ShinDengen

ST70-27MF

TVS

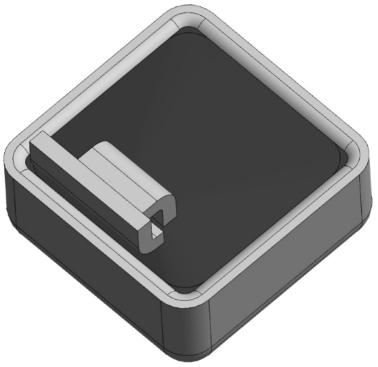
180A, 7000W

Feature

- Optimized for Multiple Protection Purposes
  [ESD],[Lighting Surge],[Automotove Transient Surge]
- Peak pulse power:7000W
- High Speed
- SMD
- Available for automotive use
- Pb free terminals
- 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_{RSM}	10/1000μs, Non-repetitive, Exponential wave ※	180	A
Maximum surge reverse current	I_{RSM}	10/10000μs, Non-repetitive, Exponential wave ※	100	A
Maximum surge reverse power	P_{RSM}	10/1000μs, Non-repetitive	7000	W
Maximum surge reverse power	P_{RSM}	10/10000μs, Non-repetitive	3500	W
Continuous (direct) reverse voltage	$V_{R(DC)}$		23	V

