

# S20K100V

Fast Recovery Diodes  
1000V, 20A

### Feature

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

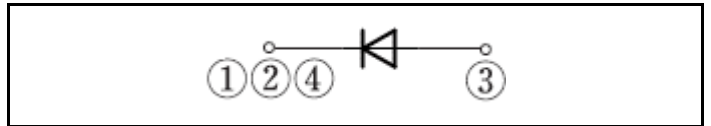
### OUTLINE

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>		1000	V
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, T <sub>c</sub> =127°C	20	A
Surge forward current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1 cycle, Peak value, T <sub>j</sub> =25°C	550	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	1450	A
Mounting torque	TOR	(Recommended torque : 0.5N·m)	0.8	N·m

※ :See the original Specifications

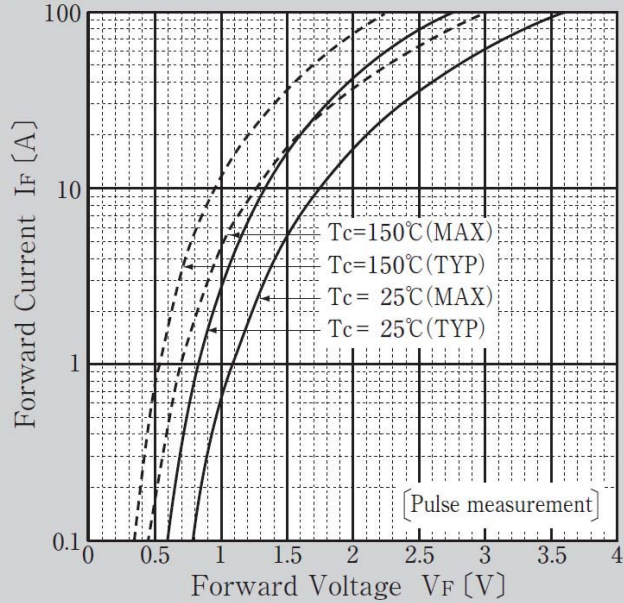
**Electrical Characteristics** (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =20A, Pulse measurement			2.1	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =1000V, Pulse measurement			10	μA
Reverse recovery time	t <sub>rr</sub>	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, 0.25I <sub>R</sub>			120	ns
Total capacitance	C <sub>t</sub>	f=1MHz, V <sub>R</sub> =10V		130		pF
Thermal resistance	R <sub>th(j-c)</sub>	Junction to case			0.5	°C/W

