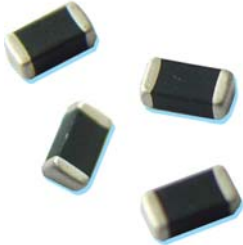
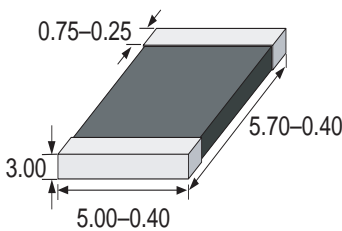


# TVS 2220 SMD

This product is not recommended for new designs. Please refer to Littelfuse series MLA.



Dimensions (mm)



## Multilayer Ceramic Transient Voltage Suppressor Standard Capacity

### Features

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

### Applications

Circuit board and ESD, EFT

Protection of:

- I/O ports
- Keyboards
- LCD's
- Sensors

### WebLinks

Further info see:

[www.wickmanngroup.com](http://www.wickmanngroup.com)

Further technical info see technical varistor file:

[www.wickmanngroup.com/download/techvaristor.pdf](http://www.wickmanngroup.com/download/techvaristor.pdf)

## Specifications

### Packaging

Tape and Reel  
T 7 inch reel (1.000 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 (αV) of clamping voltage (V<sub>c</sub>) @ specified test current

<0.01%/°C

### Power dissipation

1.0W max.

### Standards

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

Type	Maximum Ratings (125°C)					Specifications (25°C)				
	max. cont. working voltage		max. non-repetitive surge current (8/20 μs)	max. non-repetitive surge energy (10/1000 μs)	max. clamping voltage at spec. current (8/20 μs)	nominal voltage at 1mA (DC) test current		typ. capacitance		typ. inductance
	V <sub>M(DC)</sub> (V)	V <sub>M(AC)</sub> (V)	I <sub>TM</sub> (A)	W <sub>TM</sub> (J)	V <sub>c</sub> (V@A)	V <sub>N(DC)min.</sub> (V)	V <sub>N(DC)max.</sub> (V)	C <sub>typ.</sub> (pF) 1KHz	C <sub>typ.</sub> (pF) 1MHz	L <sub>typ.</sub> (nH)
WT2220ML050A	5,5	4,0	1000	1,4	15,5 @ 10	7,1	9,8	26000	22000	3,0
WT2220ML090A	9,0	6,0	1200	3,6	25,0 @ 10	10,0	14,5	19200	16000	3,0
WT2220ML120A	12,0	9,0	1200	4,2	30,0 @ 10	14,0	18,5	15930	13500	3,0
WT2220ML140A	14,0	11,0	1200	5,4	33,0 @ 10	16,0	21,0	11300	9500	3,0
WT2220ML180A	18,0	14,0	1200	5,8	38,0 @ 10	22,0	28,0	10200	8700	3,0
WT2220ML220A	22,0	17,0	1200	7,3	44,0 @ 10	24,3	30,0	9550	8000	3,0
WT2220ML260A	26,0	20,0	1200	7,8	54,0 @ 10	29,5	38,0	8380	7100	3,0
WT2220ML300A	30,0	25,0	1200	9,5	65,0 @ 10	35,0	43,0	4200	3500	3,0
WT2220ML380A	38,0	30,0	1200	12,0	77,0 @ 10	42,3	51,7	3540	3000	3,0
WT2220ML450A	45,0	35,0	1000	7,5	90,0 @ 10	50,0	61,0	3350	2900	3,0
WT2220ML560A	56,0	40,0	1000	9,0	110,0 @ 10	61,2	74,0	2240	1900	3,0
WT2220ML680A	68,0	50,0	800	5,5	135,0 @ 10	74,0	90,0	1900	1550	3,0
WT2220ML850A	85,0	60,0	600	6,8	165,0 @ 10	91,0	115,0	1100	930	3,0
WT2220ML121A	120,0	107,0	1100	10,0	230,0 @ 10	135,0	165,0	420	350	3,0

### Order Information

Qty.	Order-Number	Type	Terminal Code	Packaging
		WT2220ML260	A	T

Specifications are subject to change without notice

### WebSite

050915 [www.wickmanngroup.com](http://www.wickmanngroup.com)

