

# S20LC60USV

## Fast Recovery Diodes

600V, 20A

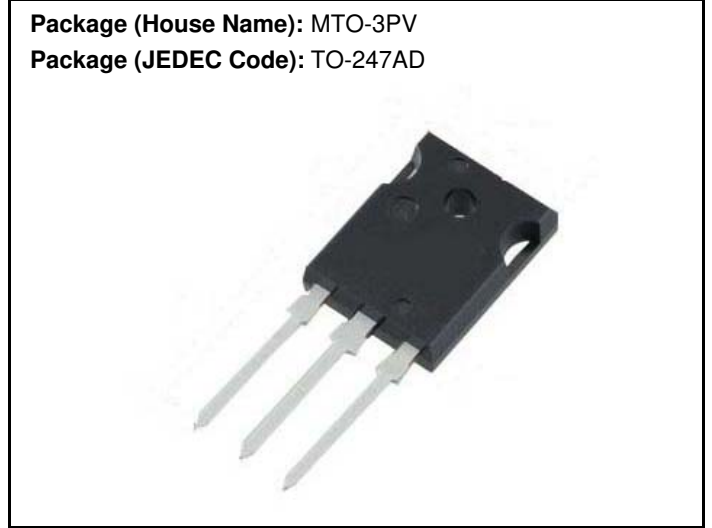
### Feature

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

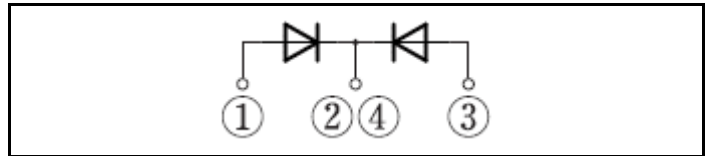
### OUTLINE

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>		600	V
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, Rating for each diode I <sub>F(AV)</sub> /2, T <sub>c</sub> =65°C	20	A
Surge forward current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1 cycle, Peak value, Rating of per diode, T <sub>j</sub> =25°C	60	A
Current squared time	I <sup>2</sup> t	1ms ≤ t <sub>p</sub> < 10ms, T <sub>j</sub> =25°C, Rating of per diode	18	A <sup>2</sup> s
Mounting torque	TOR	(Recommended torque : 0.5N·m)	0.8	N·m

※ : See the original Specifications

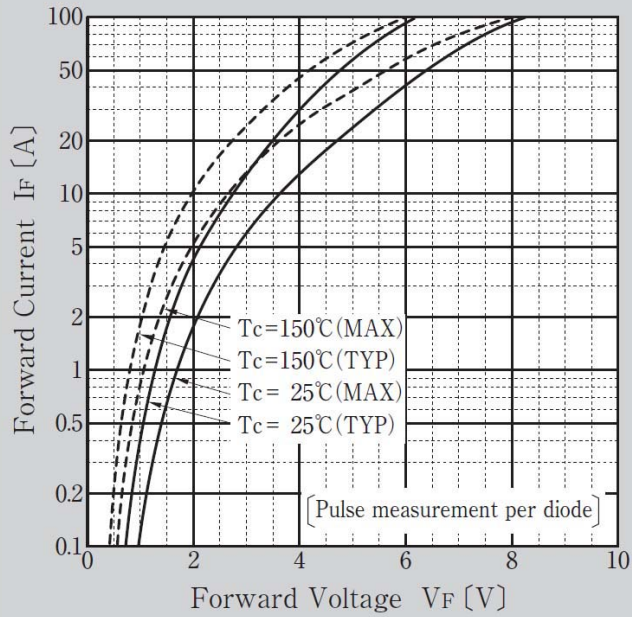
**Electrical Characteristics** (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V <sub>F</sub>	IF=10A, Pulse measurement, Per diode			3.6	V
Reverse current	I <sub>R</sub>	VR=600V, Pulse measurement, Per diode			50	μA
Reverse recovery time	trr	IF=0.5A, IR=1A (Recovery point 90%), Per Diode			25	ns
Total capacitance	Ct	f=1MHz, VR=10V, Per diode		24		pF
Thermal resistance	Rth(j-c)	Junction to case			1	°C/W

