

ST80-14MF

TVS
400A, 8000W

Feature

- Optimized for Multiple Protection Purposes
[ESD],[Lighting Surge],[Automotive Transient Surge]
- Peak pulse power:8000W
- 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 ※	400	A
Maximum surge reverse current	I _{RSM}	10/10000μs, Non-repetitive ※	200	A
Maximum surge reverse power	P _{RSM}	10/1000μs, Non-repetitive ※	8000	W
Maximum surge reverse power	P _{RSM}	10/10000μs, Non-repetitive ※	4000	W
Continuous (direct) reverse voltage	V _{R(DC)}		12	V
Power dissipation	P		5	W

※ :See the original Specifications

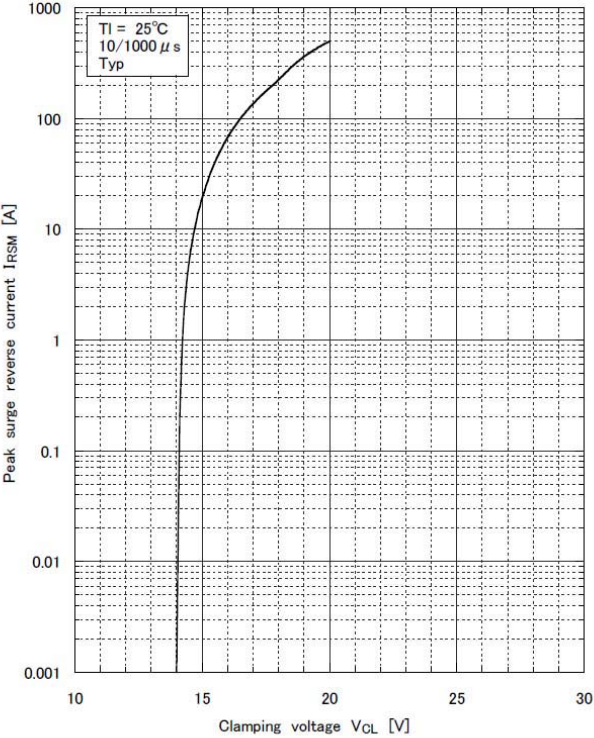
Electrical Characteristics (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakdown voltage	V_{BR}	IR=1mA, Pulse measurement	13		15	V
Reverse current	I_R	VR=12V, Pulse measurement			10	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
Forward voltage	V_F	IF=30A, Pulse Measurement			1.3	V
Temperature coefficient	rz				0.08	%/°C

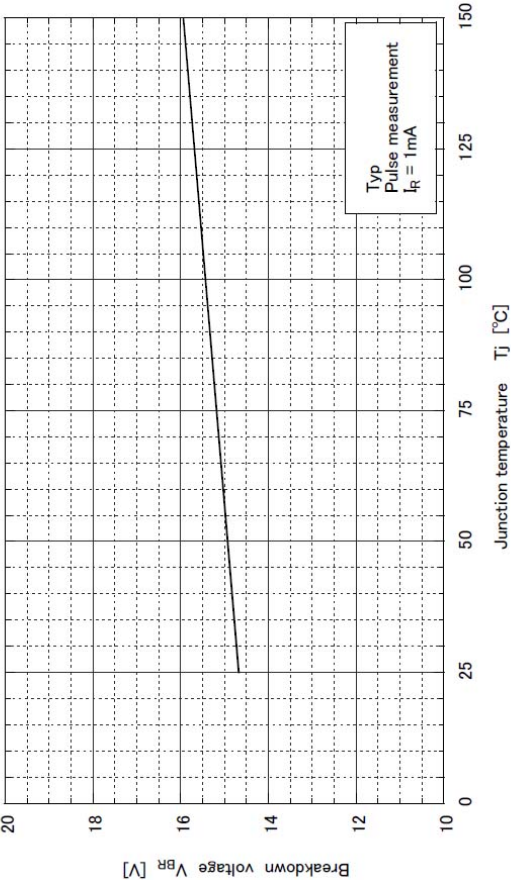
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

