

# S30V80V

## General Rectifying Diodes

800V, 30A

### Feature

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

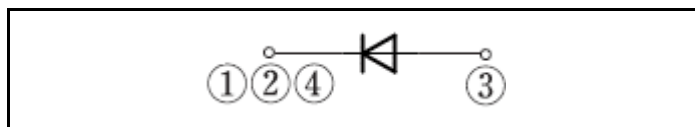
### OUTLINE

Package (House Name): MTO-3PV

Package (JEDEC Code): TO-247AD



### Equivalent circuit



### Absolute Maximum Ratings (unless otherwise specified : T<sub>c</sub>=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>		800	V
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, With heatsink T <sub>c</sub> =131°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, T <sub>j</sub> =25°C, Non-repetitive	1423	A
Current squared time	I <sup>2</sup> t	1ms ≤ t <sub>p</sub> < 10ms, Rating of per diode	1012.5	A <sup>2</sup> s
Mounting torque	TOR	(Recommended torque:0.5N·m)	0.8	N·m

\* :See the original Specifications

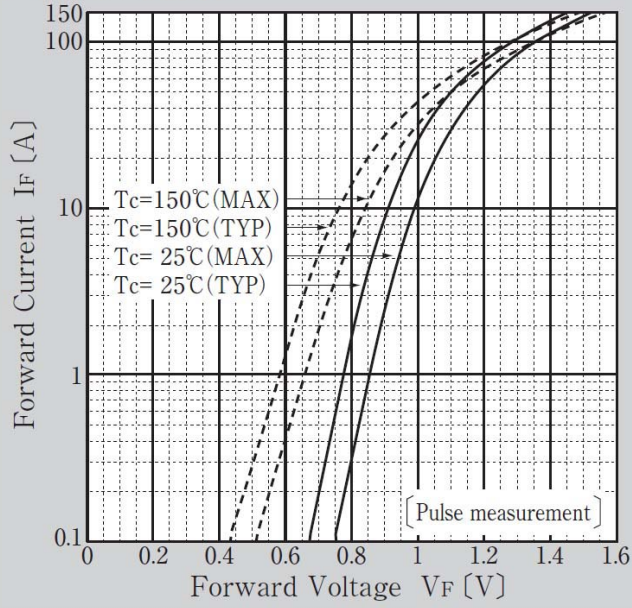
**Electrical Characteristics** (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =30A, Pulse measurement			1.1	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =800V, Pulse measurement			10	μA
Thermal resistance	R <sub>th(j-c)</sub>	Junction to case, With heatsink			0.5	°C/W