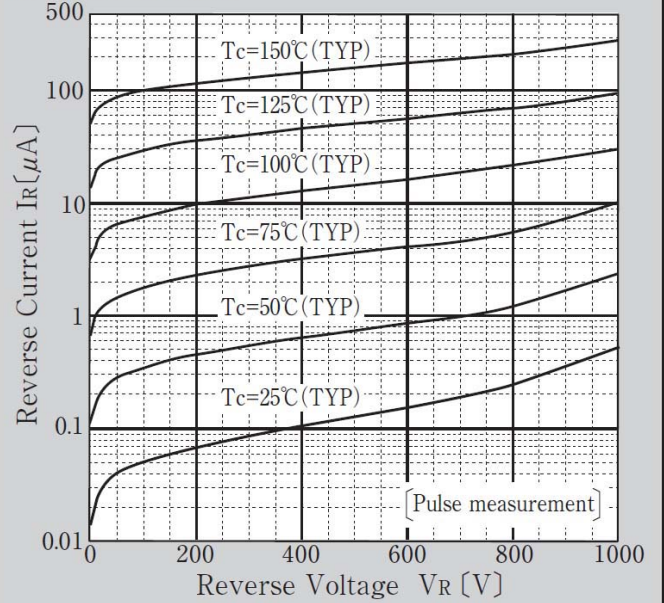
\* :See the original Specifications

# CHARACTERISTIC DIAGRAMS

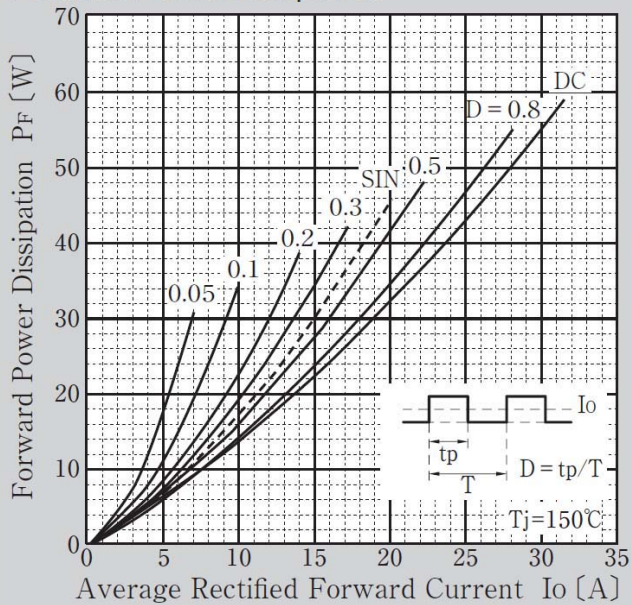
### Forward Voltage



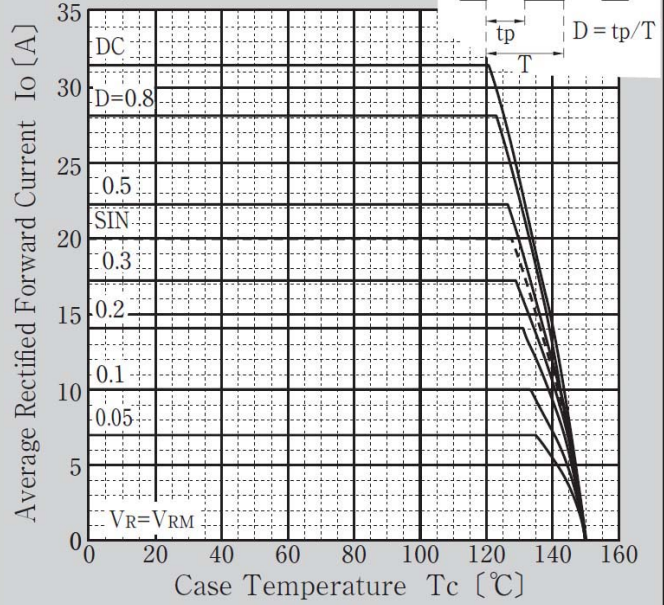
### Reverse Current



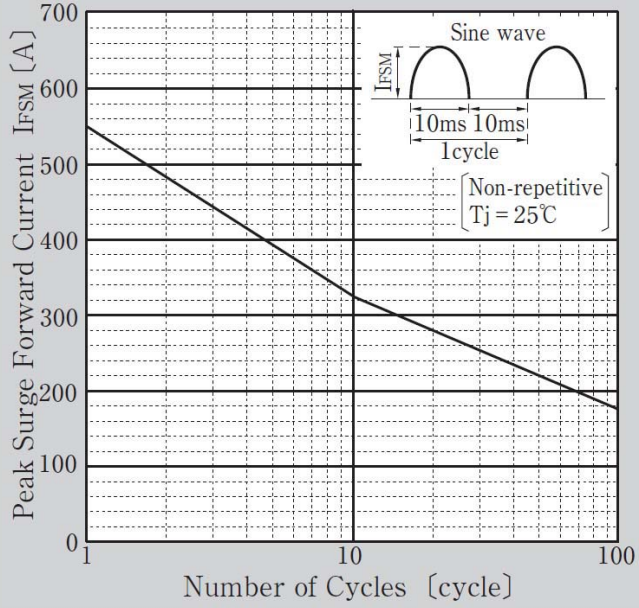
