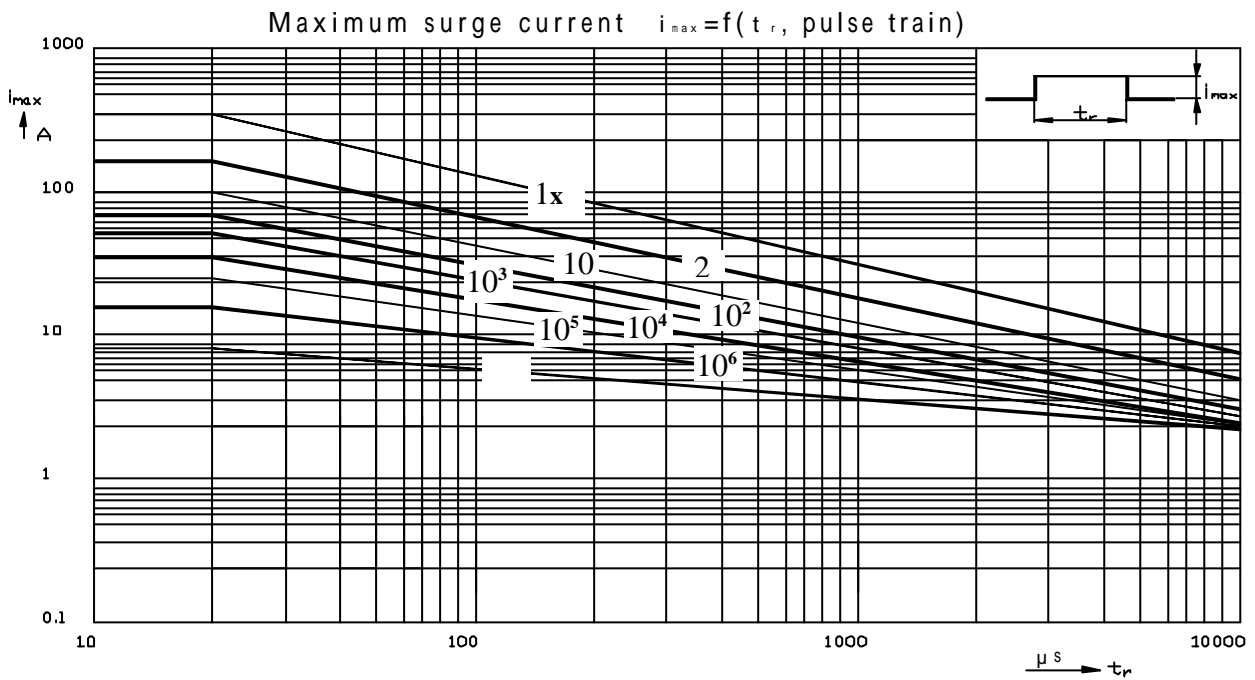


Maximum Surge Current: **JV1210ML380A - JV1210ML850A**

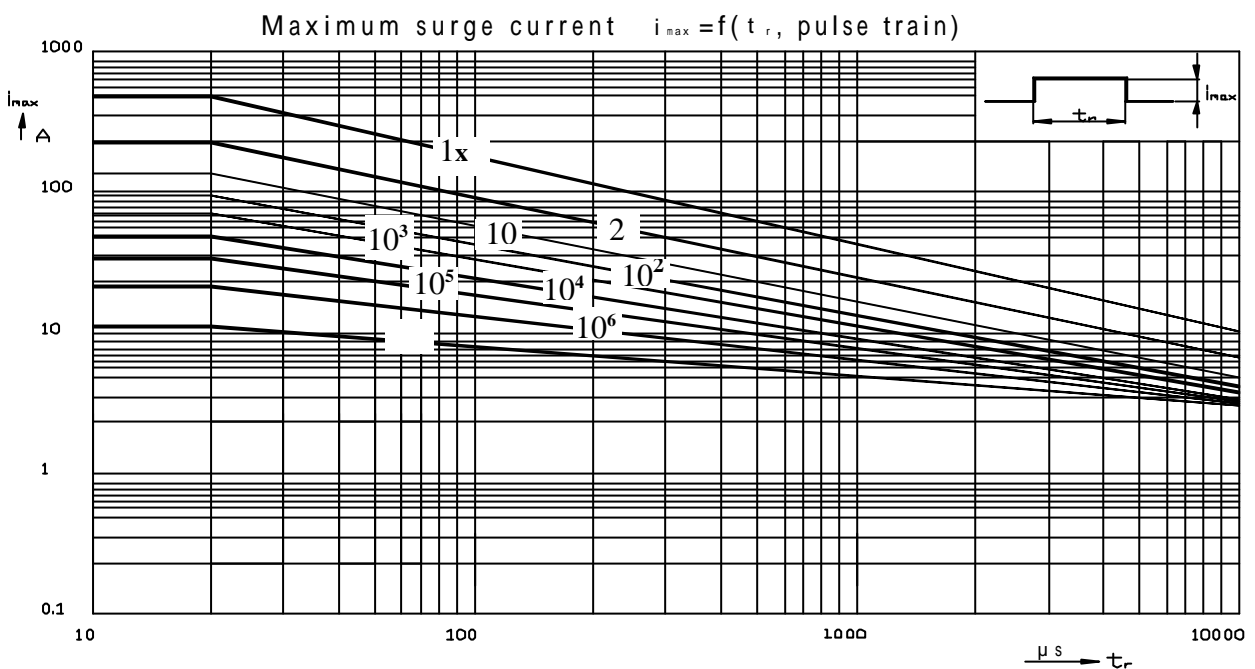


Maximum Surge Current: **JV1210ML300A**

## TVS 1210 SMD



Maximum Surge Current: **JV1210ML220A - JV1210ML260A**



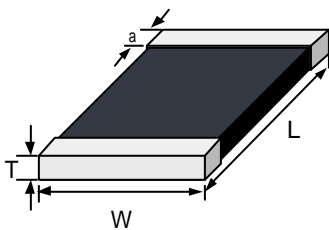
Maximum Surge Current: **JV1210ML180A**



## TVS 1210 SMD



Dimensions



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
T	-	0.071	-	1.80
a	0.010	0.030	0.25	0.75
L	0.114	0.138	2.90	3.50
W	0.110	0.087	2.20	2.80

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Thin layer, high precise techniques  
Lead free  
Bi-directional clamping  
low capacity  
Available with Nickel/Tin end termination

### Applications

Circuit board and ESD, EFT

Protection of:

- I/O ports
- Keyboards
- LCD's
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### Packaging

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T 7 inch reel (2.000 pcs.)

### Material

Body: Ceramic (ZnO)  
Terminals: Ni/Sn plated (code "P")  
Ag/Pt/Pd non plated (code "N" on request)

### Operating Temperature

-55 to +125°C

### Solderability

acc. to IEC 60068-2-58  
235°C, 2s

### Soldering Heat Resistance

260°C, 10 sec. (IEC 60068-2-58)  
280°C, 5 sec. (IEC 60068-2-58)

### Response Time

<0.5ns

### Temperature coefficient ( $\alpha V$ ) of clamping voltage ( $V_C$ ) @ specified test current

<0.01%/°C

### Power dissipation

0.15W max.

