

# D10FY60VE

## General Rectifying Diodes

600V, 10A

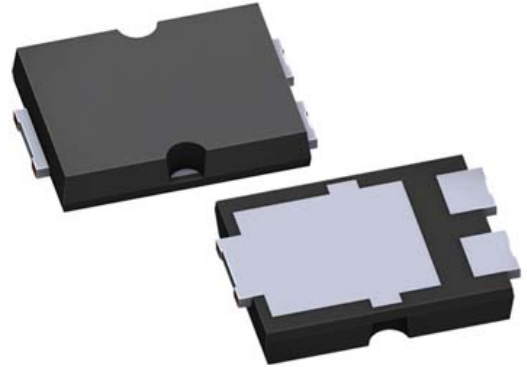
### Feature

- Permit high current with a small package
- Based on AEC-Q101
- Halogen free
- Pb free terminal
- RoHS:Yes

### OUTLINE

Package (House Name): FY

Package (JEDEC Code): TO-277A similar



### 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>		-55 to 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, With heatsink, T <sub>l</sub> =120°C ※	10	A
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, On alumina substrate, T <sub>a</sub> =25°C ※	2.2	A
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, On glass-epoxy substrate, T <sub>a</sub> =25°C ※	2.1	A
Surge forward current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1 cycle peak value, T <sub>j</sub> =25°C	220	A
Surge forward current	I <sub>FSM1</sub>	t <sub>p</sub> =1ms, sine wave, Non-repetitive, peak value, T <sub>j</sub> =25°C	450	A