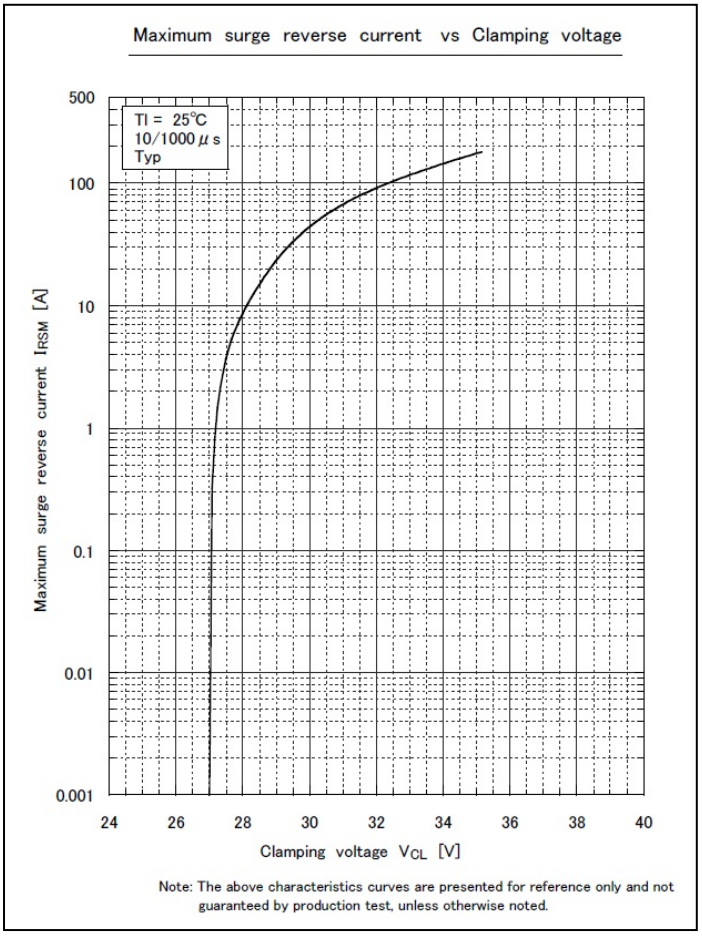
※ ：See the original Specifications

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

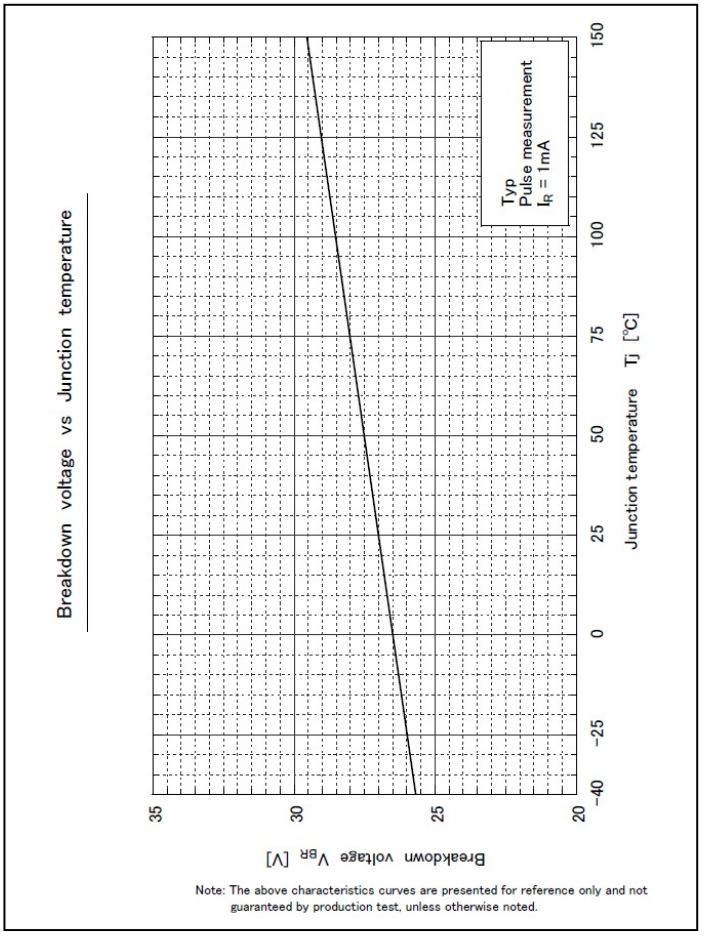
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakdown voltage	V_{BR}	IR=1mA, Pulse measurement	24.3		29.7	V
Reverse current	I_R	VR=23V, Pulse measurement			5	μA
Thermal resistance	Rth(j-l)	Junction to lead, On glass-epoxy substrate ※			5	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			45	°C/W