Europe Tel: +49 2302 662-107

E-mail: [sales@wickmann.com](mailto:sales@wickmann.com)

Americas Tel: +1 404 699-7820

E-mail: [service@wickmannusa.com](mailto:service@wickmannusa.com)

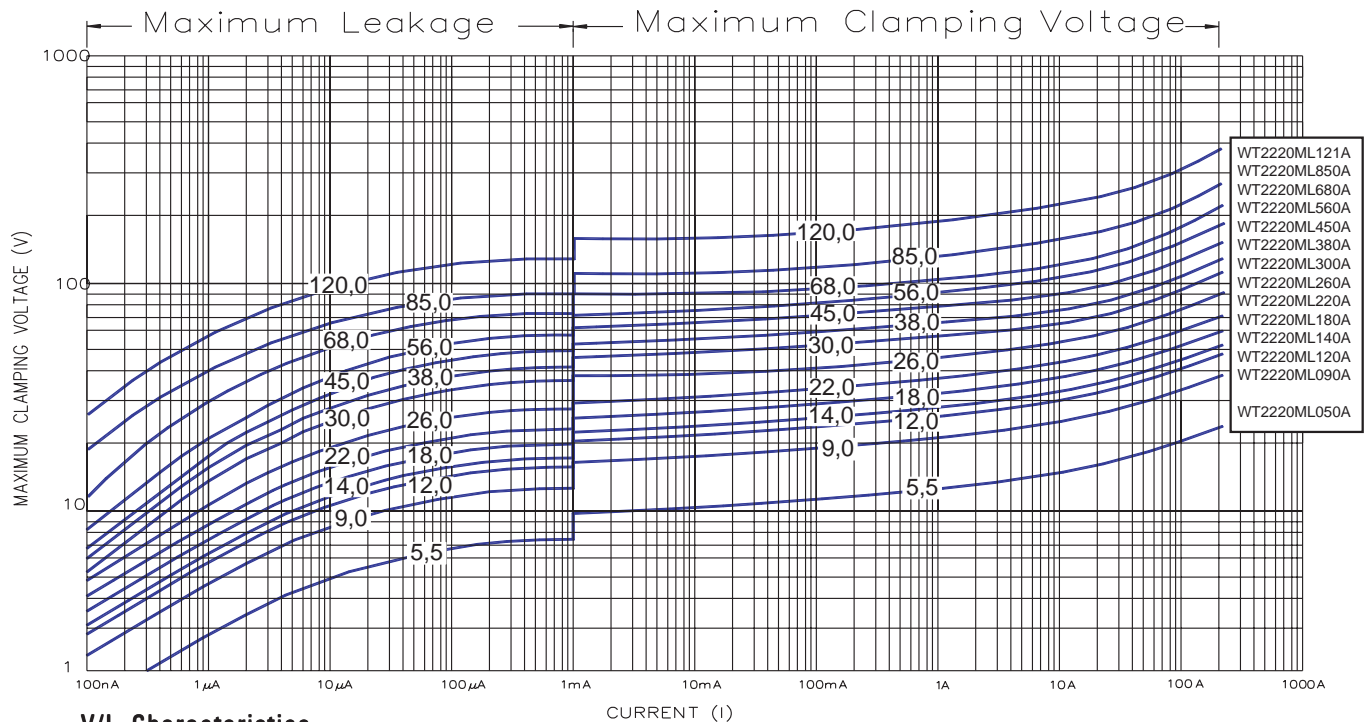
Asia Tel: +852 26 14-1108

E-mail: [sales@wickmann.com.hk](mailto:sales@wickmann.com.hk)