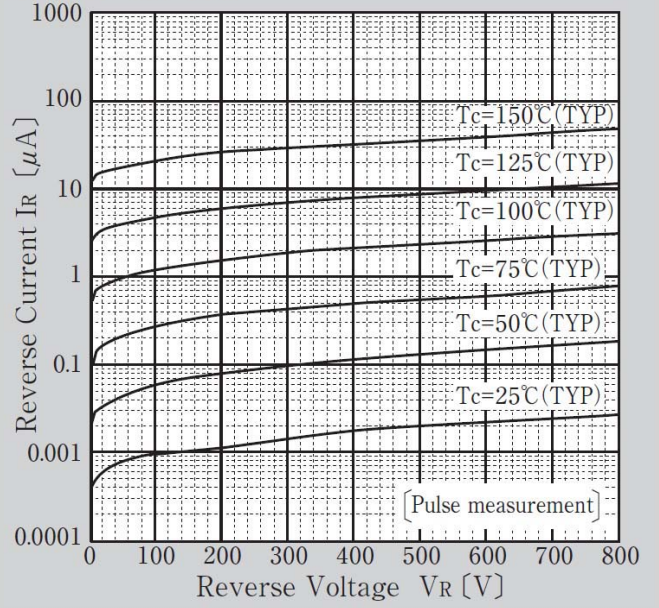
\* :See the original Specifications

# CHARACTERISTIC DIAGRAMS

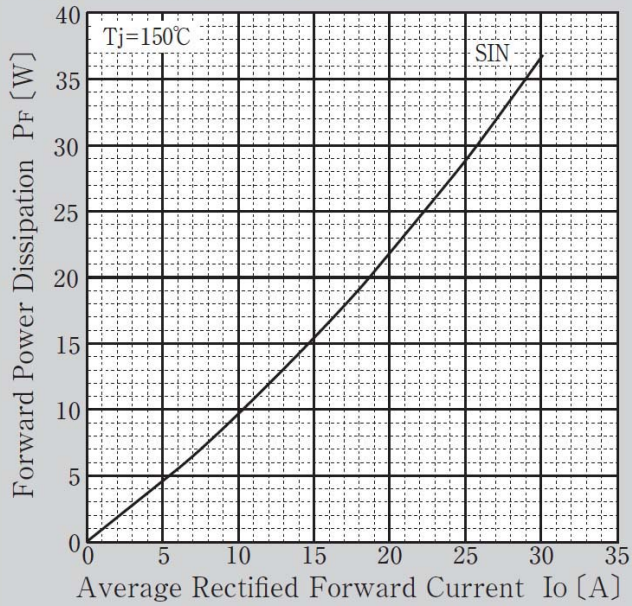
### Forward Voltage



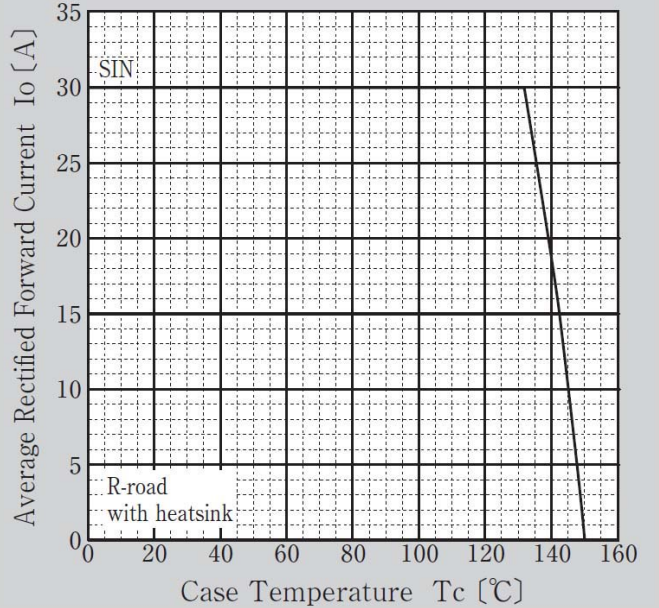
### Reverse Current



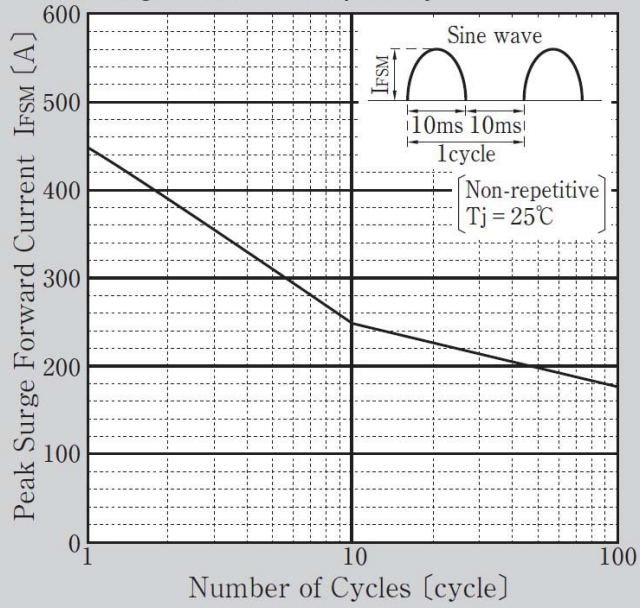
### Forward Power Dissipation



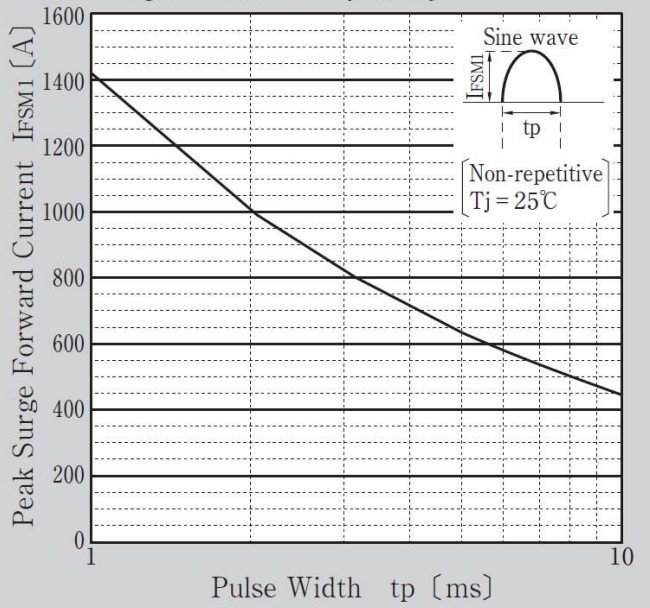
### Derating Curve



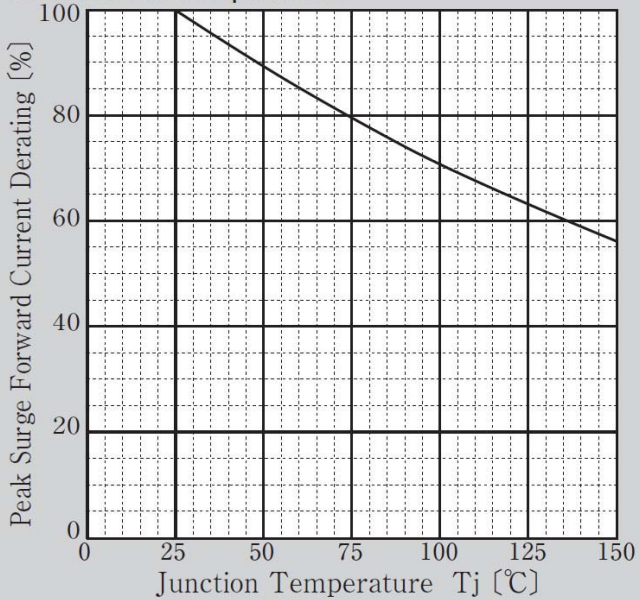