### Forward Power Dissipation



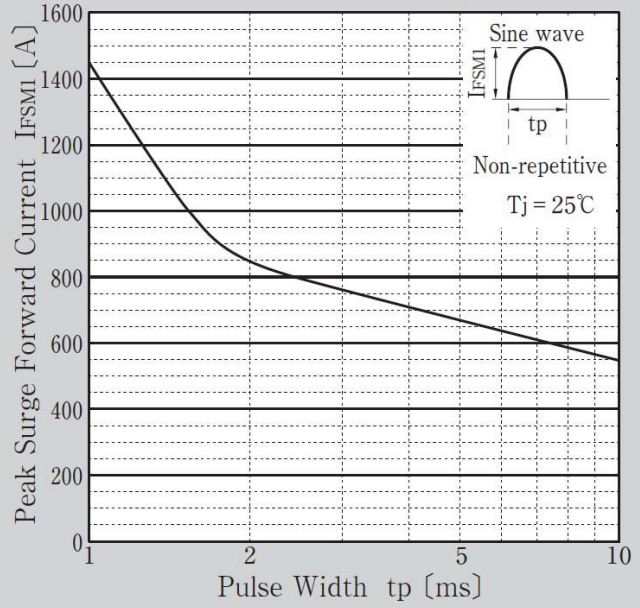
### Derating Curve



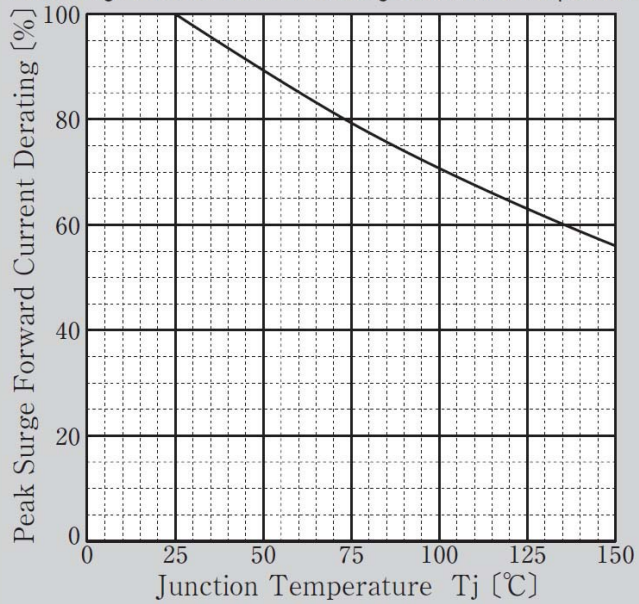
Peak Surge Forward Current Capability



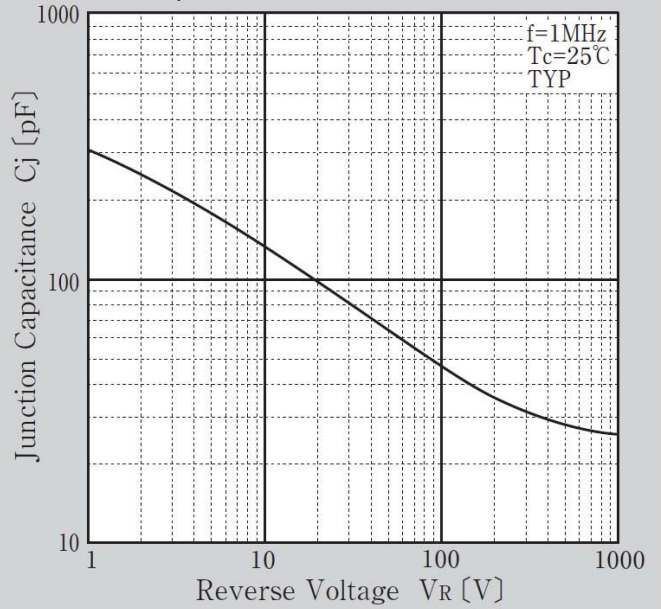
Peak Surge Forward Current Capability



Peak Surge Forward Current Derating vs Junction Temperature

