

# S30K60V

Fast Recovery Diodes  
600V, 30A

### Feature

- High Voltage
- Low Noise
- Available for automotive use
- Pb free terminal
- RoHS:Yes

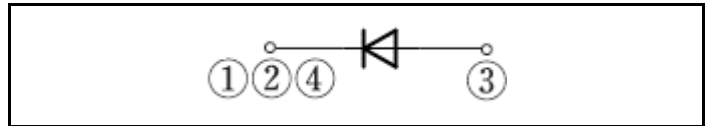
### OUTLINE

Package (House Name): MTO-3PV

Package (JEDEC Code): TO-247AD



### Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	T <sub>stg</sub>		-55 to 150	°C
Junction temperature	T <sub>j</sub>		150	°C
Repetitive peak reverse voltage	V <sub>RRM</sub>		600	V
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, T <sub>c</sub> =108°C	30	A
Surge forward current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1 cycle, Peak value, T <sub>j</sub> =25°C	450	A
Surge forward current	I <sub>FSM1</sub>	t <sub>p</sub> =1ms, Sine wave, Non-repetitive, 1 cycle, Peak value, T <sub>j</sub> =25°C	1423	A
Mounting torque	TOR	(Recommended torque : 0.5N·m)	0.8	N·m

※ :See the original Specifications

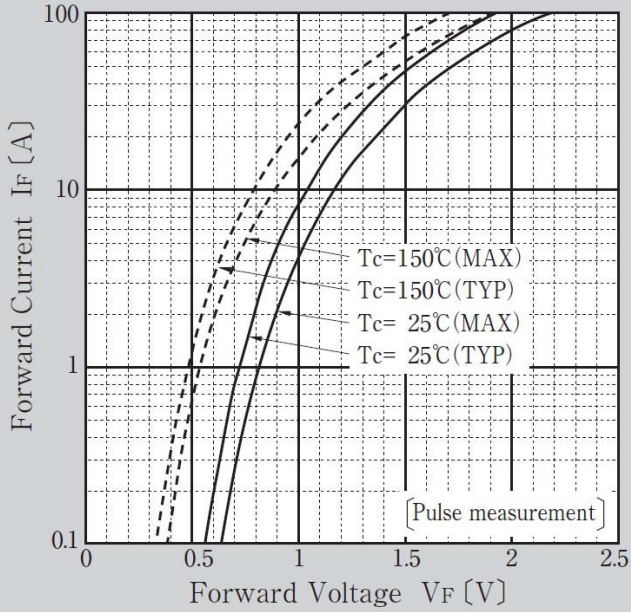
**Electrical Characteristics** (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V <sub>F</sub>	IF=30A, Pulse measurement		1.33	1.5	V
Forward voltage	V <sub>F</sub>	IF=3A, Pulse measurement		0.84		V
Reverse current	I <sub>R</sub>	VR=600V, Pulse measurement			10	μA
Reverse recovery time	trr	IF=0.5A, IR=1A, 0.25IR			100	ns
Reverse recovery time	trr	IF=1.0A, VR=30V, di/dt=-50A/μs, 0.25IR			74	ns
Reverse recovery time	trr	IF=1.0A, VR=420V, di/dt=-50A/μs, 0.25IR			88	ns
Total capacitance	Ct	f=1MHz, VR=10V		154		pF
Thermal resistance	Rth(j-c)	Junction to case			0.8	°C/W