China Tel: +86 21 6432 5146

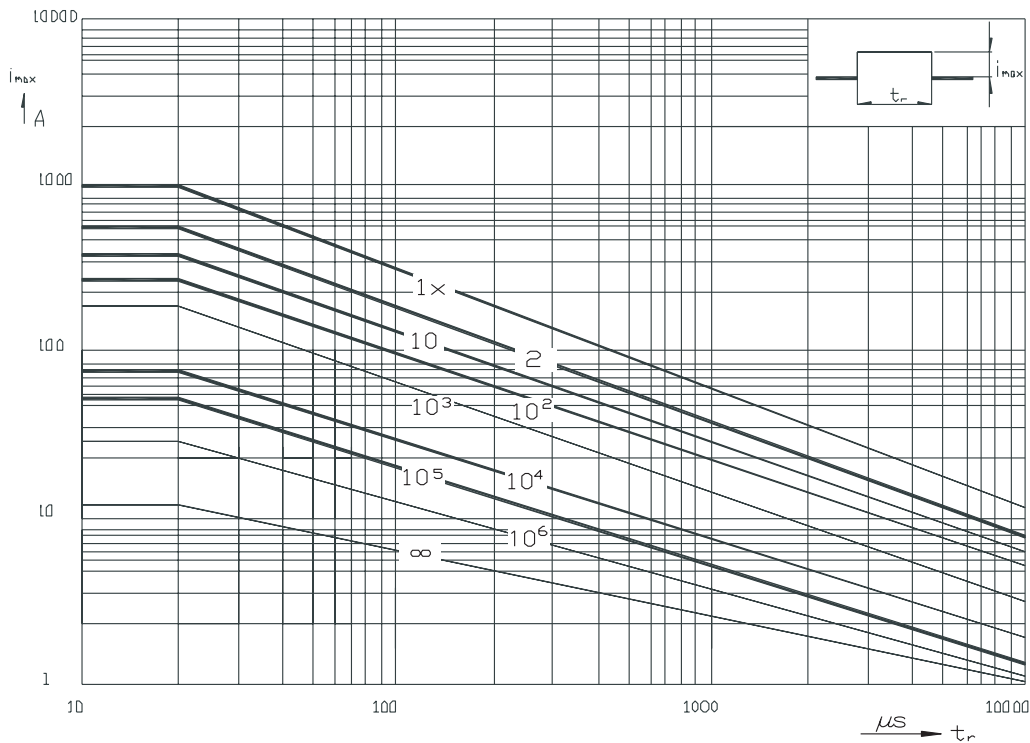
E-mail: [sales@wickmann.com](mailto:sales@wickmann.com)

# TVS 2220 SMD



**V/I Characteristics**

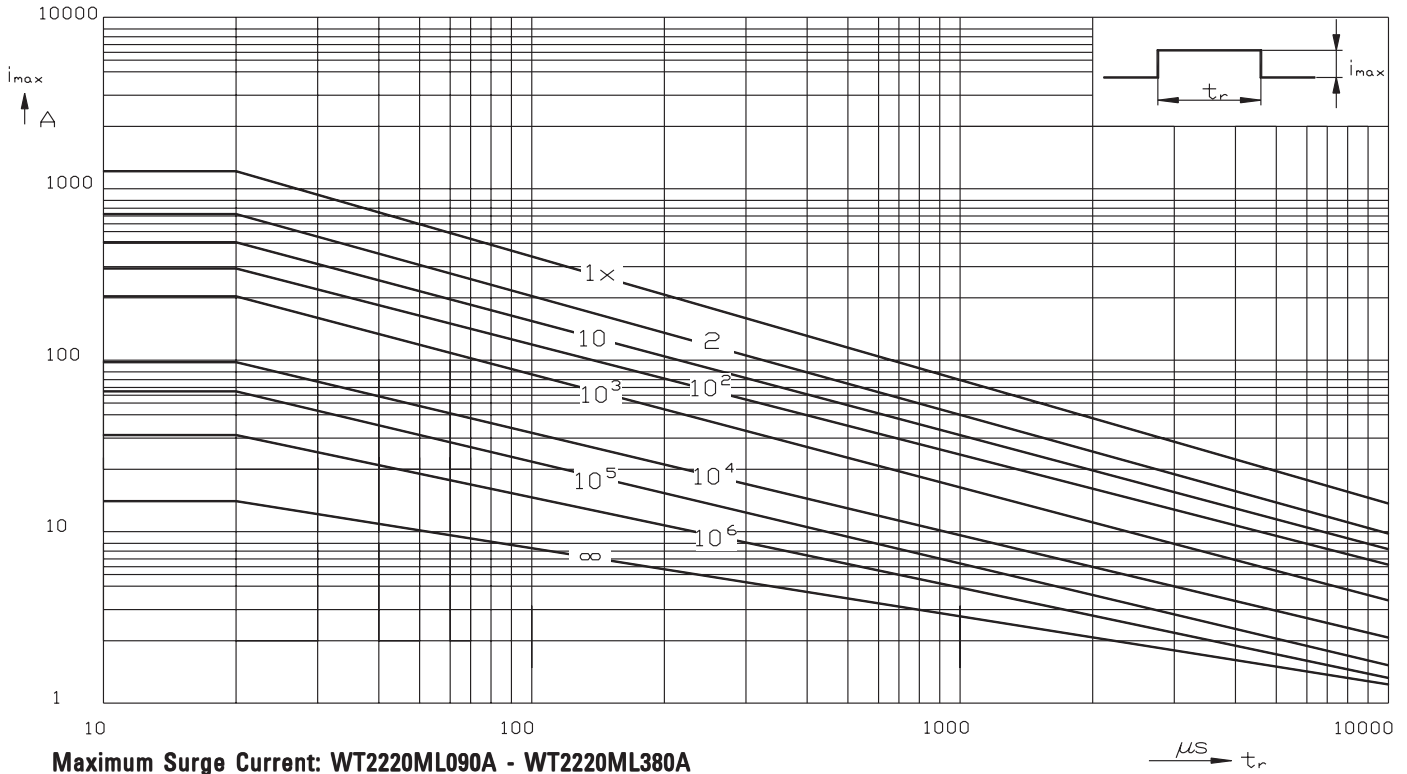
Maximum surge current  $i_{max} = f(t_r, \text{pulse train})$



