

# ST70-22MF

TVS  
220A, 7000W

### Feature

- Peak pulse power:7000W
- SMD
- Available for automotive use
- Pb free terminal
- RoHS:Yes

### OUTLINE

Package (House Name): MCP



### Equivalent circuit



### Absolute Maximum Ratings (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	Tstg		-40 to 150	°C
Operating junction temperature	Tj		-40 to 150	°C
Maximum surge reverse current	I <sub>RSM</sub>	10/1000μs, Non-repetitive *	220	A
Maximum surge reverse current	I <sub>RSM</sub>	10/10000μs, Non-repetitive	130	A
Maximum surge reverse power	P <sub>RSM</sub>	10/1000μs, Non-repetitive *	7000	W
Maximum surge reverse power	P <sub>RSM</sub>	10/10000μs, Non-repetitive *	3500	W
Continuous (direct) reverse voltage	V <sub>R(DC)</sub>		18	V

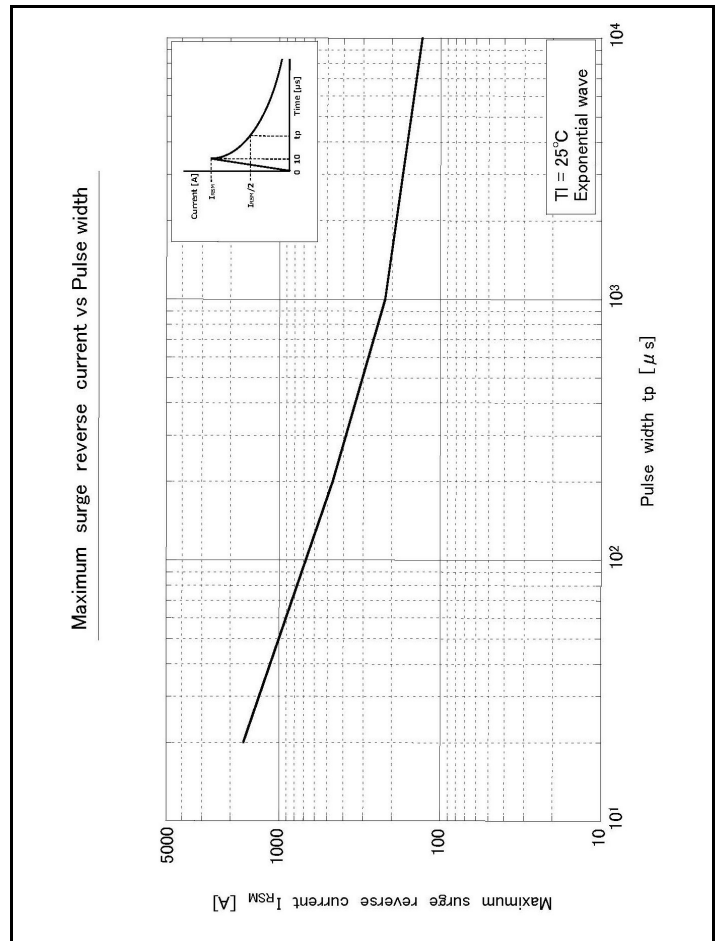
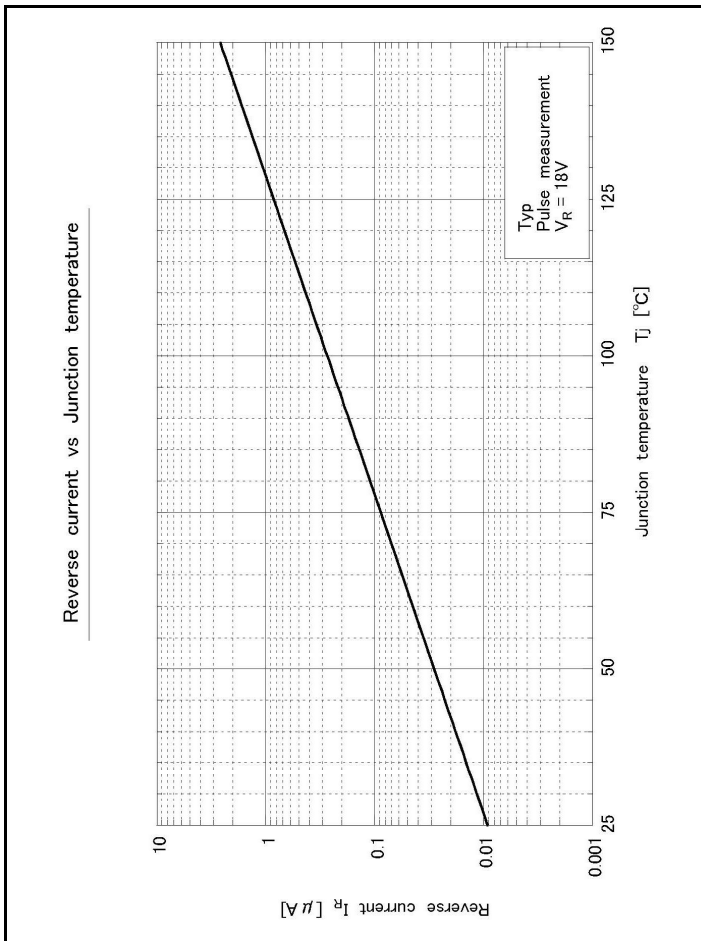
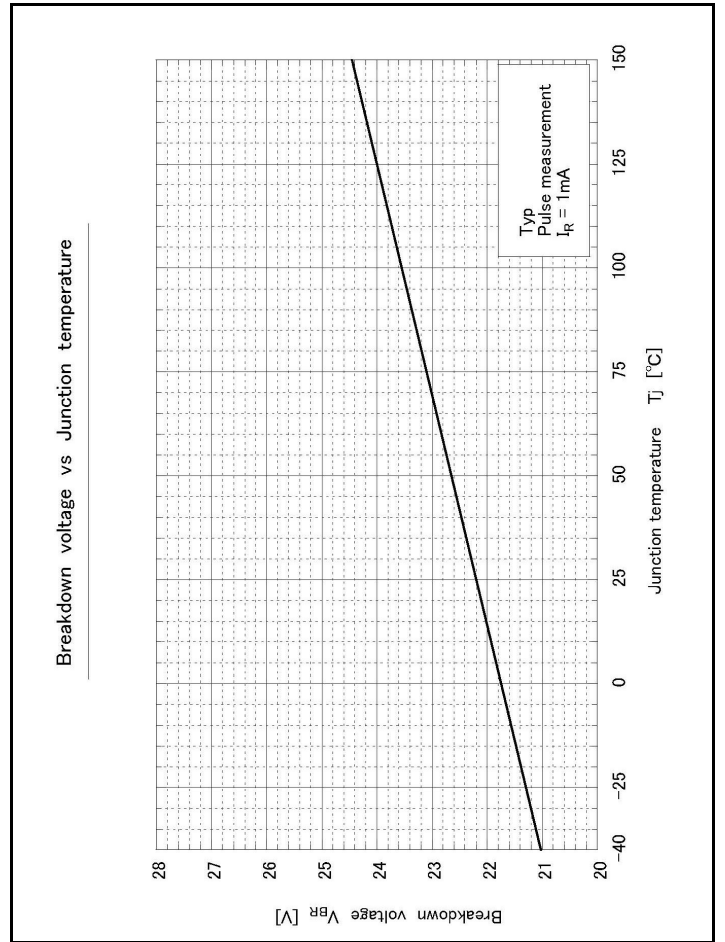
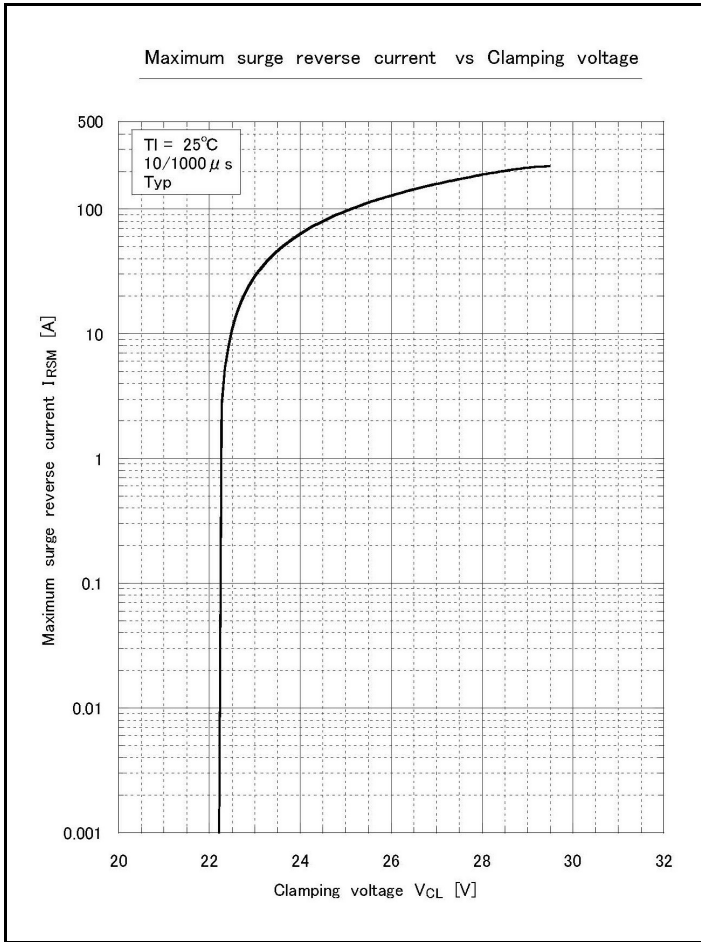
\* : See the original Specifications

