

# S20LC40UV

## Fast Recovery Diodes

400V, 20A

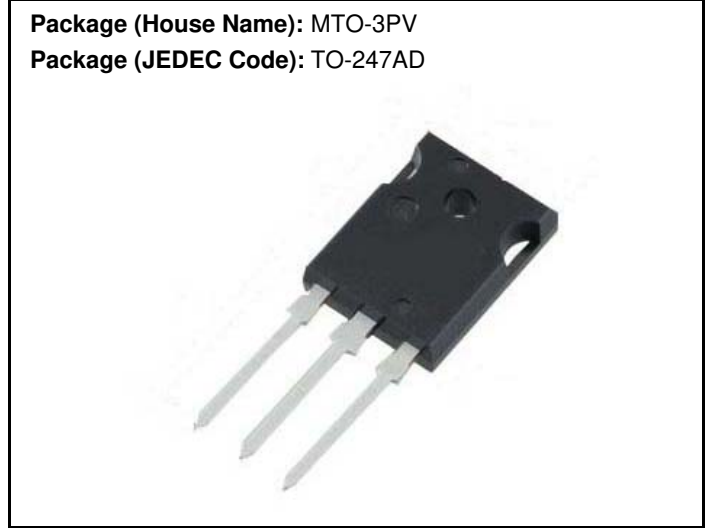
### Feature

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

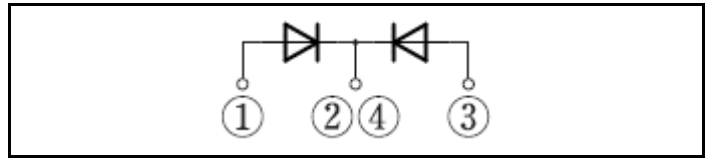
### OUTLINE

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>		400	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> =123°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	200	A
Surge forward current	I <sub>FSM1</sub>	t <sub>p</sub> =1ms, Non-repetitive, T <sub>j</sub> =25°C	450	A
Mounting torque	TOR	(Recommended torque : 0.5N·m)	0.8	N·m

※ :See the original Specifications

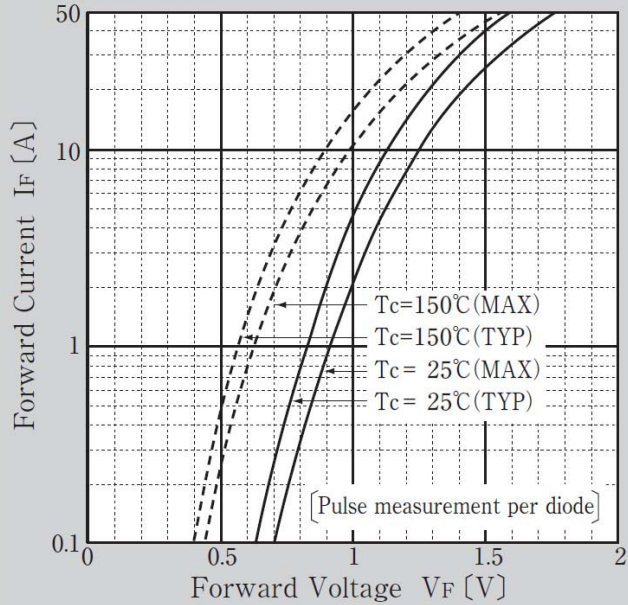
**Electrical Characteristics** (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =10A, Pulse measurement, Per diode		1.07	1.25	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =400V, Pulse measurement, Per diode			10	μA
Reverse recovery time	t <sub>rr</sub>	I <sub>F</sub> =0.5A, I <sub>R</sub> =1A, 0.25I <sub>R</sub> , Per Diode			30	ns
Total capacitance	C <sub>t</sub>	f=1MHz, V <sub>R</sub> =10V, Per diode		65		pF
Thermal resistance	R <sub>th(j-c)</sub>	Junction to case, With heatsink			1	°C/W