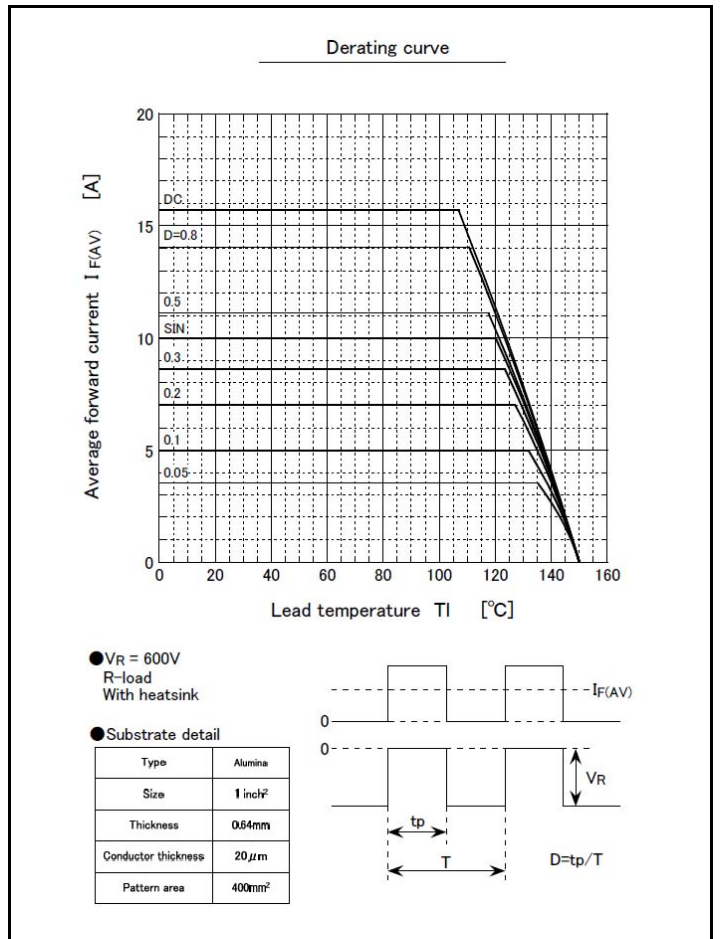
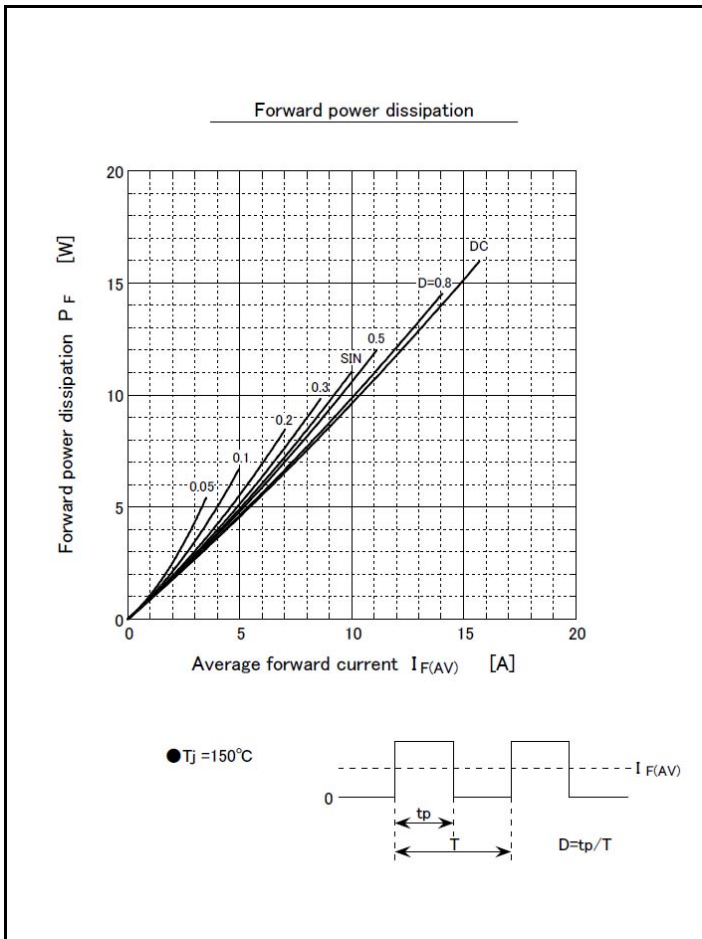
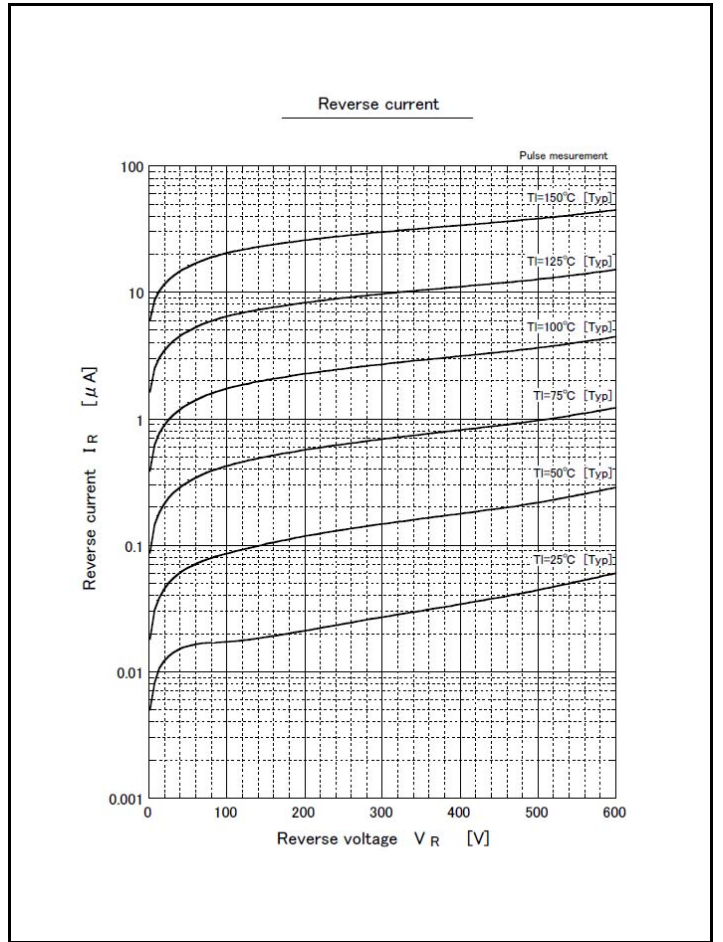
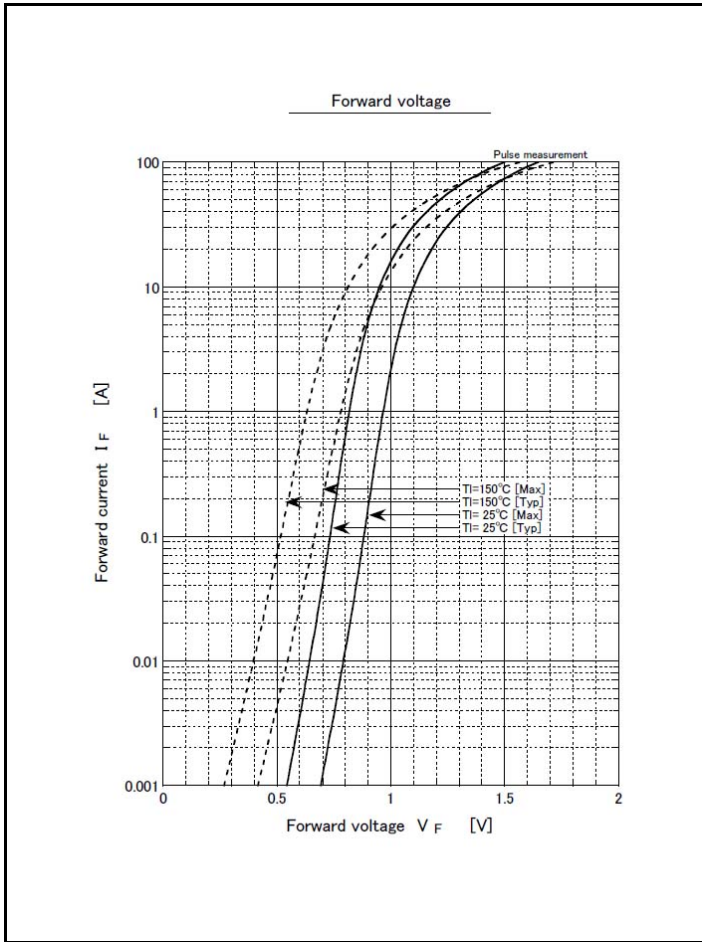
※ :See the original Specifications

