ShinDengen

ST02D-170F2

Power Clampers
200W, 145V

Feature

- TVS with FRD
- SMD Package
- Application for snubber circuit
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): 2F

Equivalent circuit

Absolute Maximum Ratings (unless otherwise specified : Tl=25℃)

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	Tstg		-40 to 150	℃
Operating junction temperature	Tj		150	℃
Maximum surge reverse power(ZD)	P_{RSM}(ZD)	10/1000μs, Non-repetitive	200	W
Maximum surge reverse current(ZD)	I_{RSM}(ZD)	10/1000μs, Non-repetitive	0.75	A
Continuous (direct) reverse voltage(ZD)	$V_{RM(DC)}$(ZD)		145	V
Repetitive peak reverse voltage(Di)	V_{RRM}(Di)		600	V

※ :See the original Specifications

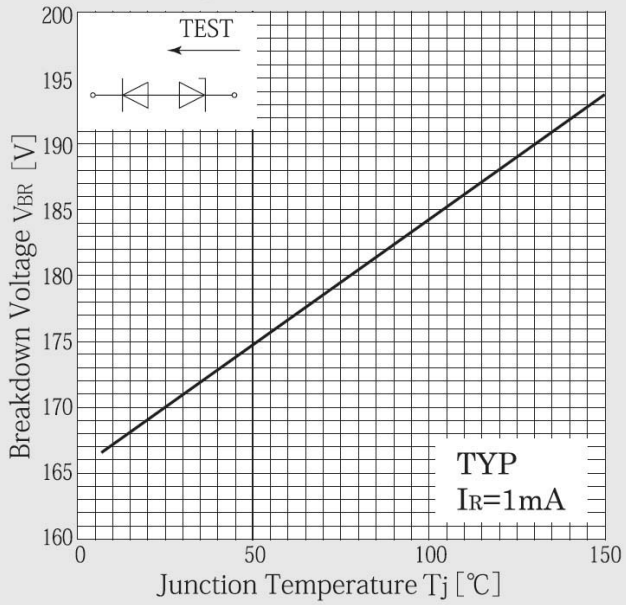
Electrical Characteristics (unless otherwise specified : Tl=25℃)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakdown voltage(ZD)	V_{BR}(ZD)	IR=1mA	155	170	185	V
Clamping Voltage(ZD)	V_{CL}(ZD)	IPP=0.75A			280	V
Reverse current(ZD)	I_R(ZD)	VR=145V			5	μA
Reverse current(Di)	I_R(Di)	VR=600V			5	μA
Reverse recovery time(Di)	trr(Di)	IF/IR=0.1A/0.3A			500	ns
Thermal resistance	Rth(j-l)	Junction to lead			24	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate			120	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient, On alumina substrate			90	℃/W