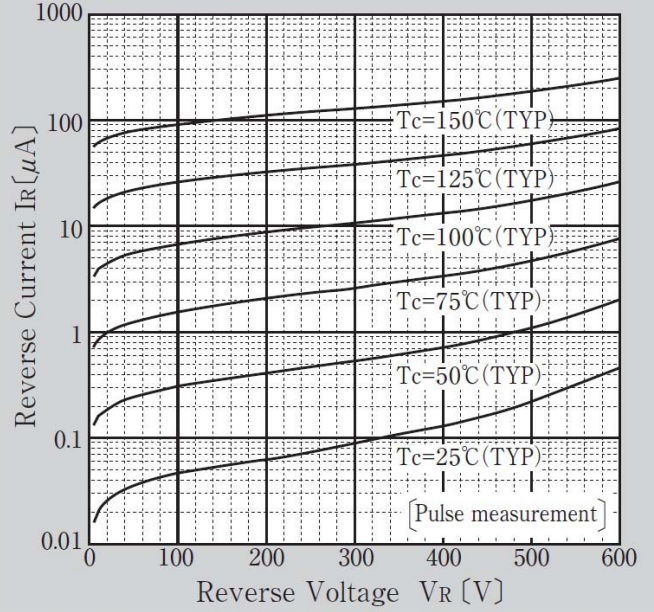
\* :See the original Specifications

# CHARACTERISTIC DIAGRAMS

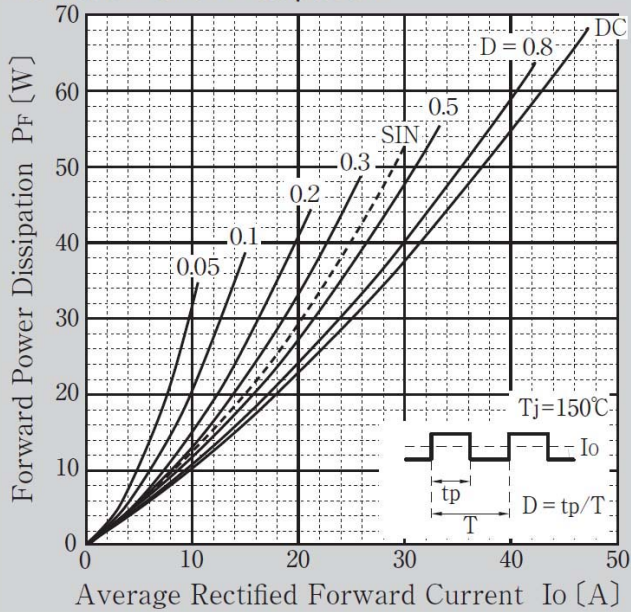
### Forward Voltage



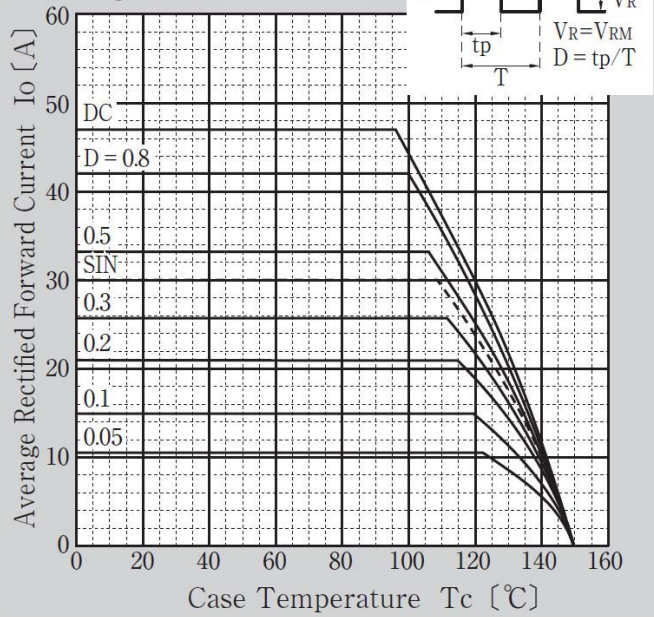
### Reverse Current



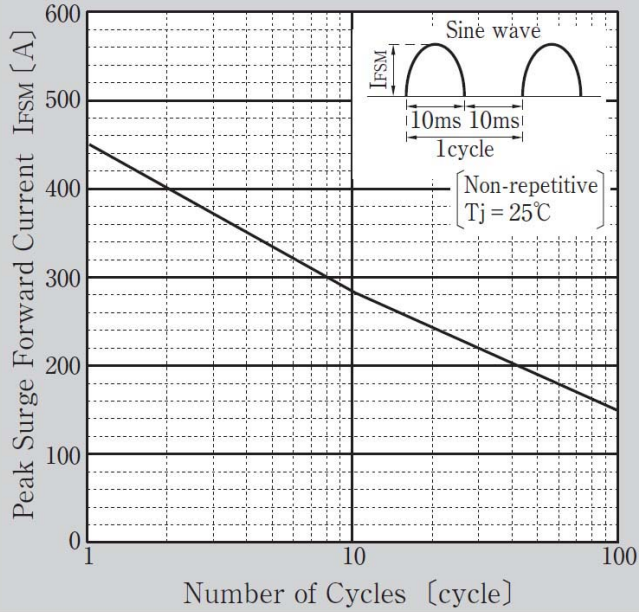