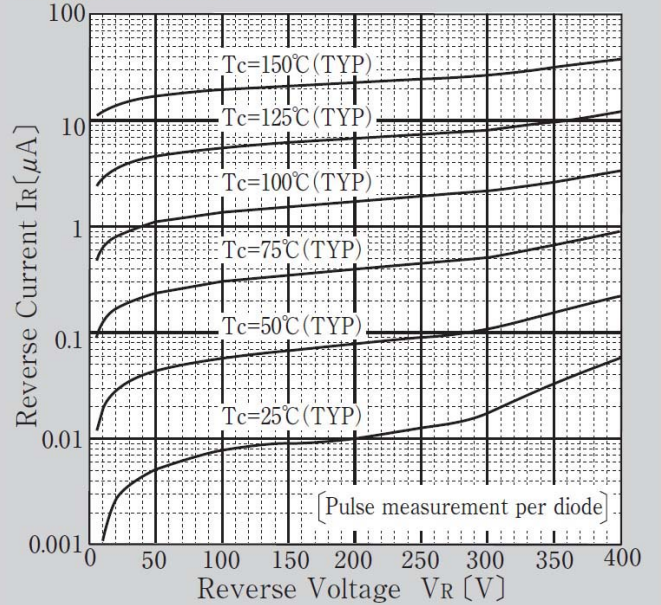
\* :See the original Specifications

# CHARACTERISTIC DIAGRAMS

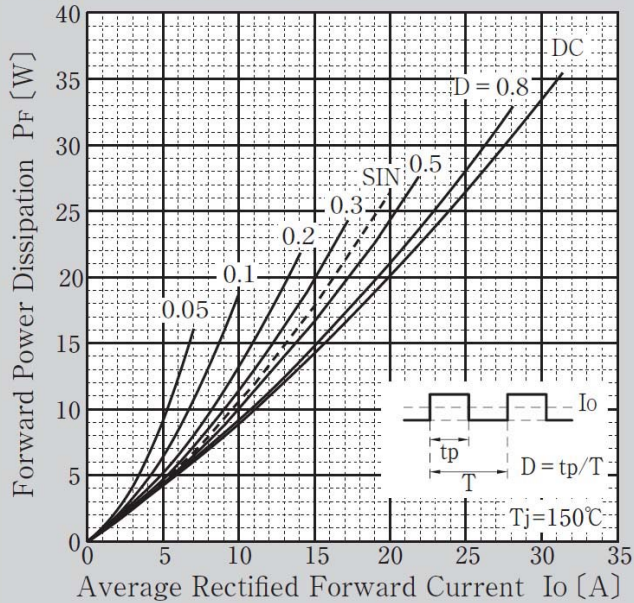
### Forward Voltage



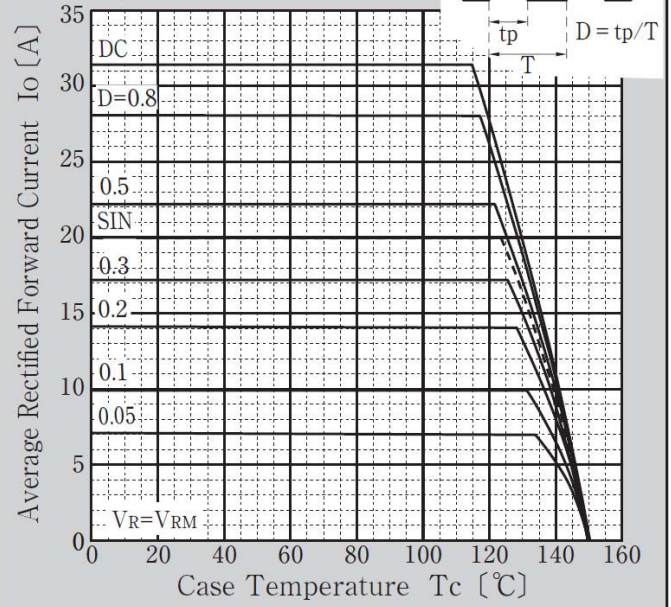
### Reverse Current



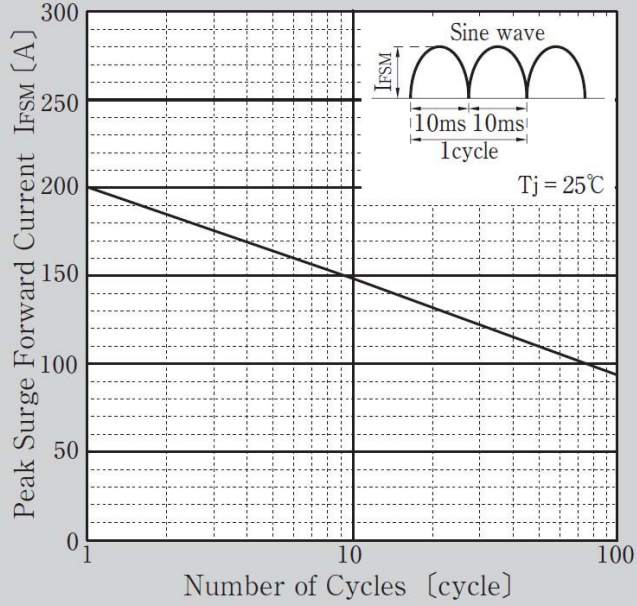
