

D10FR60LA

Fast Recovery Diodes
600V, 10A

Feature

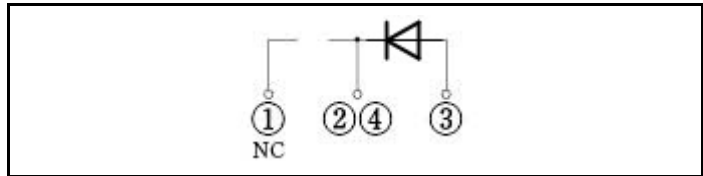
- SMD
- High Voltage
- High Recovery Speed
- Low Noise
- Based on AEC-Q101
- Low V_F
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): FR
Package (JEDEC Code): TO-252AA similar



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : $T_c=25^\circ\text{C}$)

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	T_{stg}		-55 to 150	$^\circ\text{C}$
Junction temperature	T_j		-55 to 150	$^\circ\text{C}$
Repetitive peak reverse voltage	V_{RRM}		600	V
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, $T_c=110^\circ\text{C}$ ※	10	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle, Peak value, $T_j=25^\circ\text{C}$	140	A
Surge forward current	I_{FSM1}	$t_p=1\text{ms}$, Sine wave, Non-repetitive, Peak value, $T_j=25^\circ\text{C}$	288	A

※ :See the original Specifications

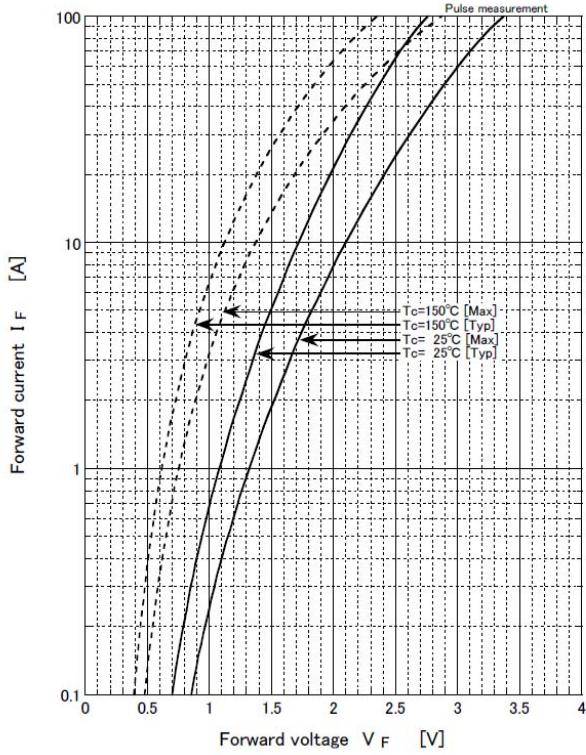
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=10A, Pulse measurement			2.1	V
Reverse current	I_R	VR=600V, Pulse measurement			10	μ A
Reverse recovery time	trr	IF=0.5A, IR=1.0A, 0.25IR			28	ns
Total capacitance	Ct	f=1MHz, VR=10V		54		pF
Thermal resistance	Rth(j-c)	Junction to case, With heatsink *			2	°C/W