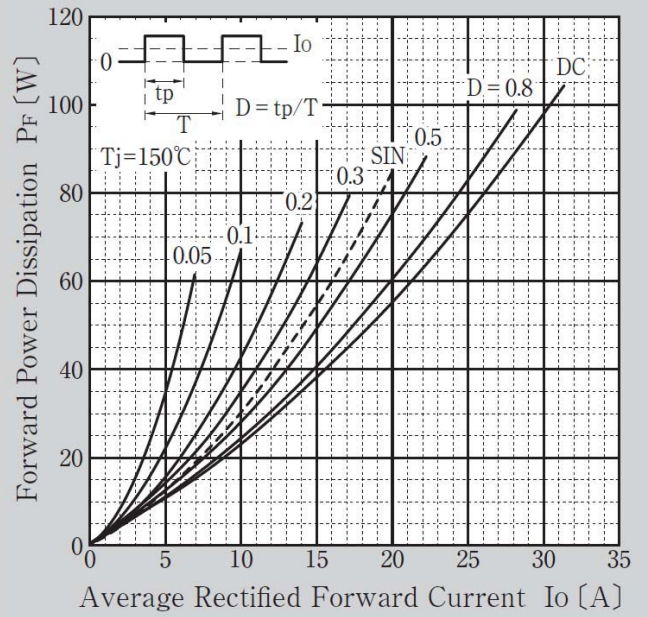
\* :See the original Specifications

# CHARACTERISTIC DIAGRAMS

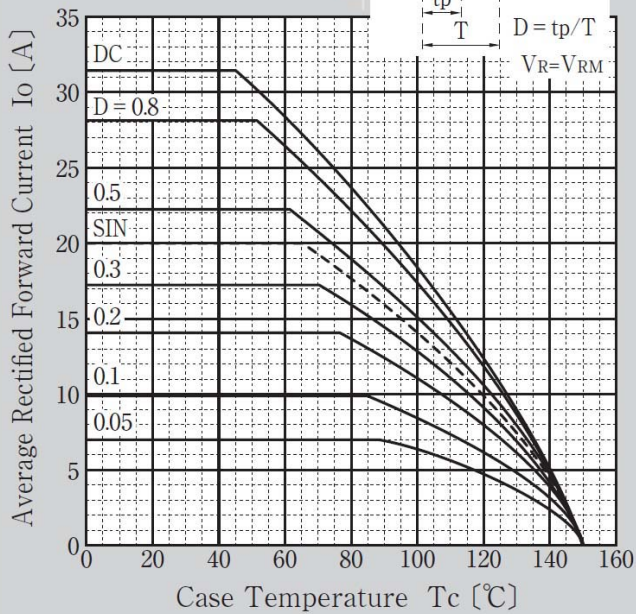
### Forward Voltage



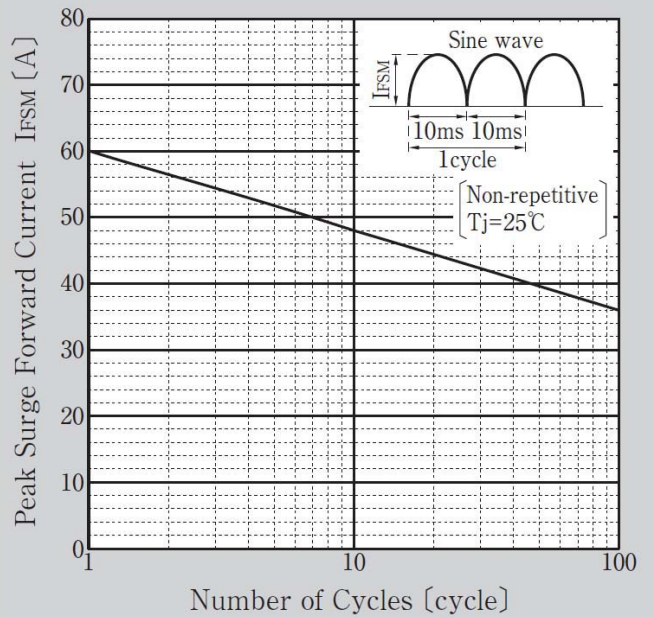
### Forward Power Dissipation



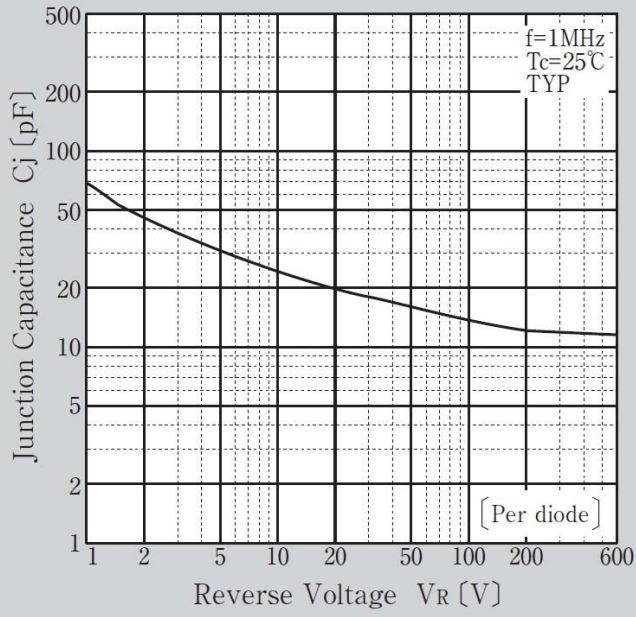
