ShinDengen

D30FD60K

Fast Recovery Diodes
600V, 30A

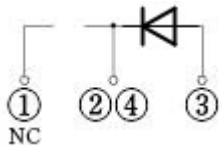
Feature

- SMD
- High Voltage
- Low Noise
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): FD
Package (JEITA Code): SC-83 similar

Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-55 to 150	℃
Junction temperature	Tj		150	℃
Repetitive peak reverse voltage	V_{RRM}		600	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, With heatsink, Tc=102℃	30	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle, Peak value, Tj=25℃	300	A
Surge forward current	I_{FSM1}	tp=1ms, Non-repetitive, Tj=25℃	948	A

※ :See the original Specifications

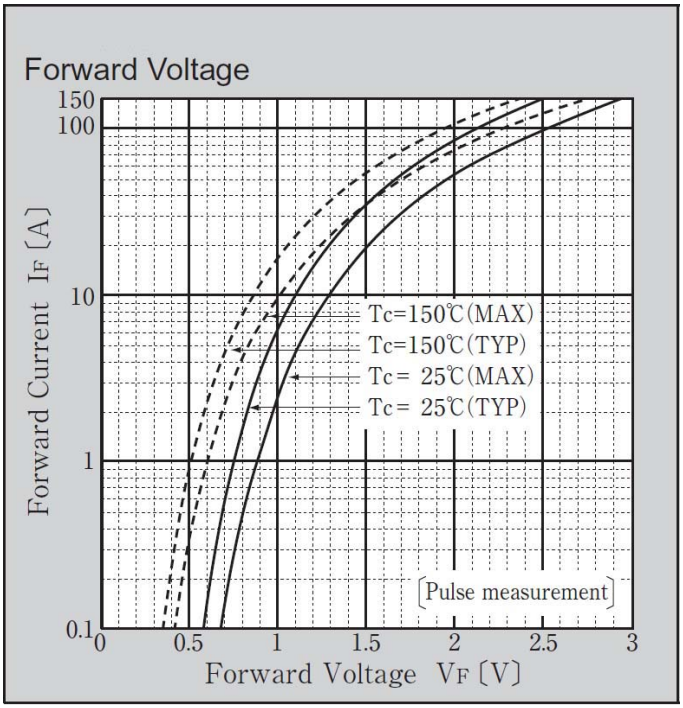
Electrical Characteristics (unless otherwise specified : Tc=25℃)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=30A, Pulse measurement			1.7	V
Reverse current	I_R	VR=600V, Pulse measurement			10	μA
Reverse recovery time	trr	IF=0.5A, IR=1A, 0.25IR			95	ns
Reverse recovery time	trr	IF=1.0A, VR=30V, di/dt=-50A/μs, 0.25IR			72	ns
Reverse recovery time	trr	IF=1.0A, VR=420V, di/dt=-50A/μs, 0.25IR			84	ns
Total capacitance	Ct	f=1MHz, VR=10V		105		pF
Thermal resistance	Rth(j-c)	Junction to case, With heatsink			0.8	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient			65	℃/W

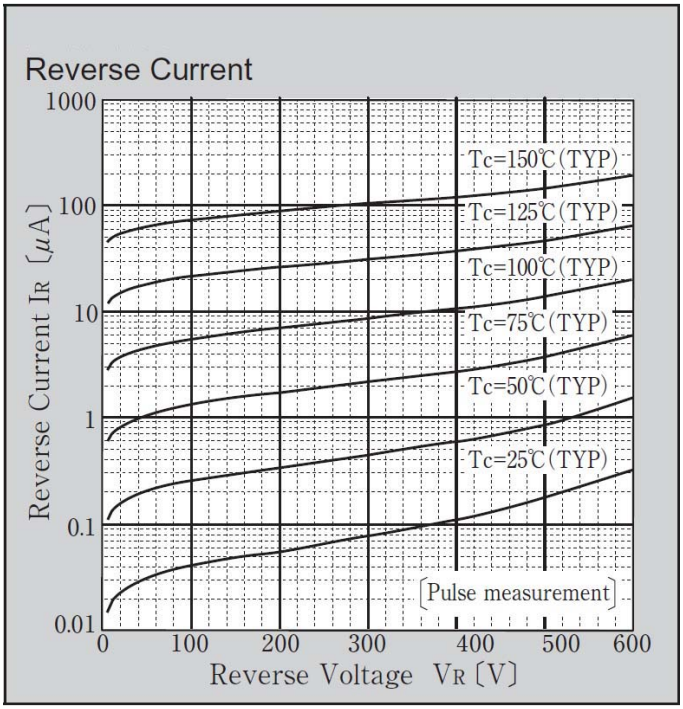
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