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

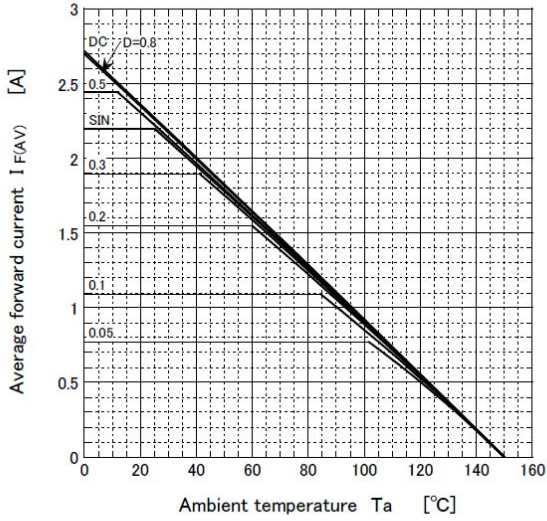
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	$V_F$	IF=10A, Pulse measurement			1.1	V
Reverse current	$I_R$	VR=600V, Pulse measurement			10	$\mu$ A
Electro static discharge Capability	$V_{ESD}$	C=330pF, R=330 $\Omega$ , Polarity $\pm$ , Aerial discharge		25		kV
Thermal resistance	Rth(j-l)	Junction to lead, With heatsink ※			2.7	$^{\circ}$ C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On alumina substrate ※			60	$^{\circ}$ C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			65	$^{\circ}$ C/W