Peak Surge Forward Capability



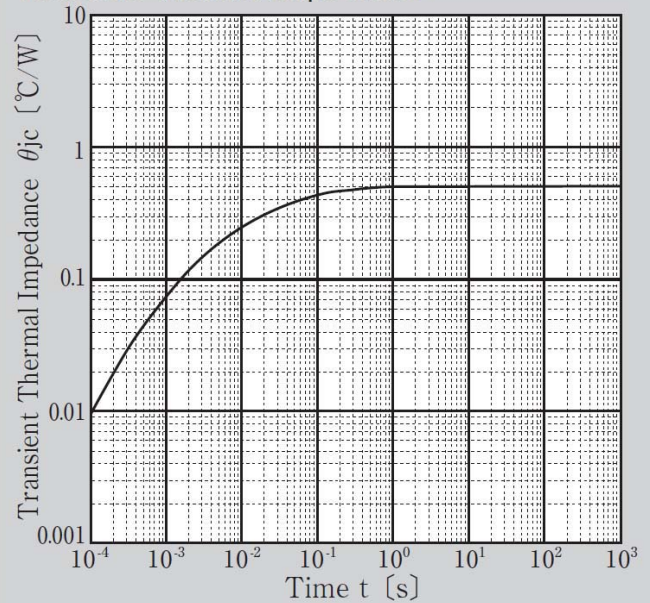
Peak Surge Forward Capability



Peak Surge Forward Current Derating vs Junction Temperature

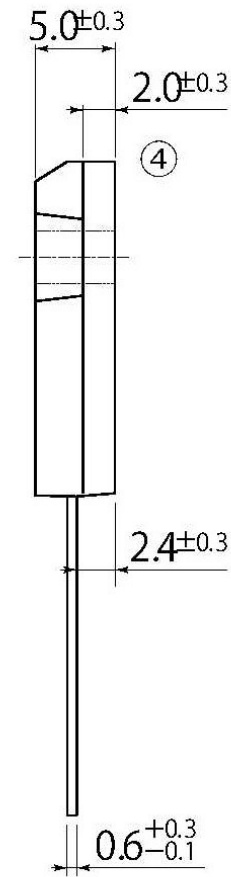
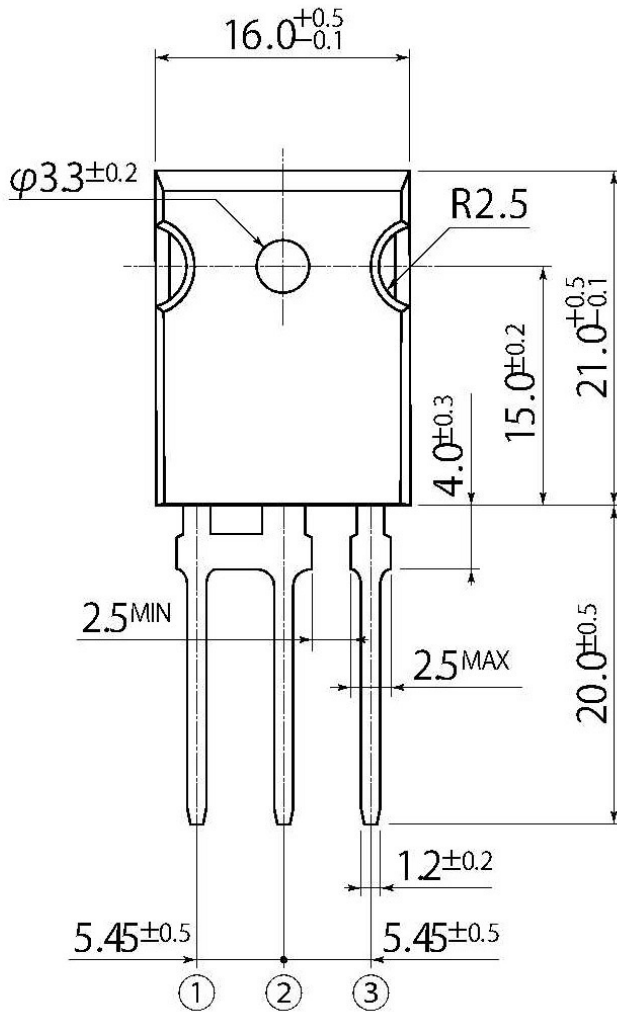


Transient Thermal Impedance



K6

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



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