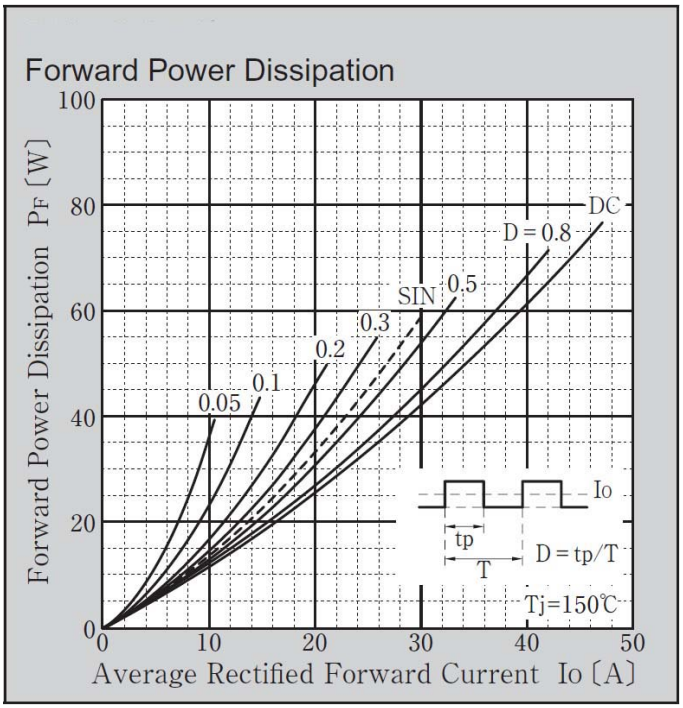
Forward Voltage



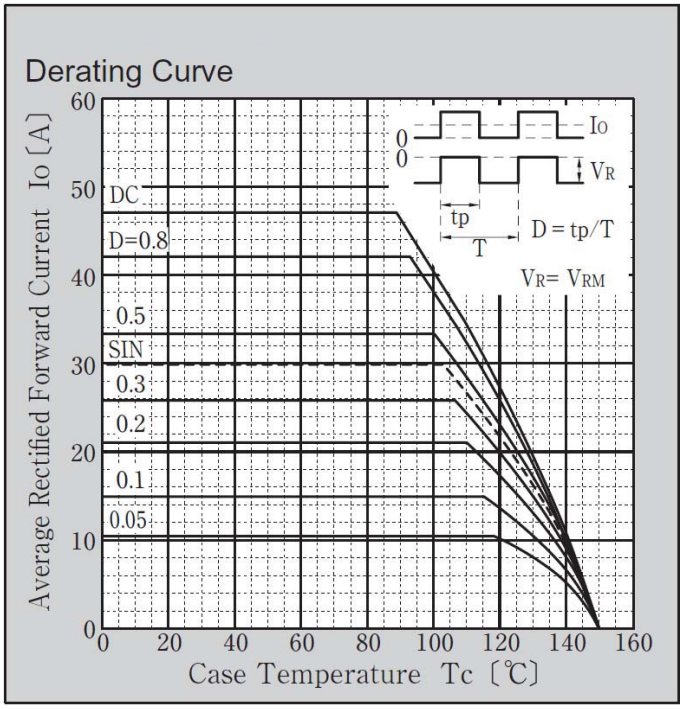
Reverse Current



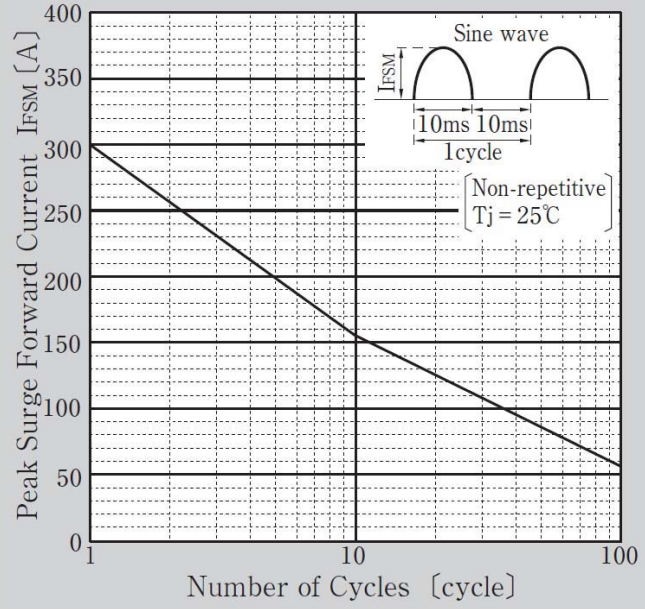
Forward Power Dissipation



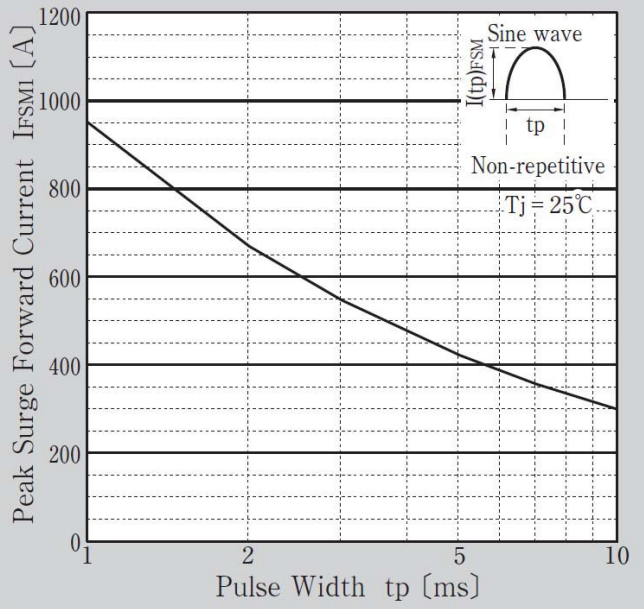
Derating Curve



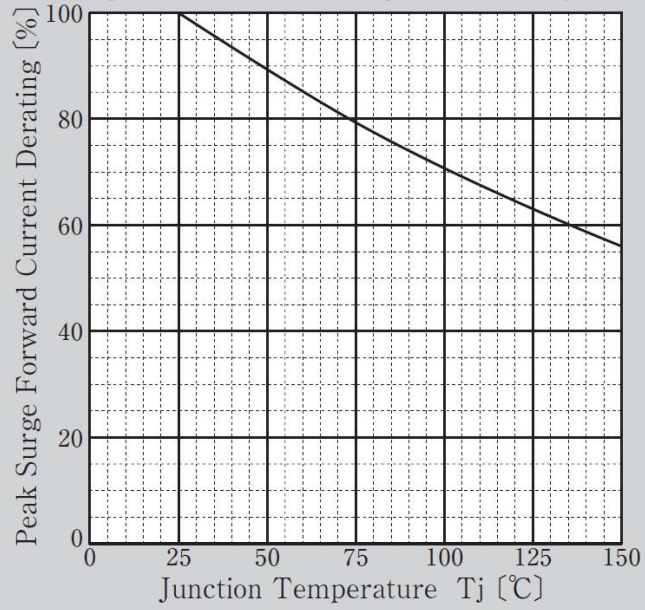
Peak Surge Forward Current Capability