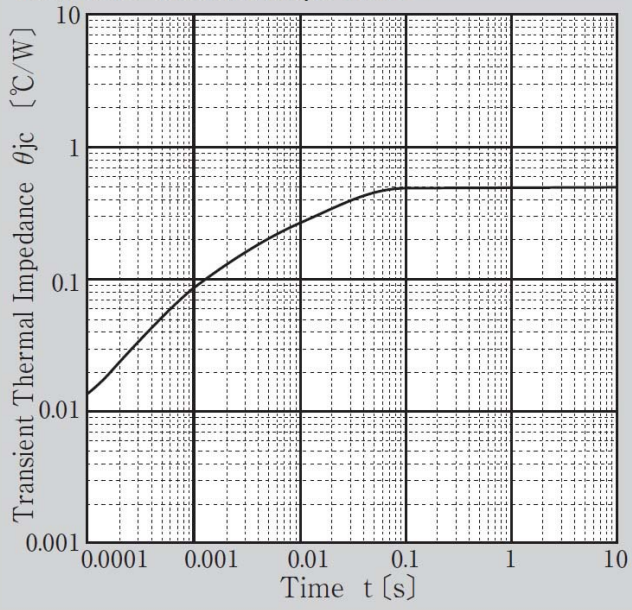


Junction Capacitance



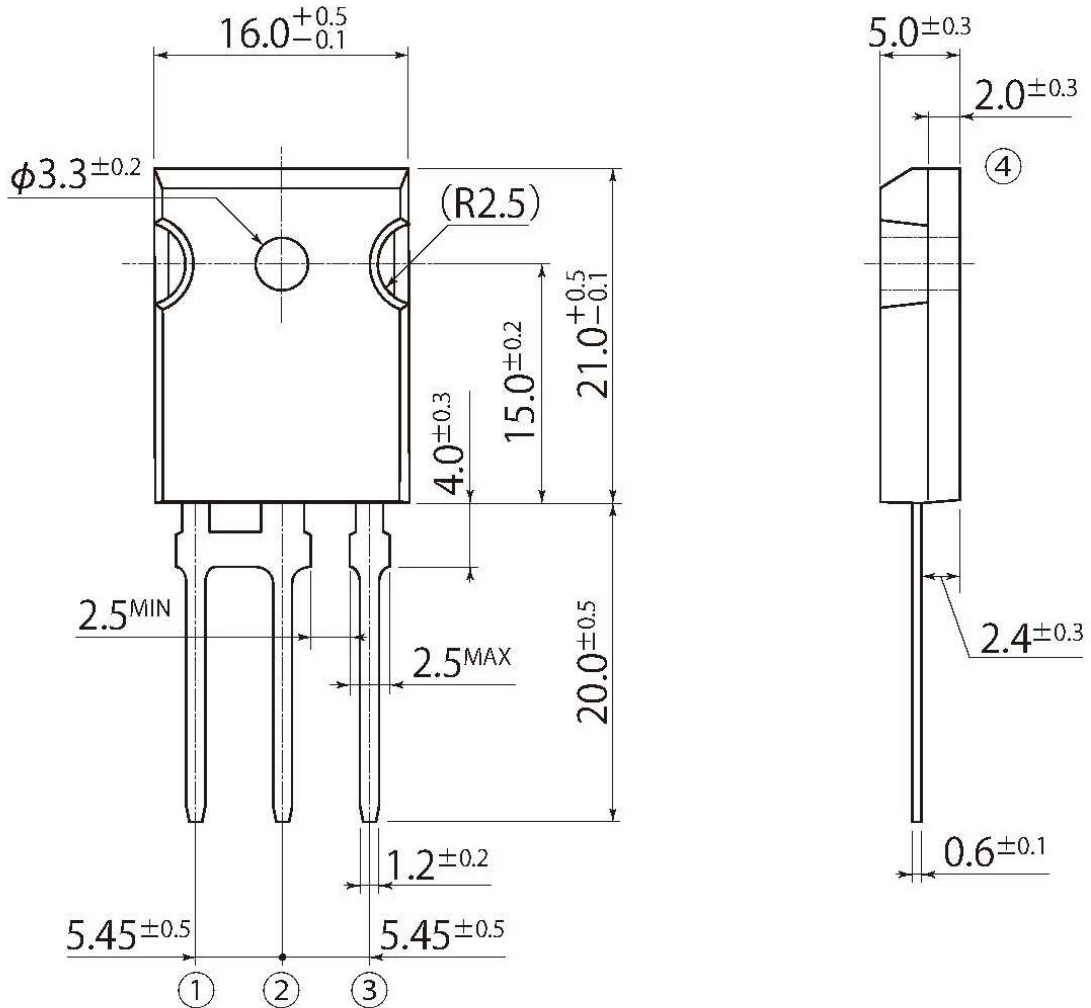


Transient Thermal Impedance



K6

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



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