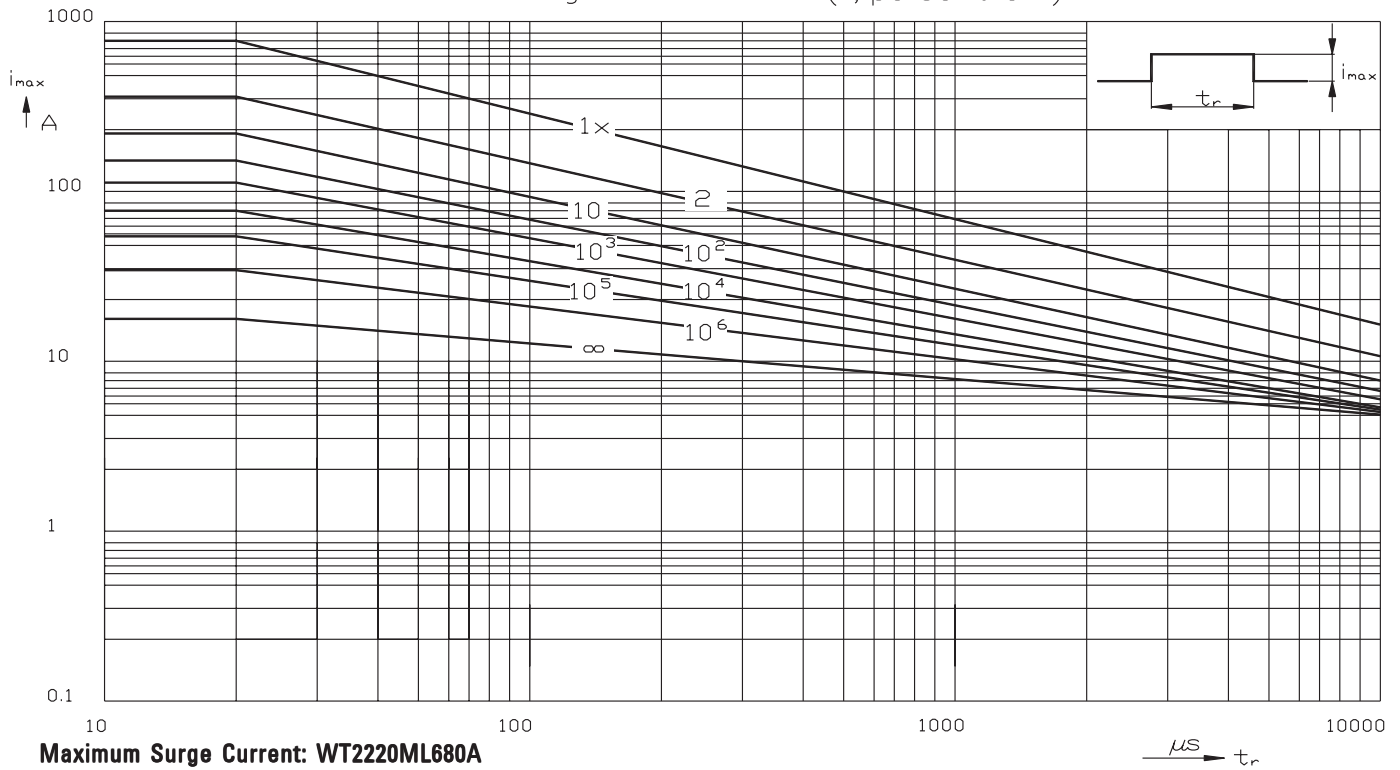
**Maximum Surge Current: WT2220ML050A, WT2220ML450A - WT2220ML560A**