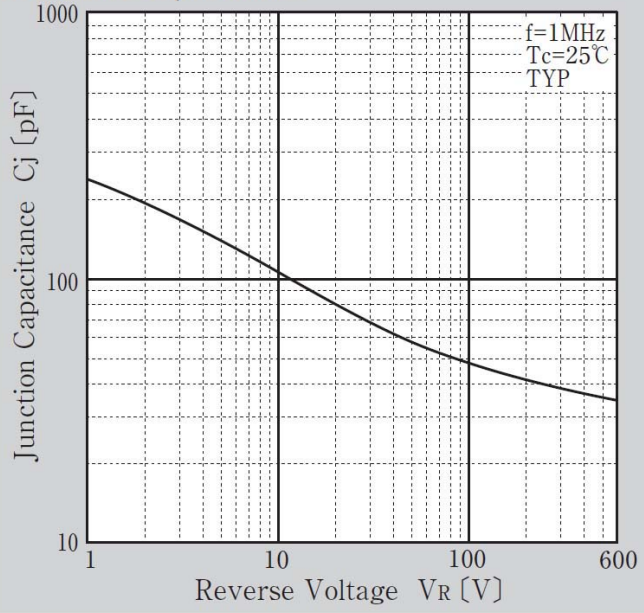
Peak Surge Forward Current Capability

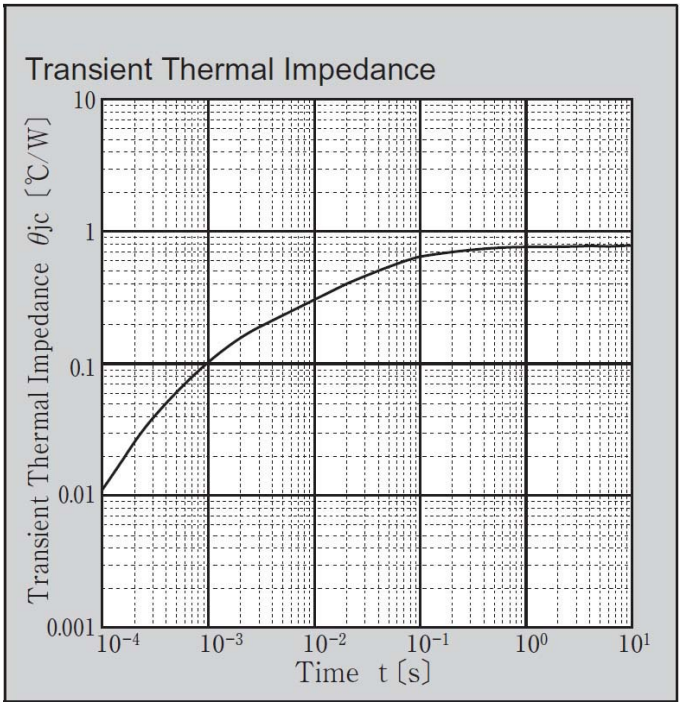


Peak Surge Forward Current Derating vs Junction Temperature



Junction Capacitance




Transient Thermal Impedance
Transient Thermal Impedance θjc 〔℃/W〕
10
1
0.1
0.01
0.001
10⁻⁴
10⁻³
10⁻²
10⁻¹
10⁰
10¹
Time t〔s〕