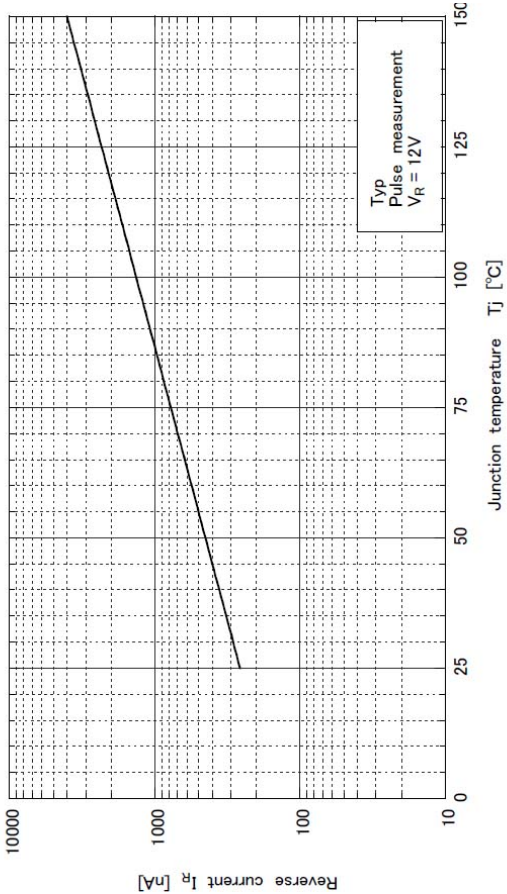
Peak surge reverse current vs Clamping voltage



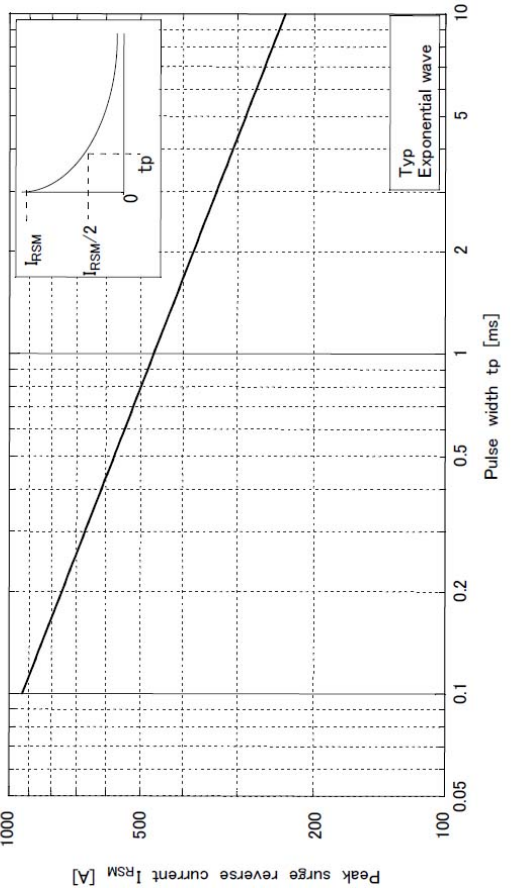
Breakdown voltage vs Junction temperature