※ ：See the original Specifications

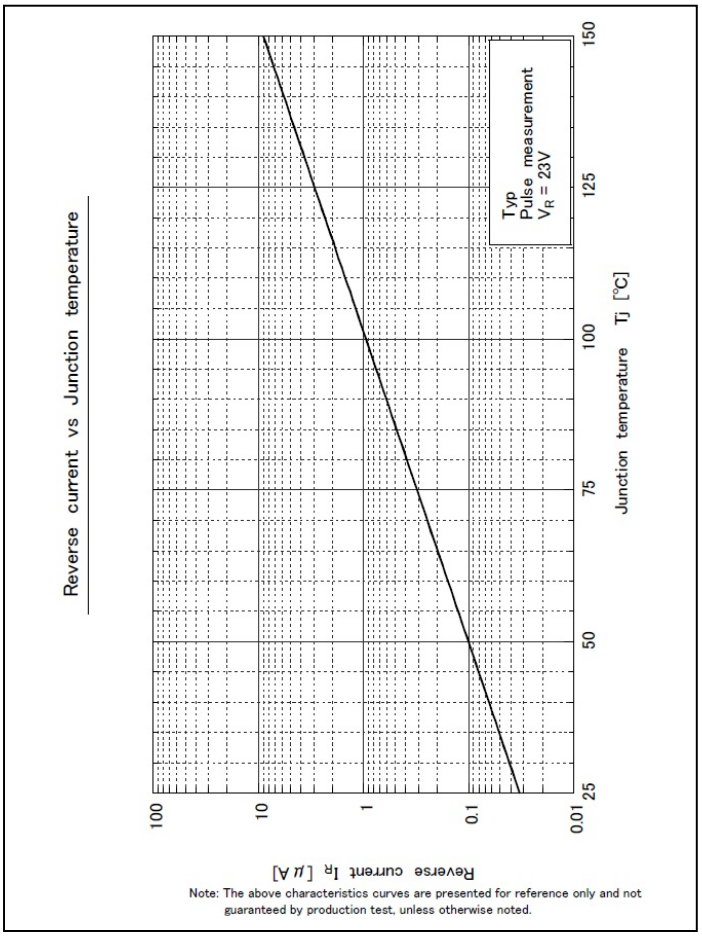
CHARACTERISTIC DIAGRAMS



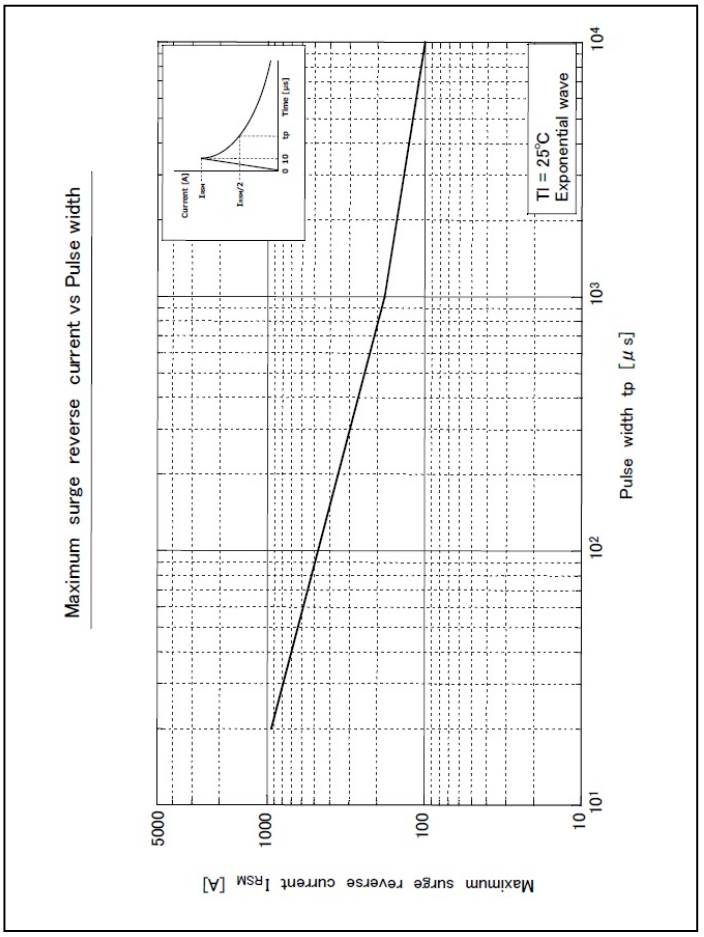
Note: The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.



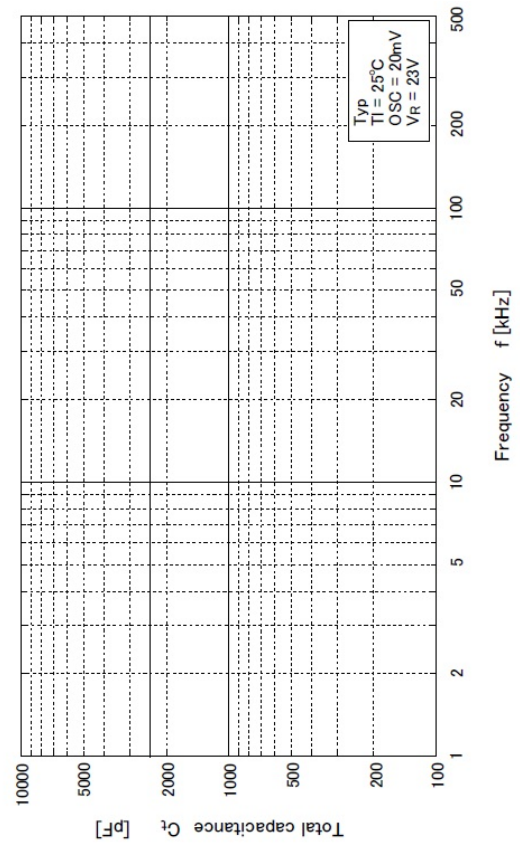
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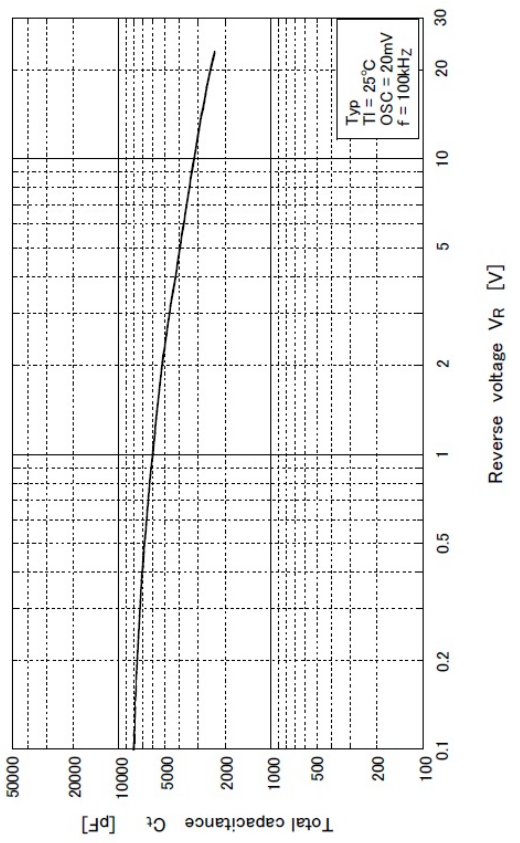