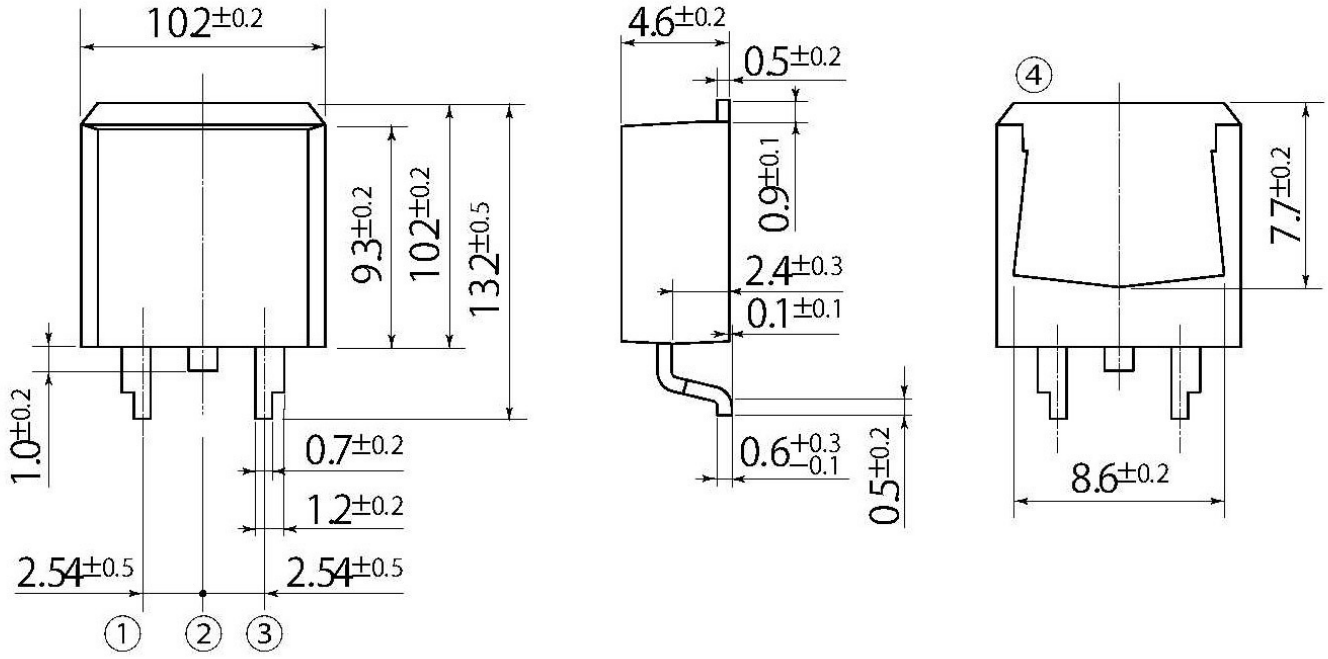
Outline Dimensions

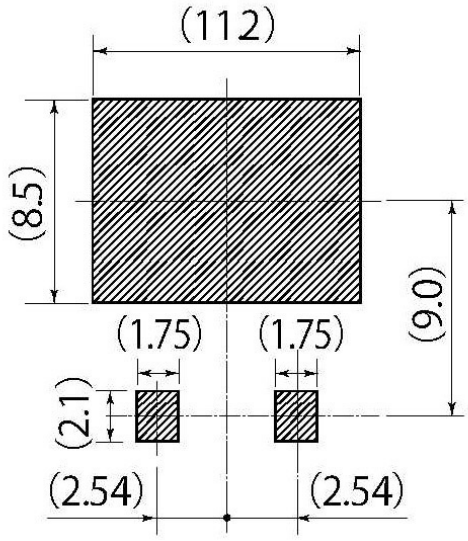
unit:mm

scale: 3/1

H2

JEDEC Code	–
JEITA Code	SC-83 similar
House Name	FD





Referential Soldering Pad

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

Notes

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