### Standards

IEC 61000-4-2  
MIL-STD-883C

## Maximum Ratings (125°C)

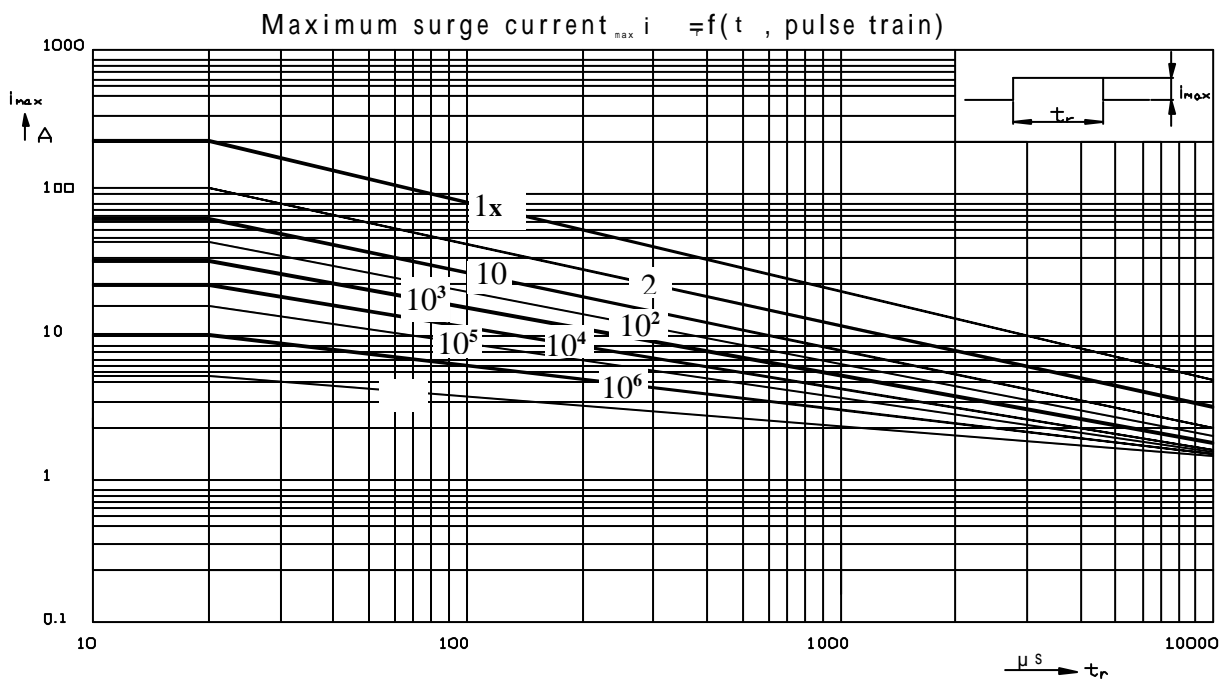
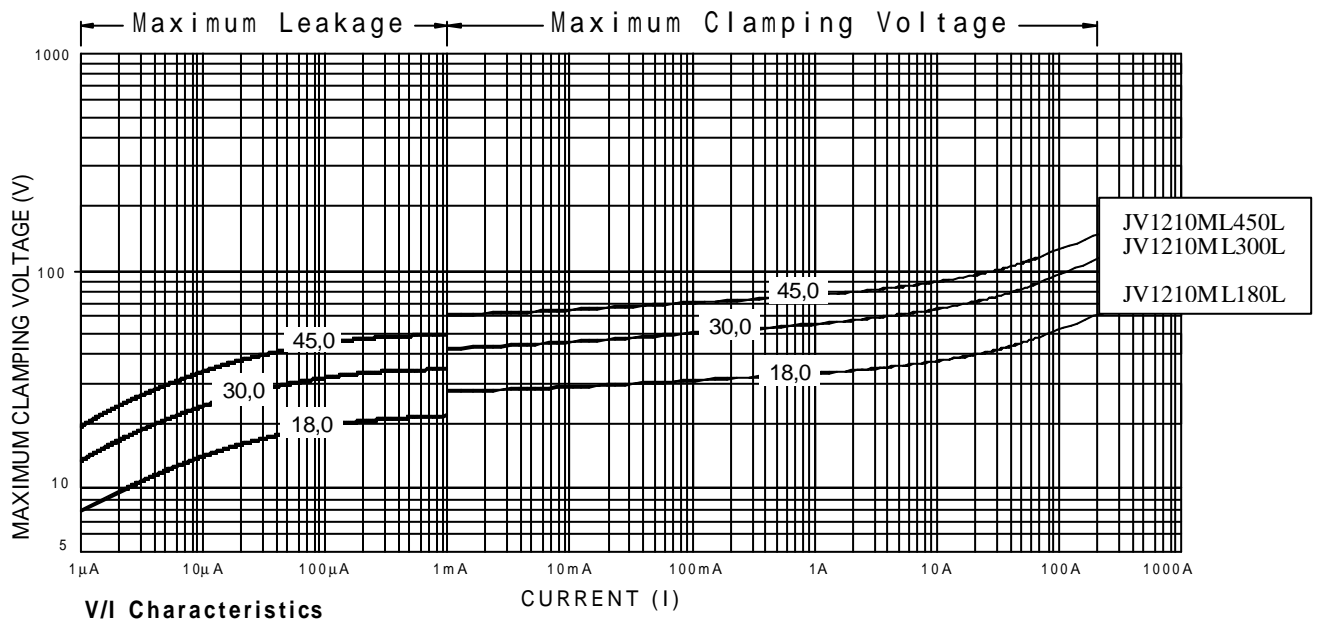
Type	max. cont. working voltage		max. non-repetitive surge current (8/20 $\mu$ s)	max. non-repetitive surge energy (10/1000 $\mu$ s)	max. clamping voltage at spec. current (8/20 $\mu$ s)	nominal voltage at 1mA (DC) test current		typ. capacitance		typ. inductance
	$V_{M(DC)}$ (V)	$V_{M(AC)}$ (V)	$I_{TM}$ (A)	$W_{TM}$ (J)	$V_C$ (V@A)	$V_{N(DC)min.}$ (V)	$V_{N(DC)max.}$ (V)	1KHz $C_{typ.}$ (pF)	1MHz $C_{typ.}$ (pF)	$L_{typ.}$ (nH)
JV1210ML180L	18,0	14,0	200	1,50	38,0 @ 10	22,0	28,0	1900	1660	1,8
JV1210ML300L	30,0	25,0	200	0,90	65,0 @ 10	35,0	43,0	720	630	1,8
JV1210ML450L	45,0	35,0	220	0,90	90,0 @ 10	50,0	61,0	380	315	1,8