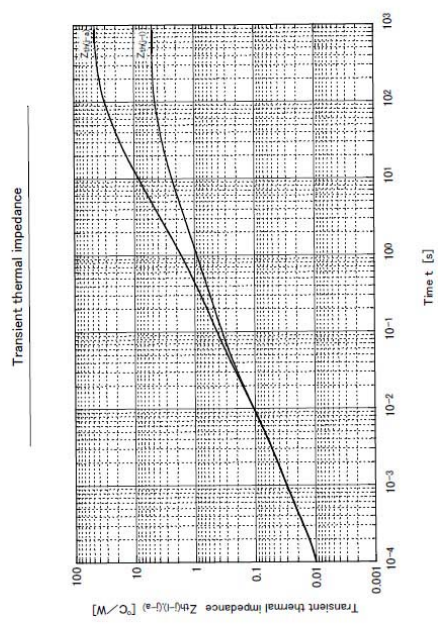


Reverse current vs Junction temperature



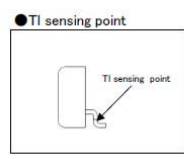
Peak surge reverse current





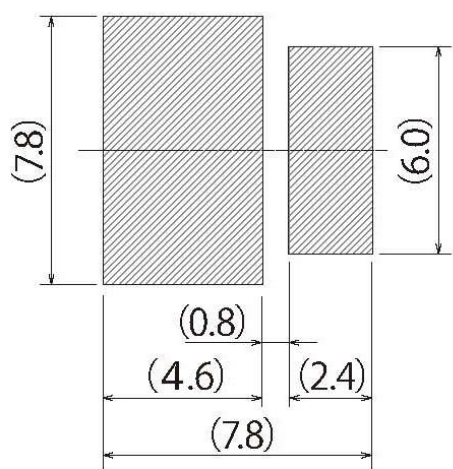
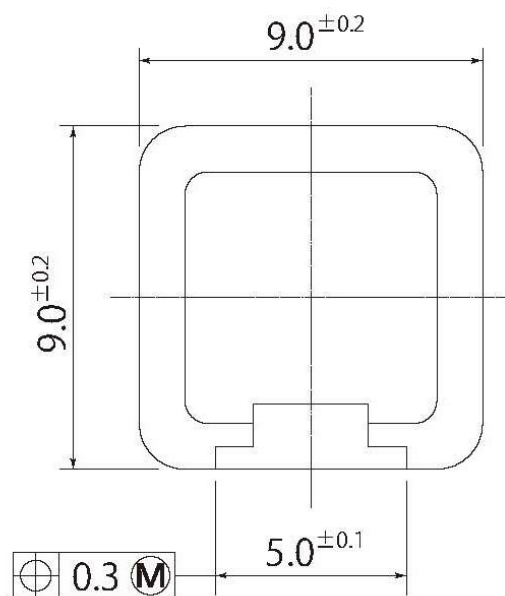
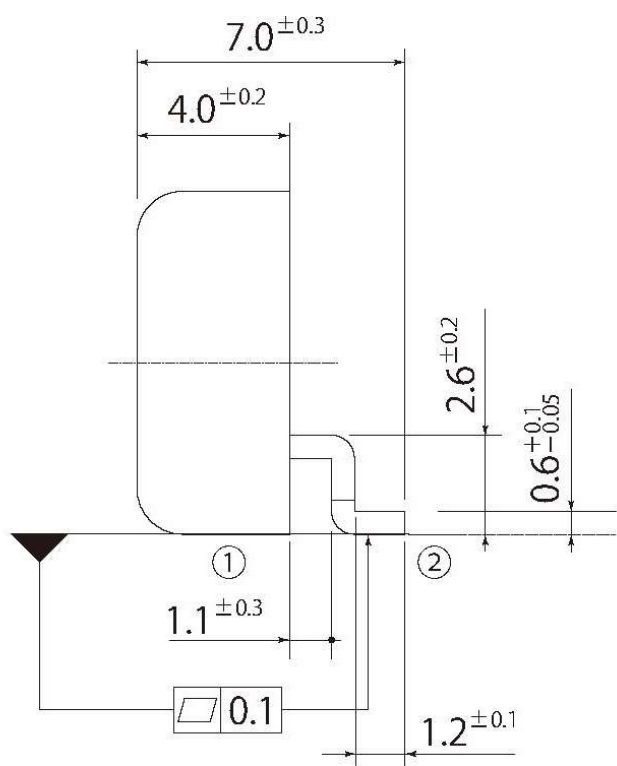
● Substrate detail

Type	Glass-epoxy
Size	2 inch ²
Thickness	1mm
Conductor thickness	35 μ m
Pattern area	242mm ²



E1

JEDEC Code	—
JEITA Code	—
House Name	MCP



Referential Soldering Pad

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

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