※ :See the original Specifications

# CHARACTERISTIC DIAGRAMS



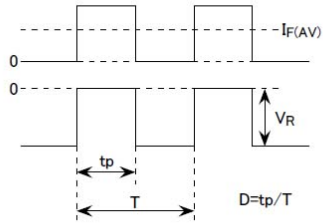
Derating curve



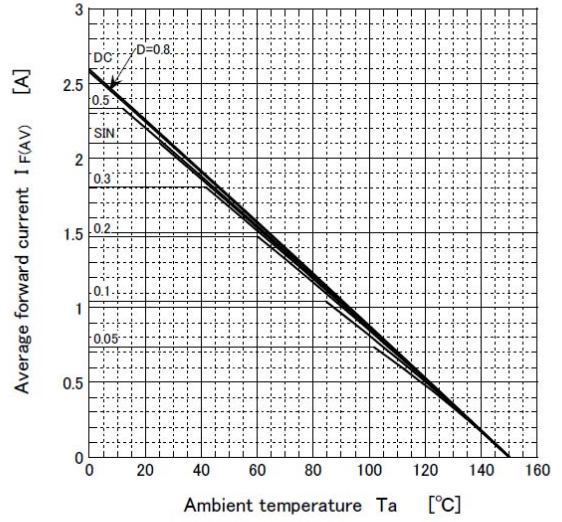
●  $V_R = 600V$   
R-load  
Free in air

● Substrate detail

Type	Alumina
Size	1 inch <sup>2</sup>
Thickness	0.64mm
Conductor thickness	20 μm
Pattern area	400mm <sup>2</sup>