### Derating Curve



### Peak Surge Forward Current Capability

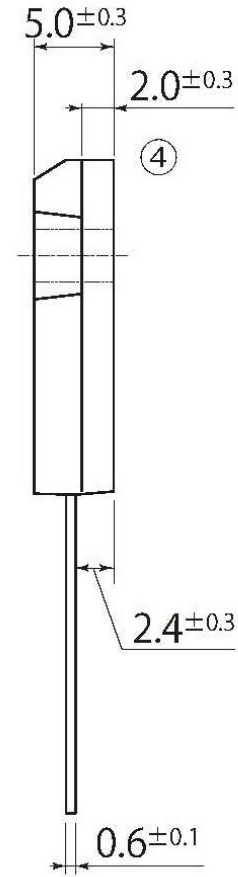
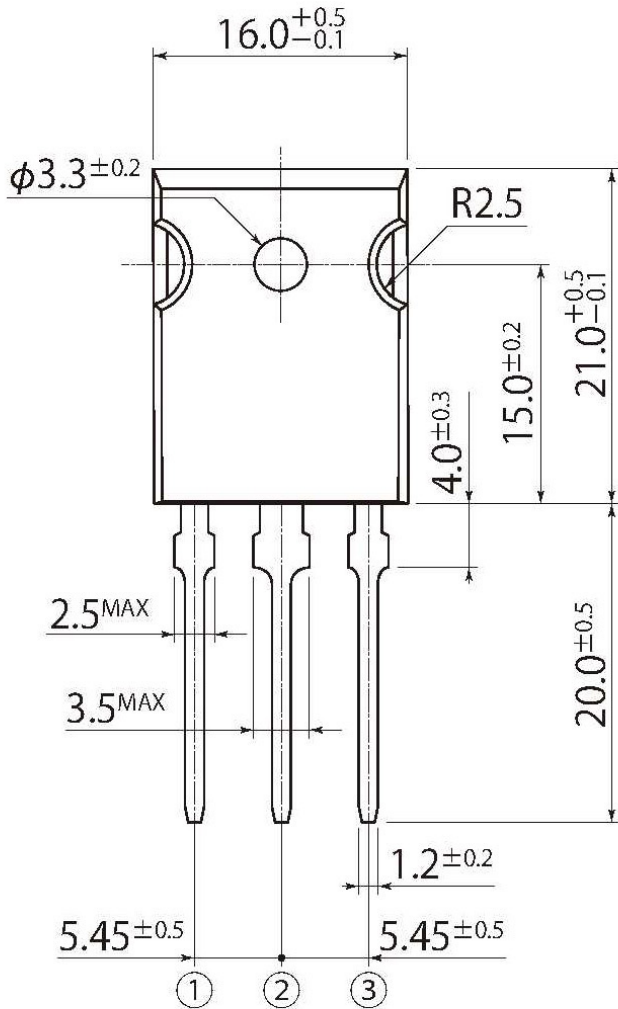


### Junction Capacitance



K7

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



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