Order Information

Qty.	Order-Number	Type	Terminal Code	Packaging
		JV1210ML180	L	T

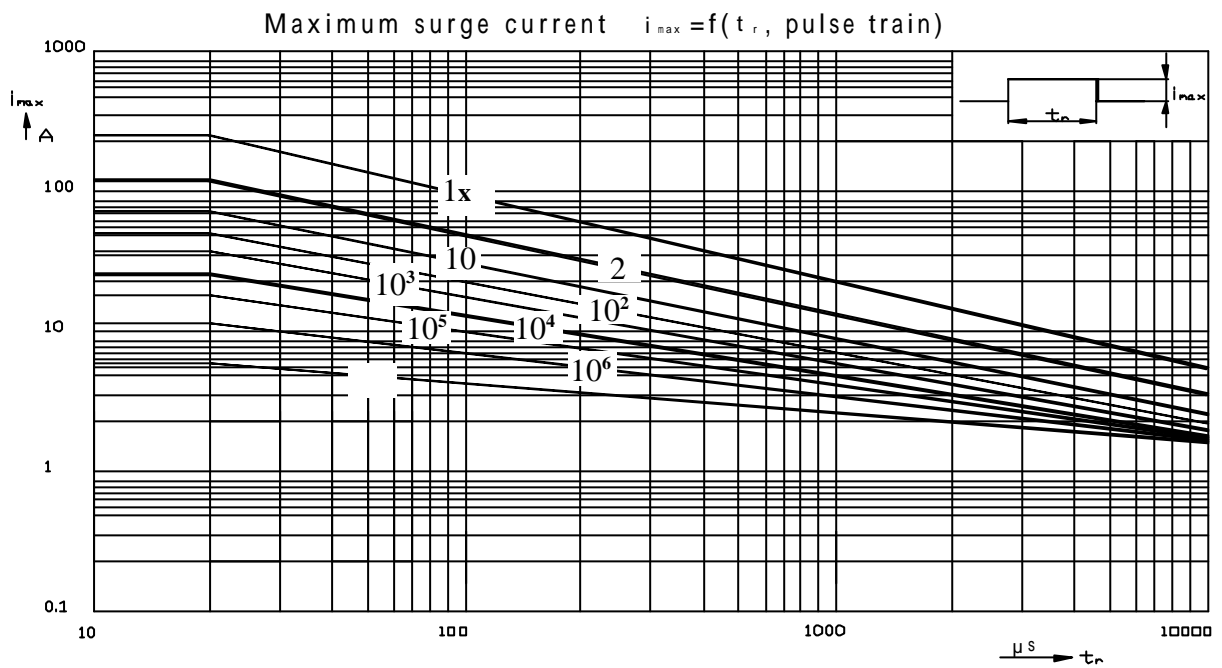
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## TVS 1210 SMD



Maximum Surge Current: **JV1210ML180L- JV1210ML300L**

## TVS 1210 SMD



Maximum Surge Current: **JV1210ML450L**