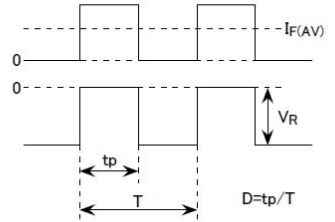
Derating curve



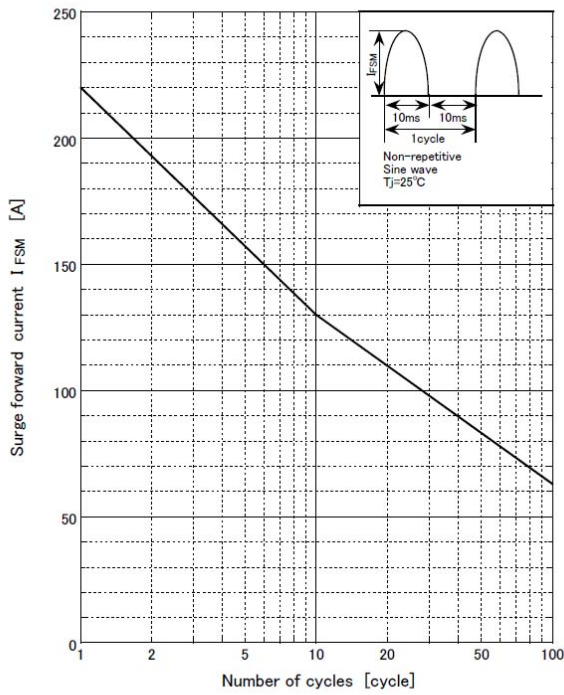
●  $V_R = 600V$   
R-load  
Free in air

● Substrate detail

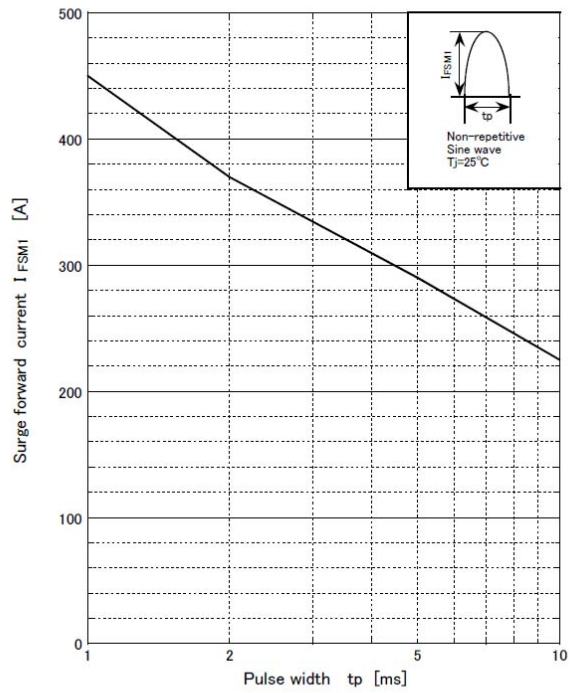
Type	Glass-epoxy
Size	1 inch <sup>2</sup>
Thickness	1mm
Conductor thickness	35 μm
Pattern area	400mm <sup>2</sup>



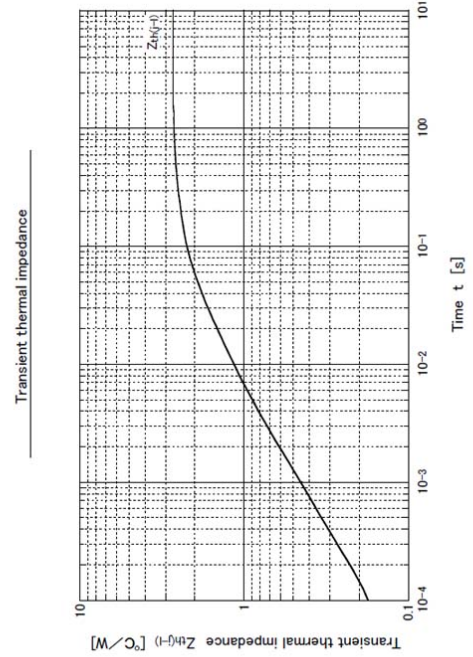
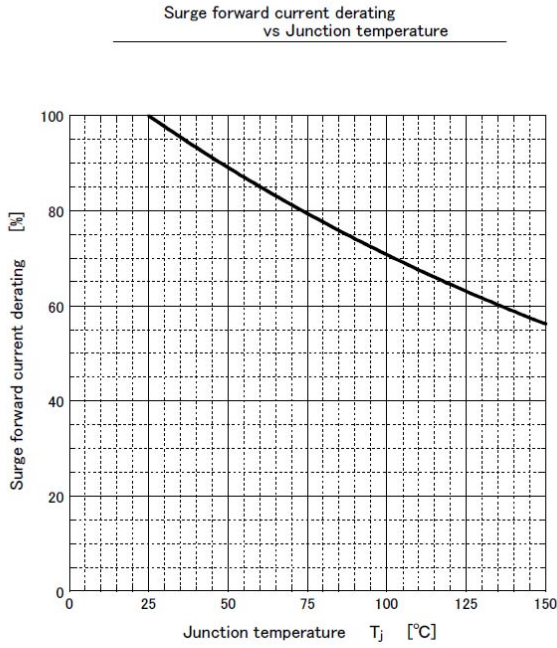
Surge forward current capability