Total capacitance vs Frequency



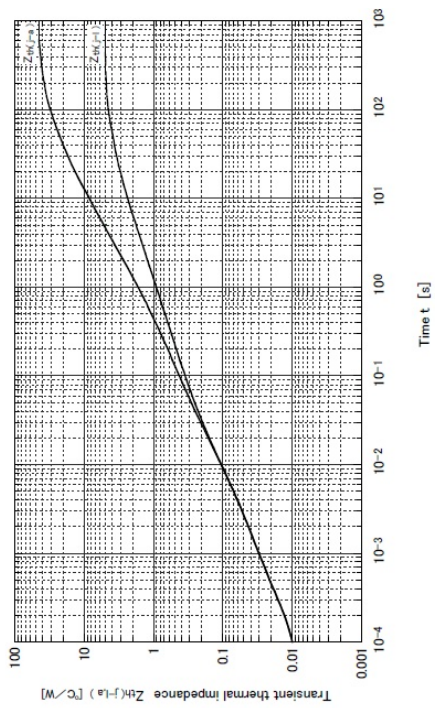
Note: The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.

Total capacitance vs Reverse voltage



Note: The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.

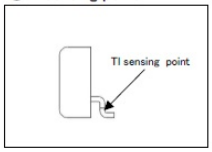
Transient thermal impedance



●Substrate detail

Type	Glass-epoxy
Size	2 inch²
Thickness	1mm
Conductor thickness	35μm
Pattern area	242mm²

●Tl sensing point

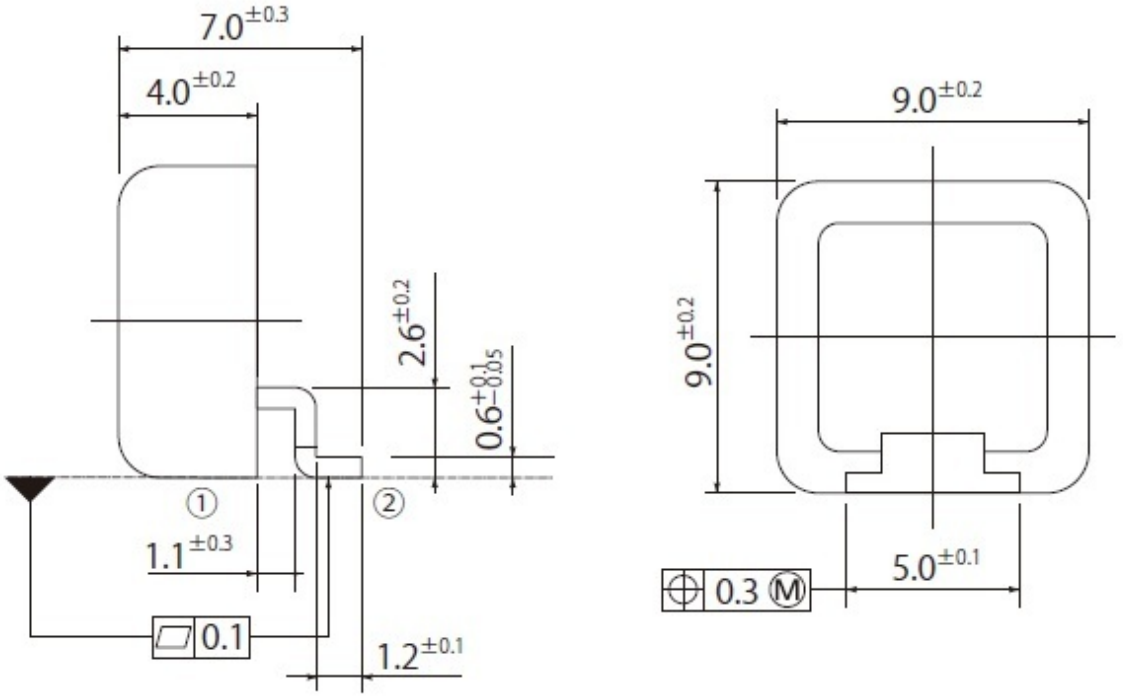


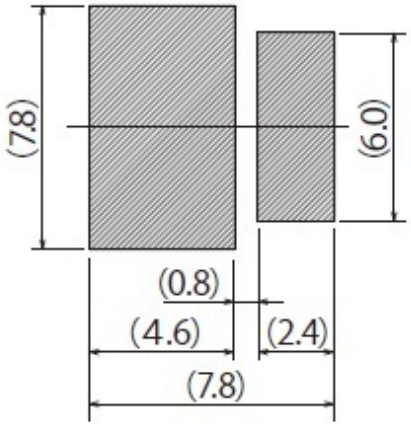
Outline Dimensions

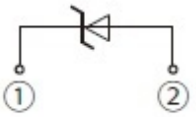
unit:mm

E1

JEDEC Code	–
JEITA Code	–
House Name	MCP







Referential Soldering Pad

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

• The content specified herein is subject to change for improvement without notice.
• If you wish to use any such products, please be sure to refer to the specifications.

U182-1(2026.09)

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