### Forward Power Dissipation



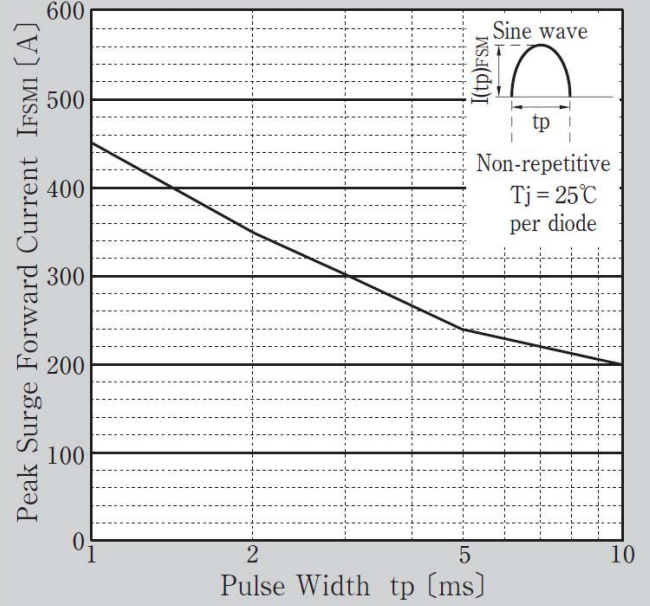
### Derating Curve



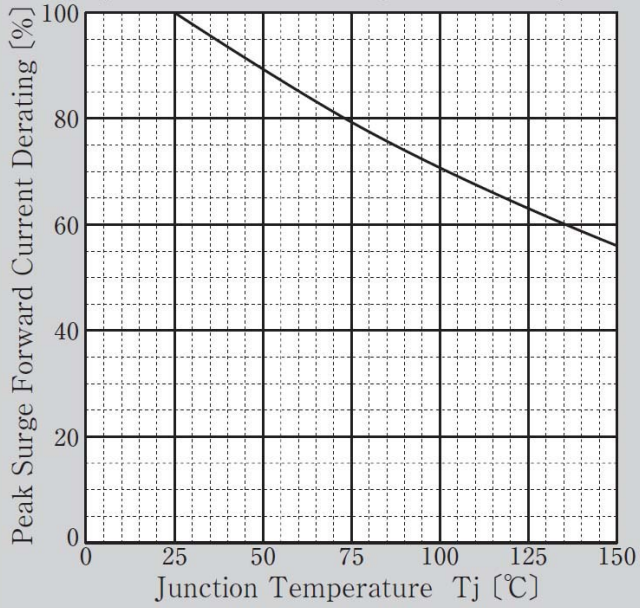
Peak Surge Forward Current Capability



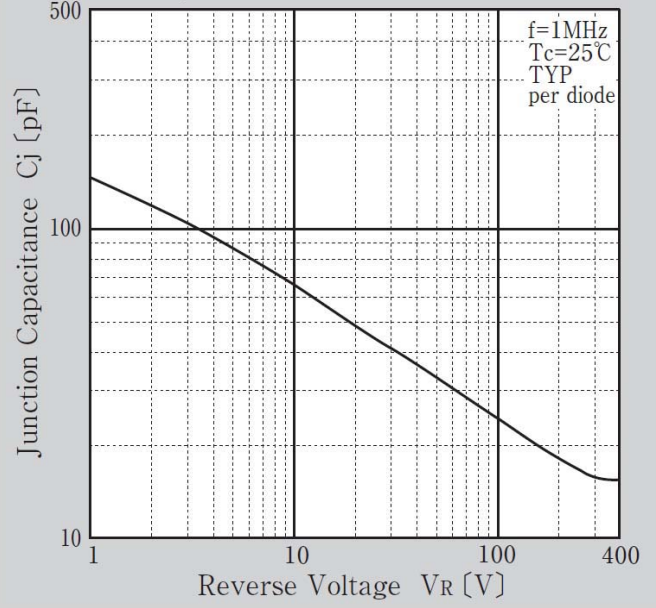
Peak Surge Forward Current Capability



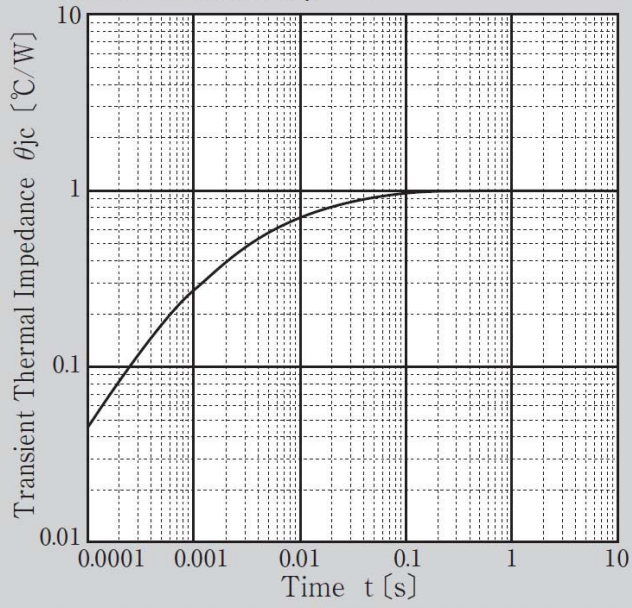