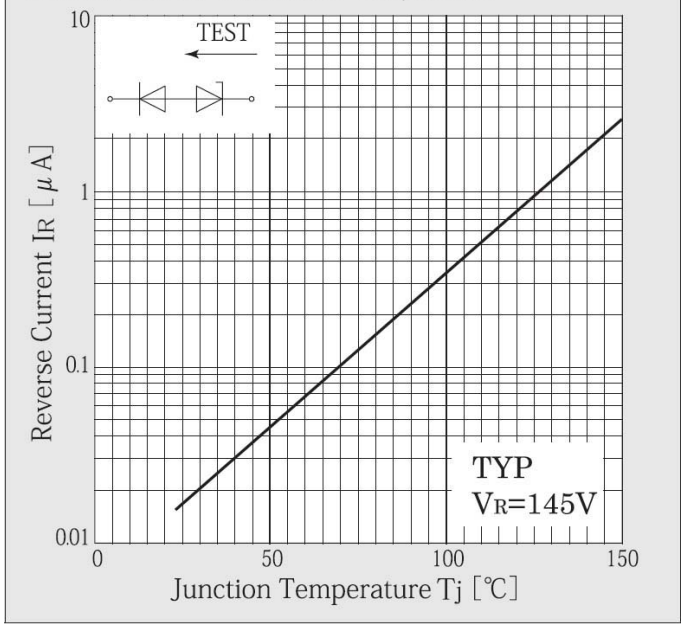
※ ：See the original Specifications

CHARACTERISTIC DIAGRAMS

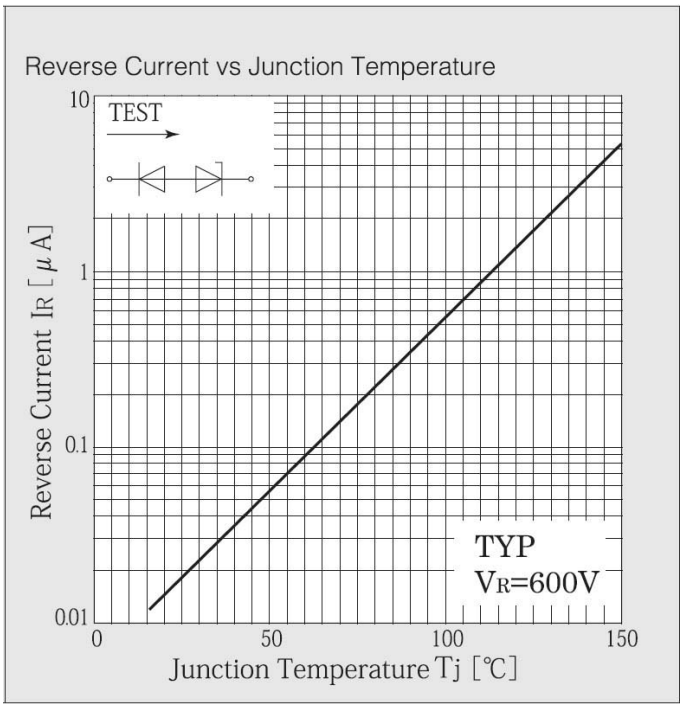
Breakdown Voltage vs Junction Temperature