### Forward Power Dissipation



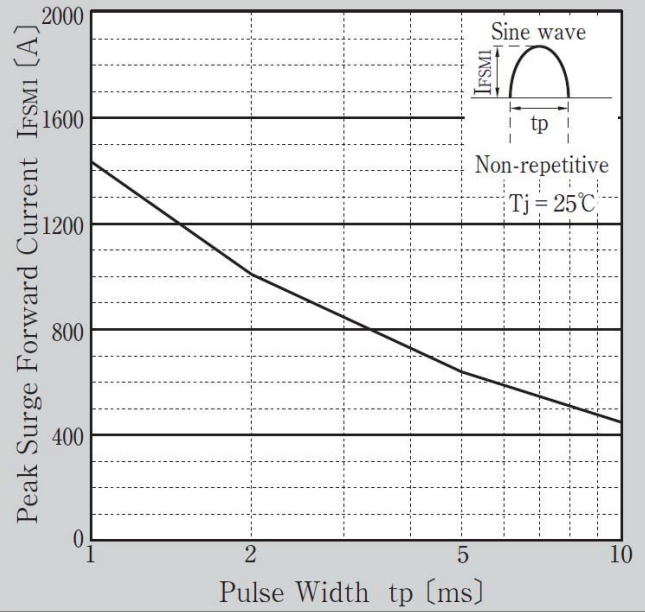
### Derating Curve



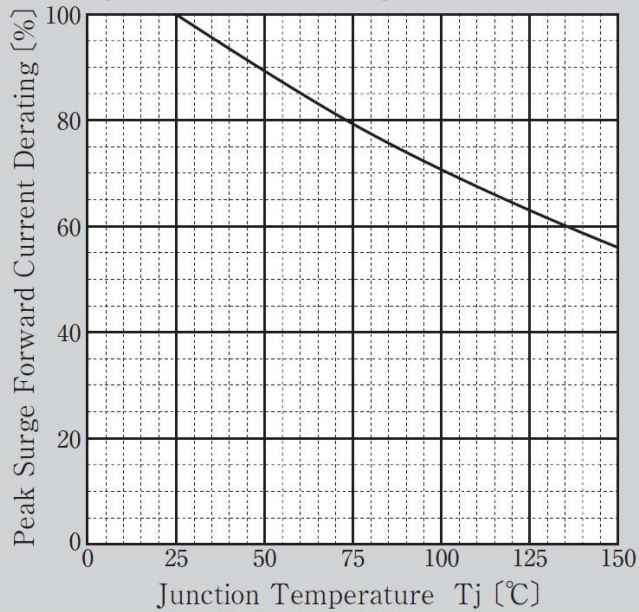
Peak Surge Forward Current Capability



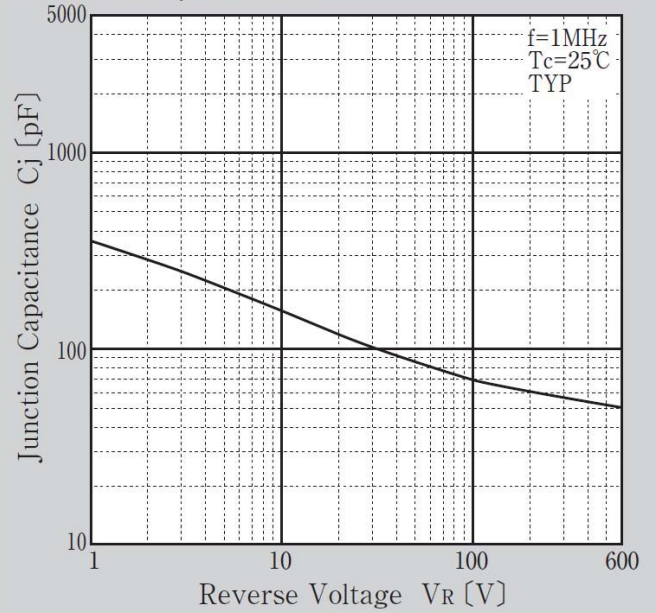
Peak Surge Forward Current Capability



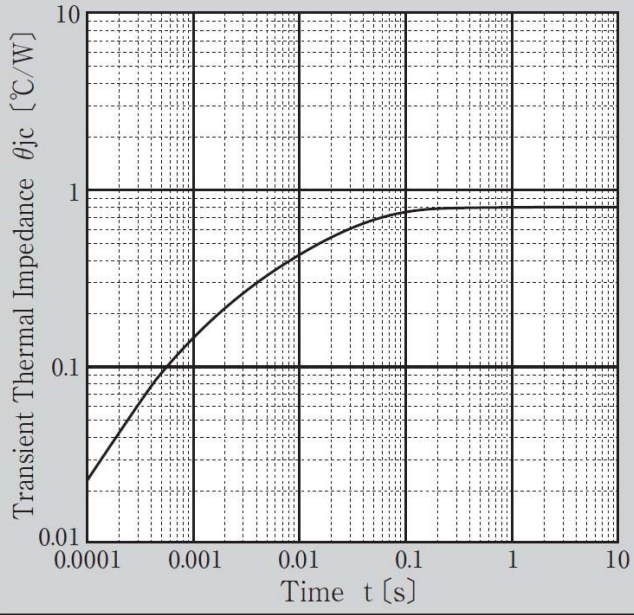