### Electrical Characteristics (unless otherwise specified : Tl=25°C)

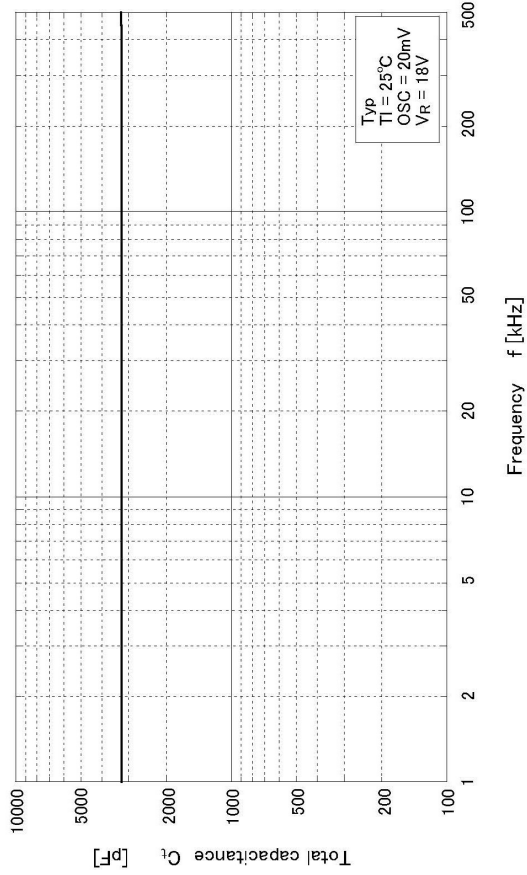
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakdown voltage	V <sub>BR</sub>	I <sub>R</sub> =1mA, Pulse measurement	20.8		23.6	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =18V, Pulse measurement			5	μA
Thermal resistance	Rth(j-l)	Junction to lead, On glass-epoxy substrate *			5	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate *			45	°C/W