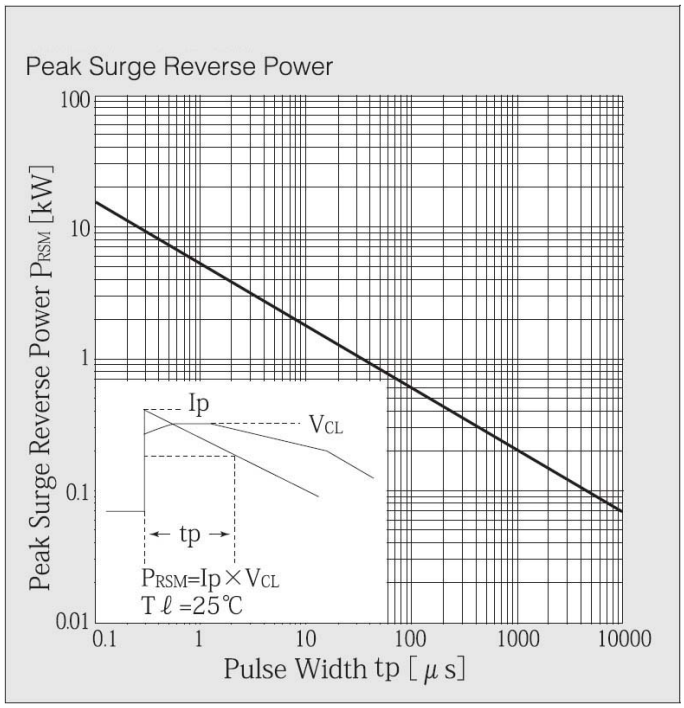
Reverse Current vs Junction Temperature



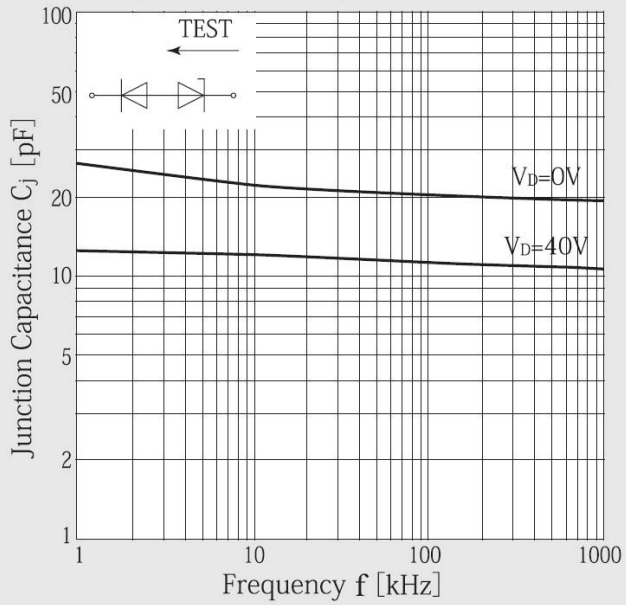
Reverse Current vs Junction Temperature



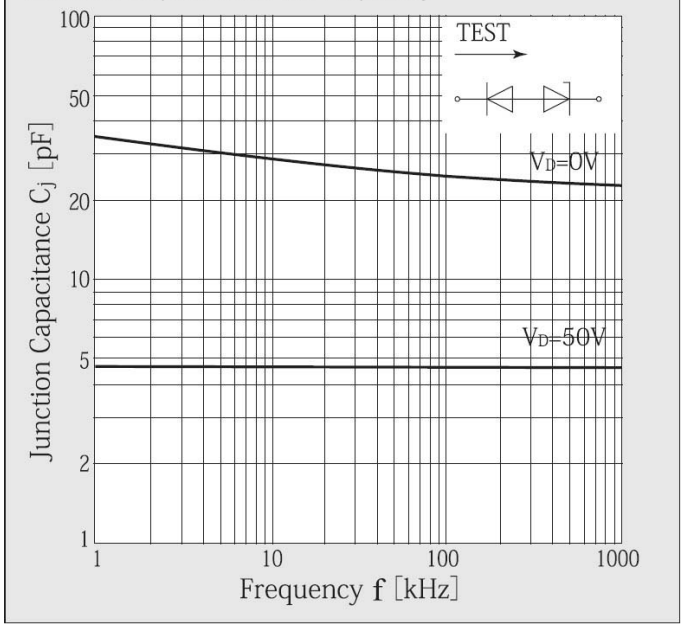
Peak Surge Reverse Power



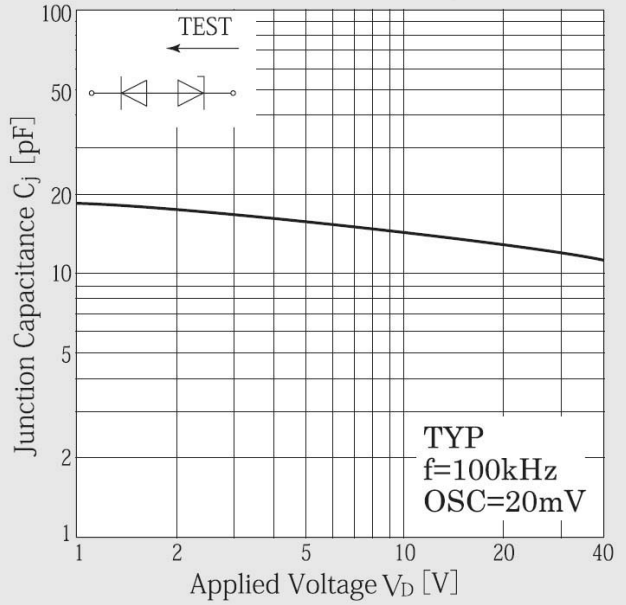
Junction Capacitance vs Frequency



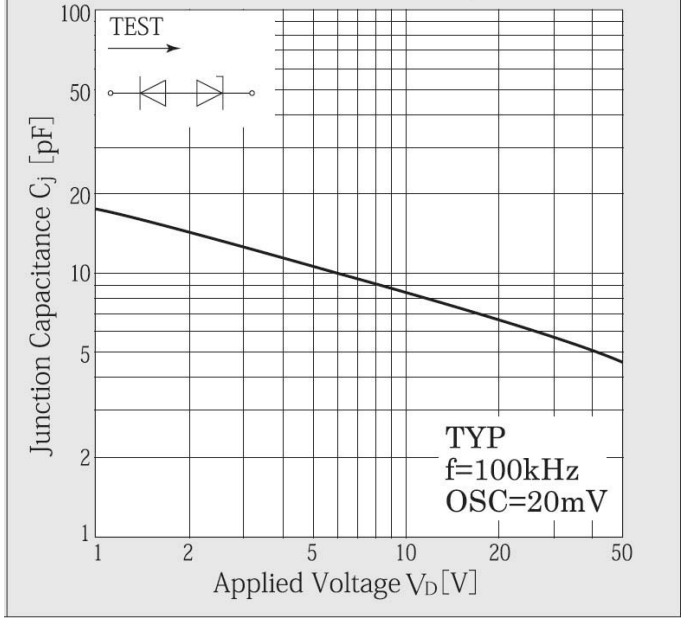
Junction Capacitance vs Frequency



Junction Capacitance vs Applied Voltage