Peak Surge Forward Current Derating vs Junction Temperature



Junction Capacitance

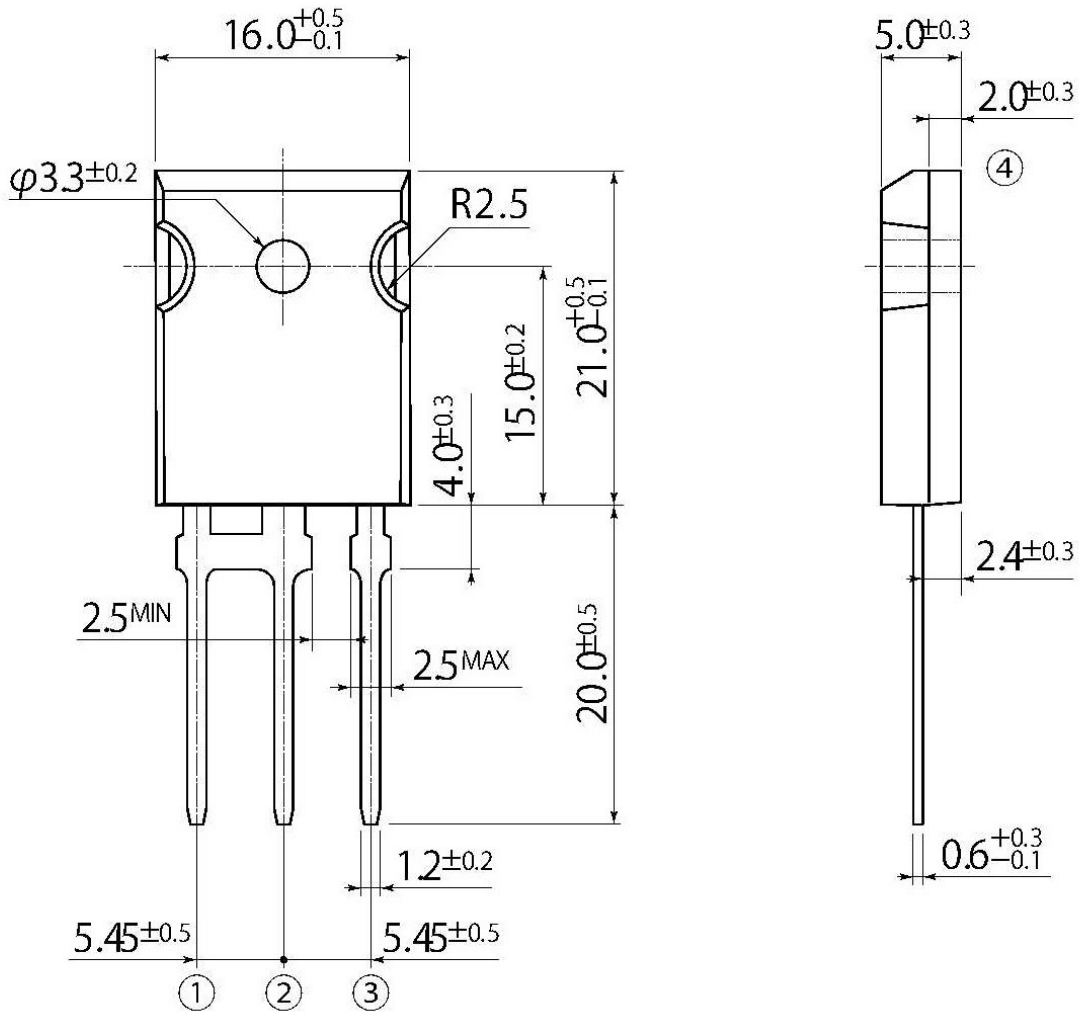


Transient Thermal Impedance



K6

JEDEC Code	TO-247AD
JEITA Code	-
House Name	MTO-3PV



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