## TVS 2220 SMD

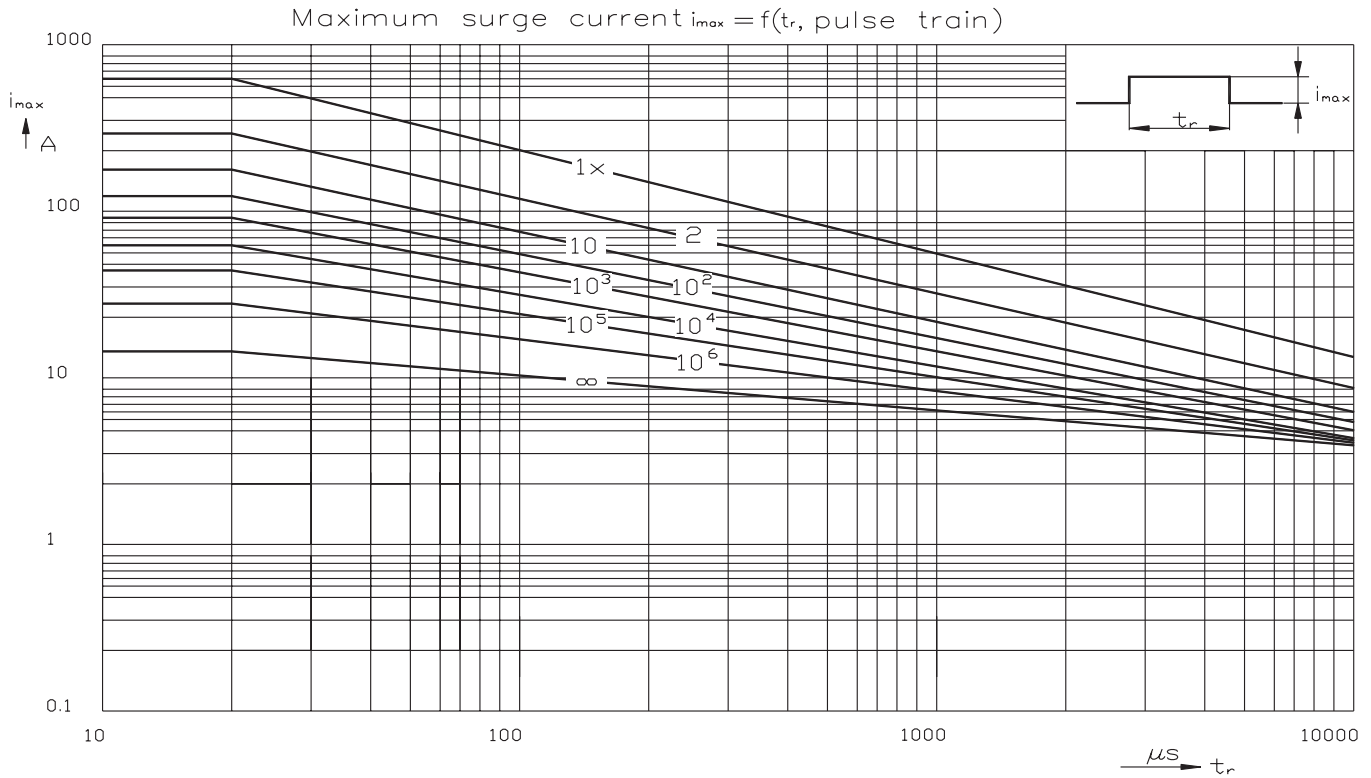
Maximum surge current  $i_{max} = f(t_r, \text{pulse train})$