Junction Capacitance vs Applied Voltage



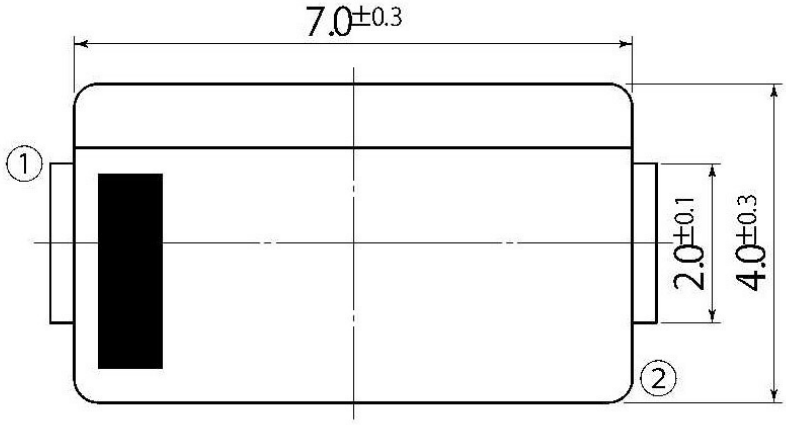
Outline Dimensions

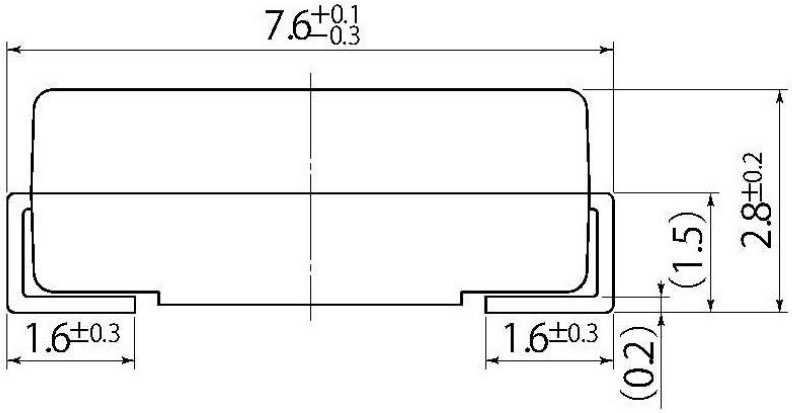
unit:mm

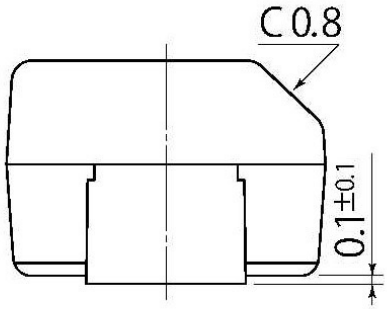
scale: 10/1

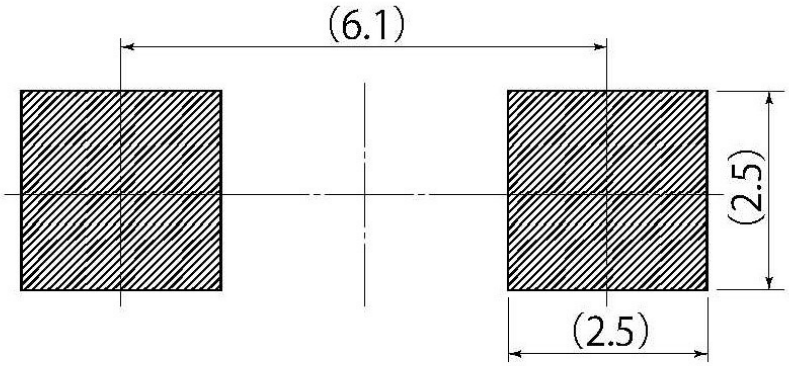
B9

JEDEC Code	–
JEITA Code	–
House Name	2F









Referential Soldering Pad

• Optimize soldering pad to the board design and soldering condi tion.

Notes

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