\* : See the original Specifications

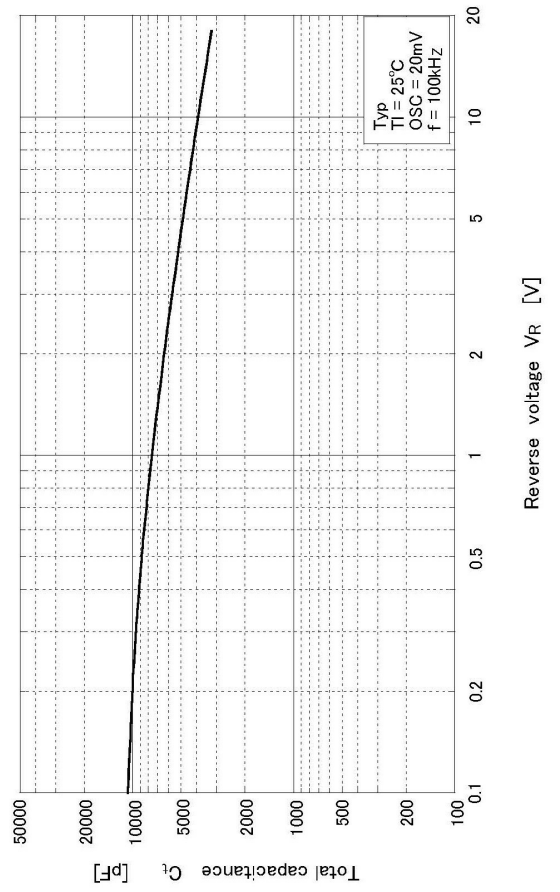
# CHARACTERISTIC DIAGRAMS



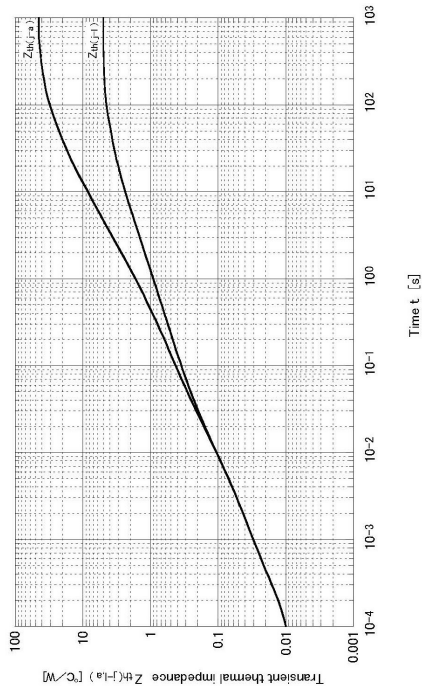
Total capacitance vs Frequency



Total capacitance vs Reverse voltage



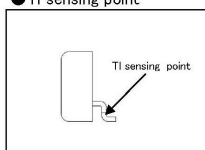
Transient thermal impedance



● Substrate detail

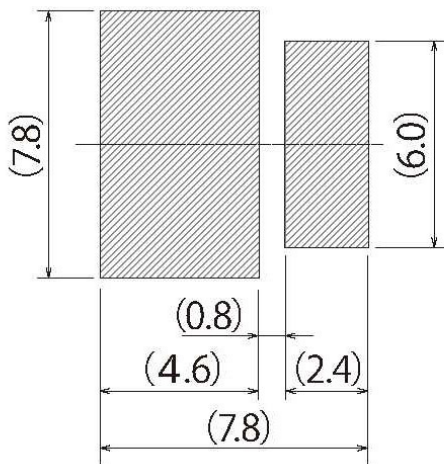
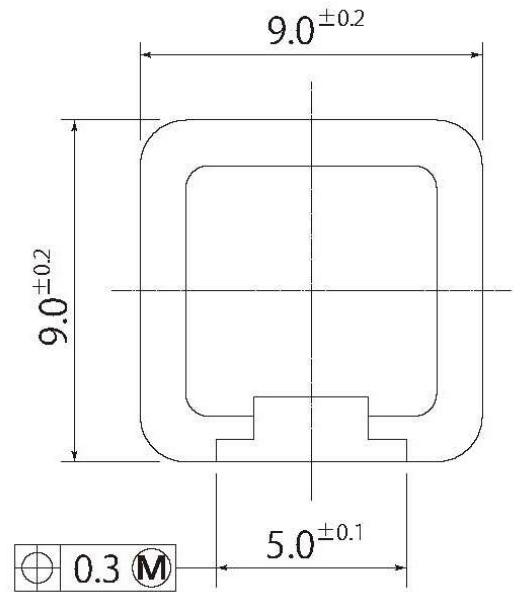
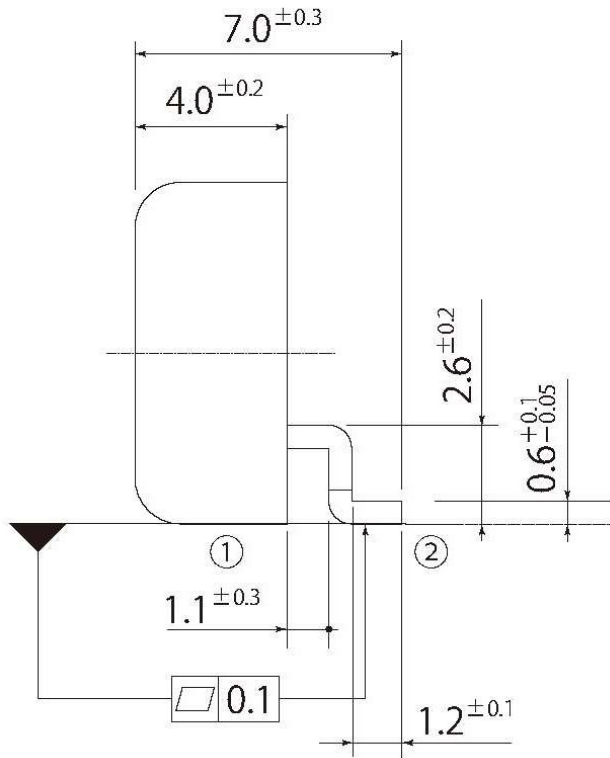
Type	Glass-epoxy
Size	2 inch <sup>2</sup>
Thickness	1mm
Conductor thickness	35 μm
Pattern area	242mm <sup>2</sup>

● TI sensing point



E1

JEDEC Code	—
JEITA Code	—
House Name	MCP



Referential Soldering Pad

• Optimize soldering pad to the board design and soldering condition.

## Notes

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