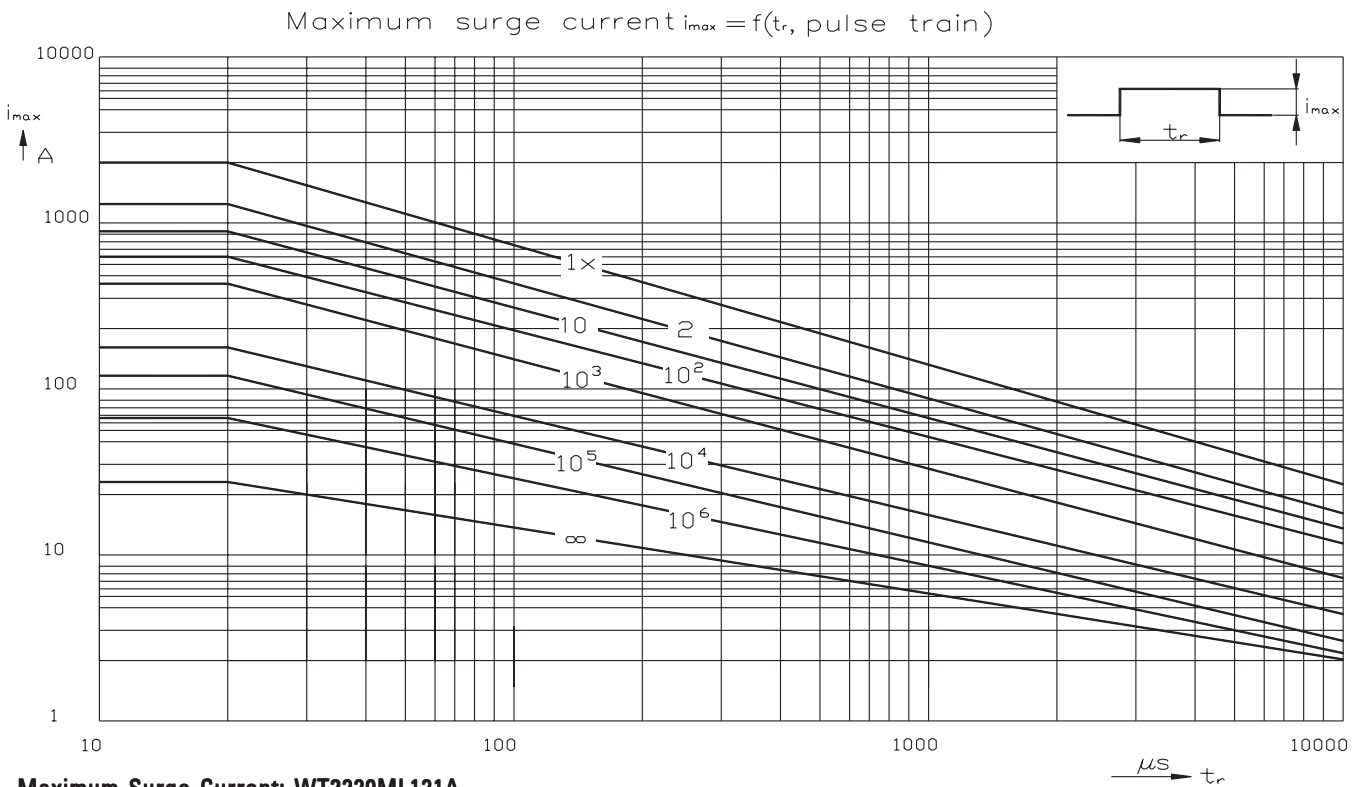
Maximum surge current  $i_{max} = f(t_r, \text{pulse train})$



## TVS 2220 SMD



### Maximum Surge Current: WT2220ML850A



### Maximum Surge Current: WT2220ML121A