Peak Surge Forward Current Derating vs Junction Temperature



Junction Capacitance

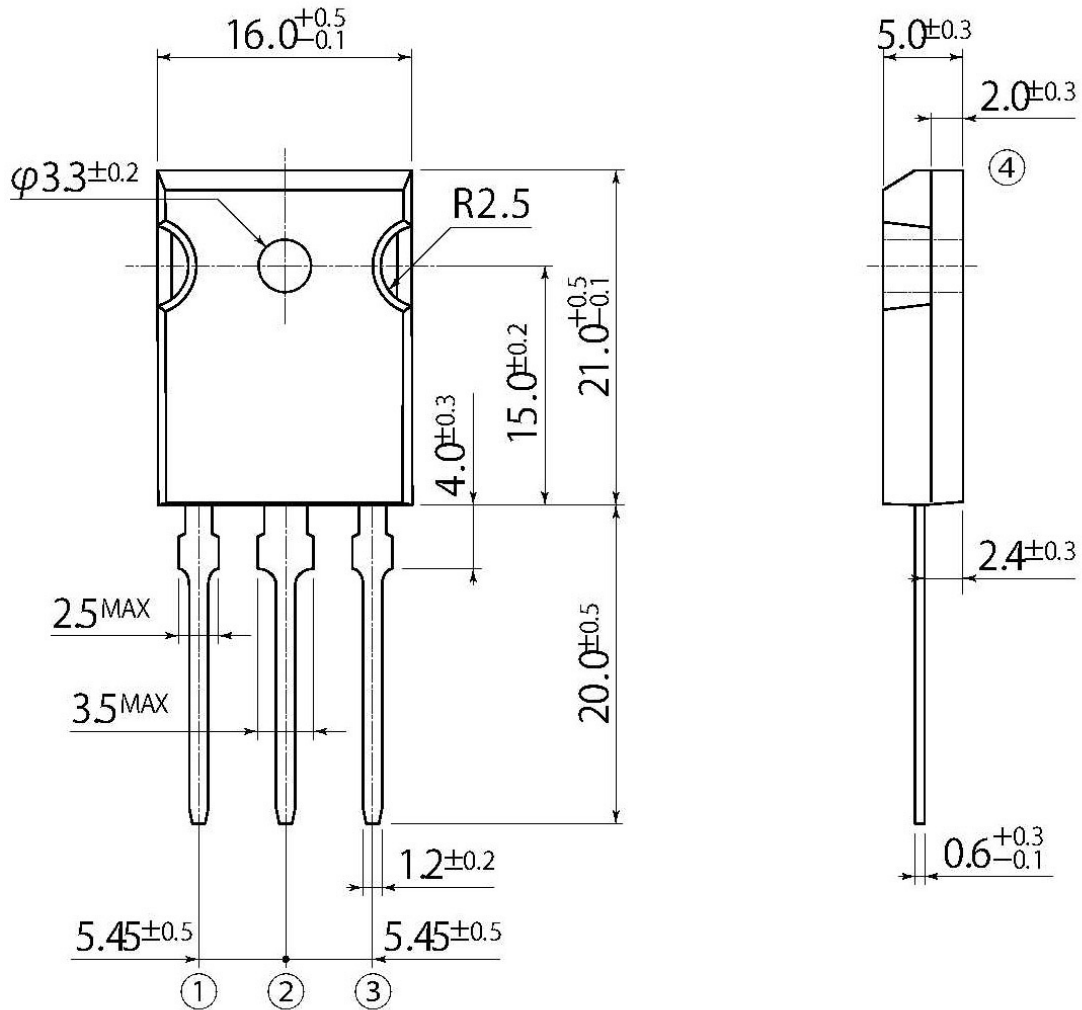


Transient Thermal Impedance



K7

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



## Notes

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