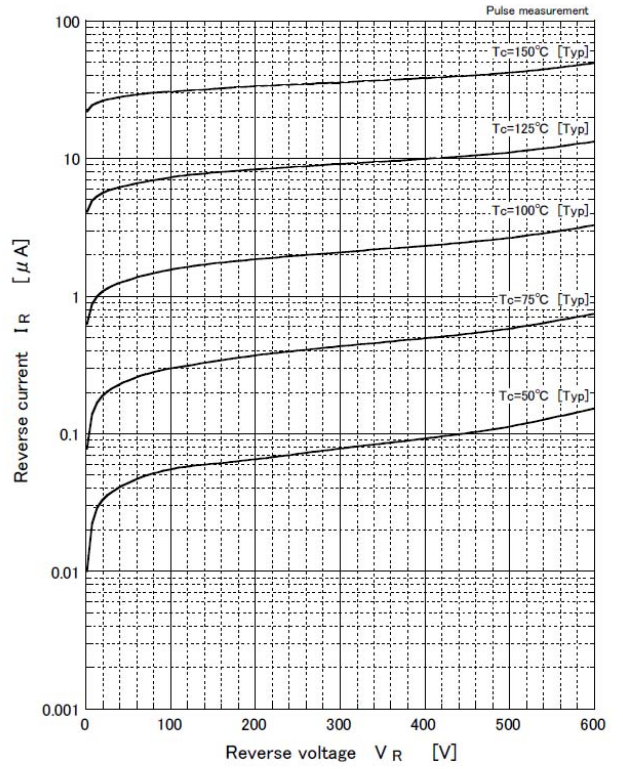
* :See the original Specifications

CHARACTERISTIC DIAGRAMS

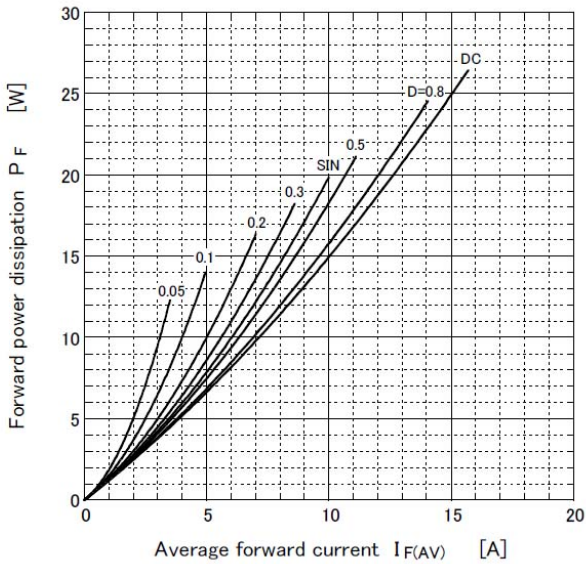
Forward voltage



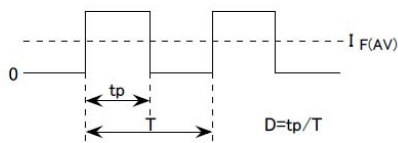
Reverse current



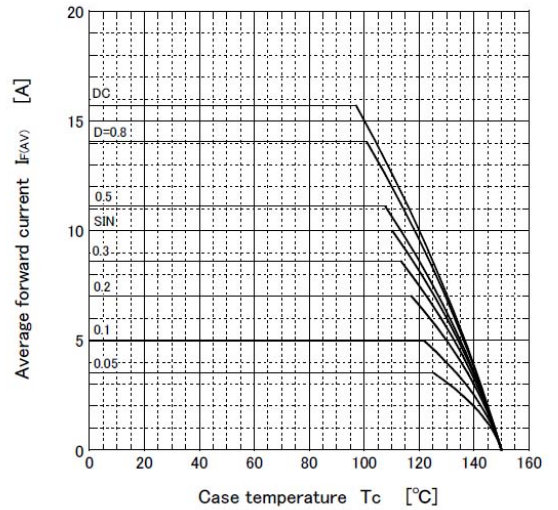