Surge forward current capability

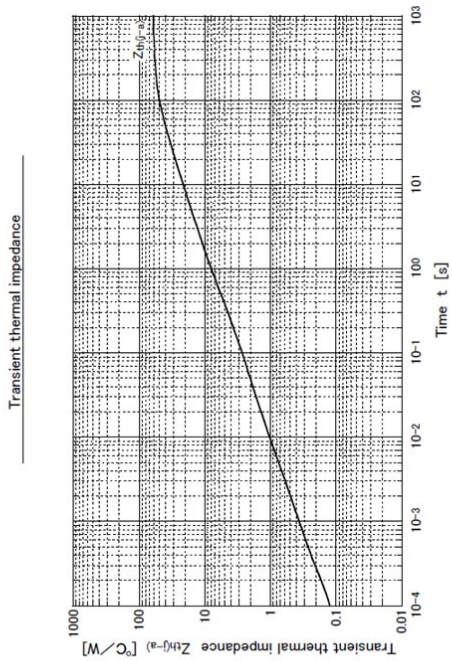
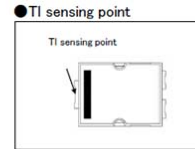






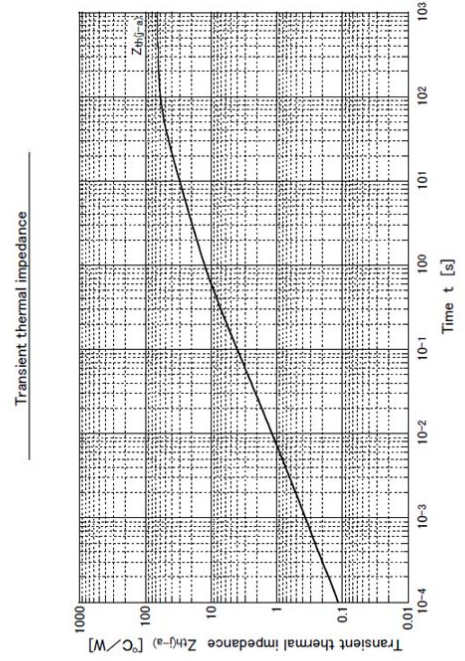
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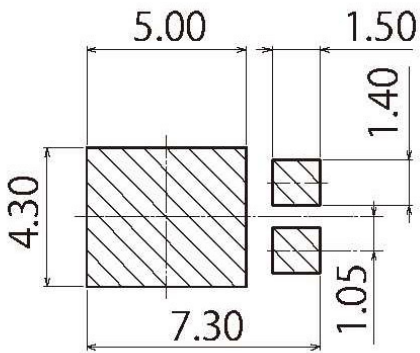
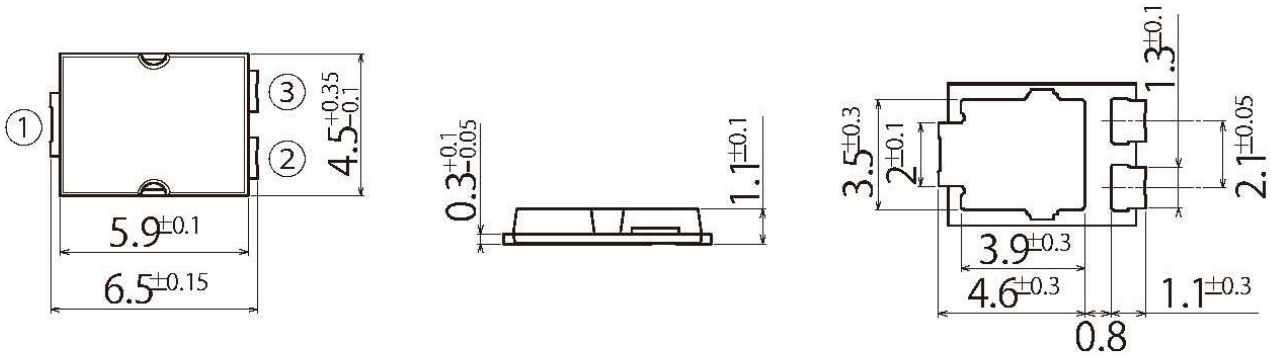


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Size	1 inch <sup>2</sup>
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Pattern area	400mm <sup>2</sup>

G4

JEDEC Code	TO-277A similar
JEITA Code	-
House Name	FY



Referential Soldering Pad

- Optimize soldering pad to the board design and soldering condition.

## Notes

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