Forward power dissipation



● $T_j = 150^\circ\text{C}$



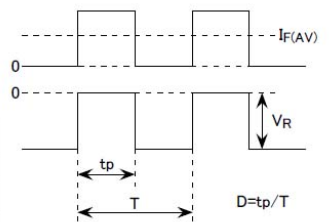
Derating curve

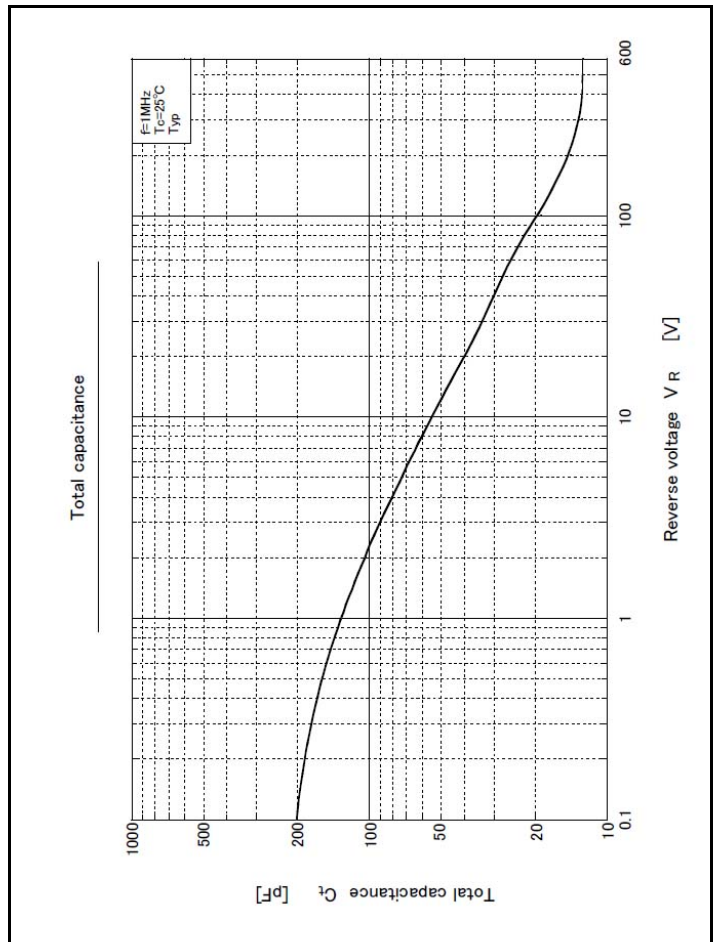
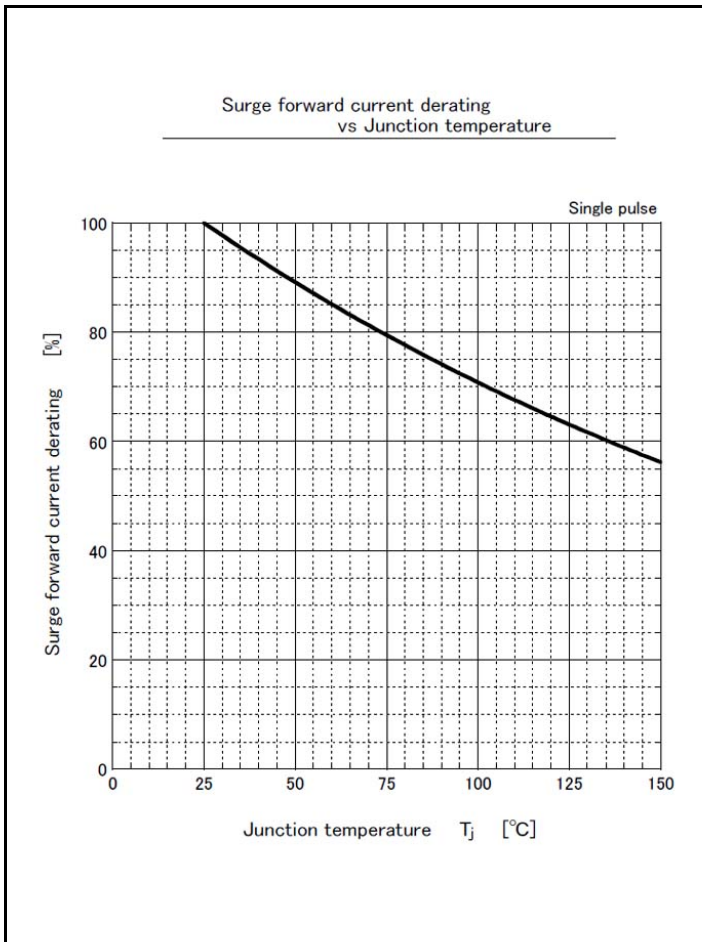
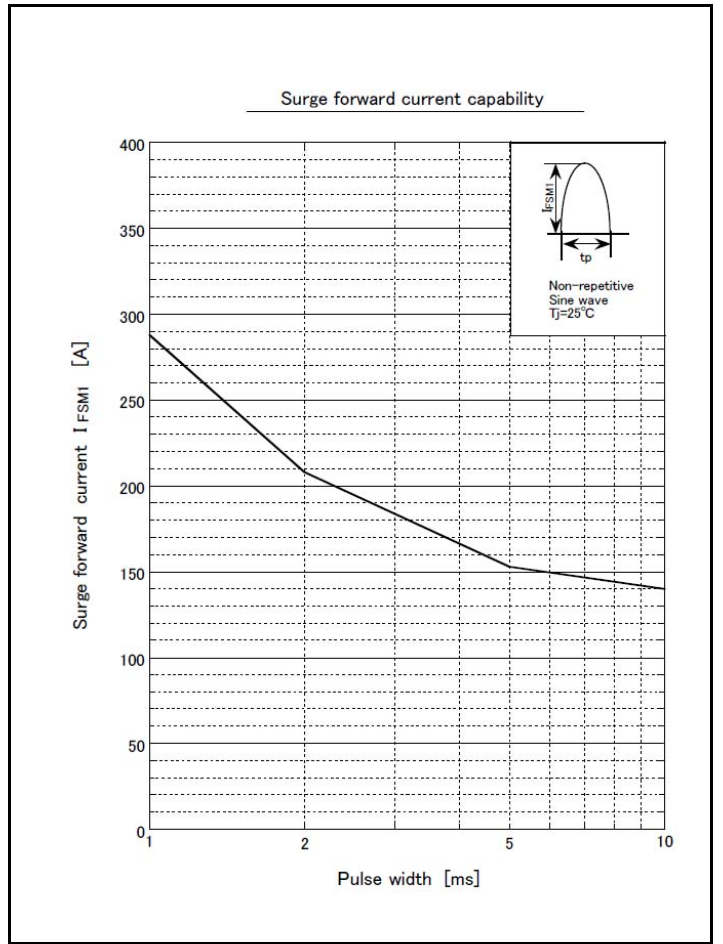
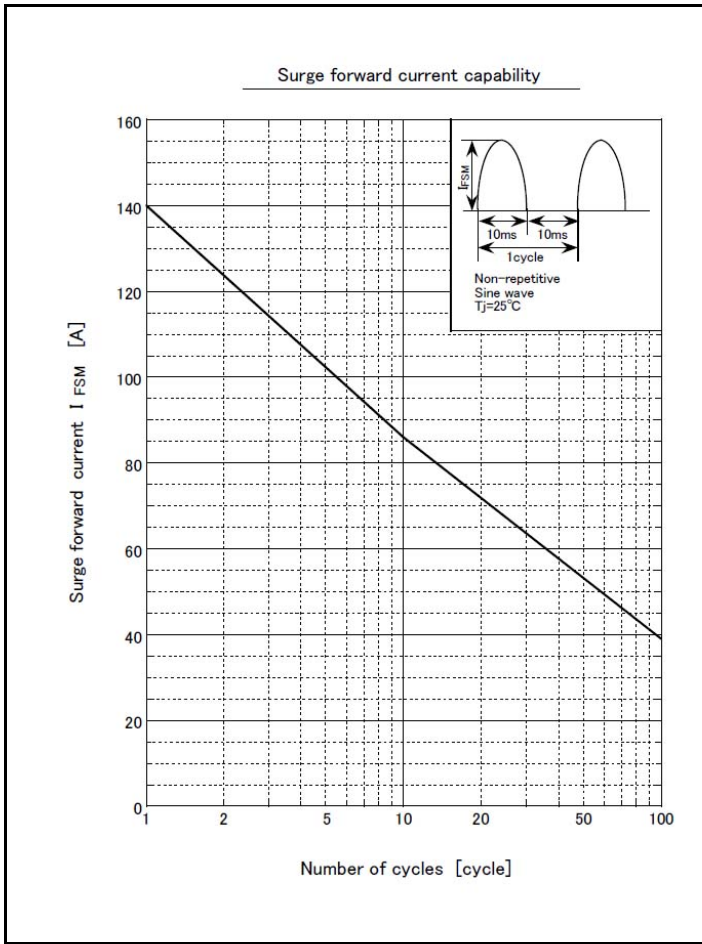


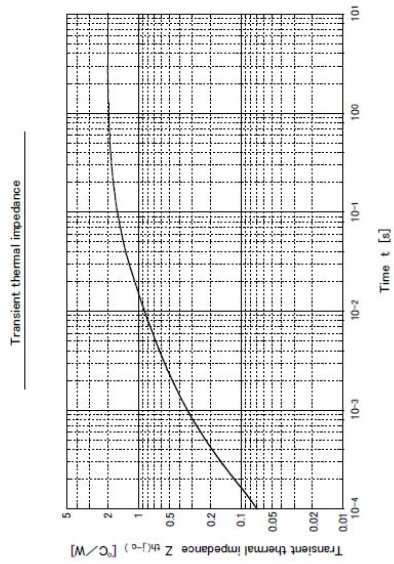
● $V_R = 600\text{V}$
R-load
With heatsink

● Substrate detail

Type	Alumina
Size	1 inch ²
Thickness	0.64mm
Conductor thickness	20μm
Pattern area	65mm ²



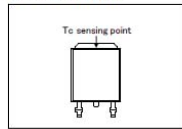




● Substrate detail

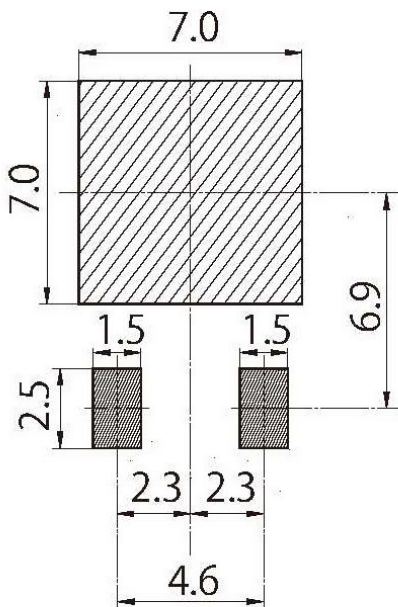
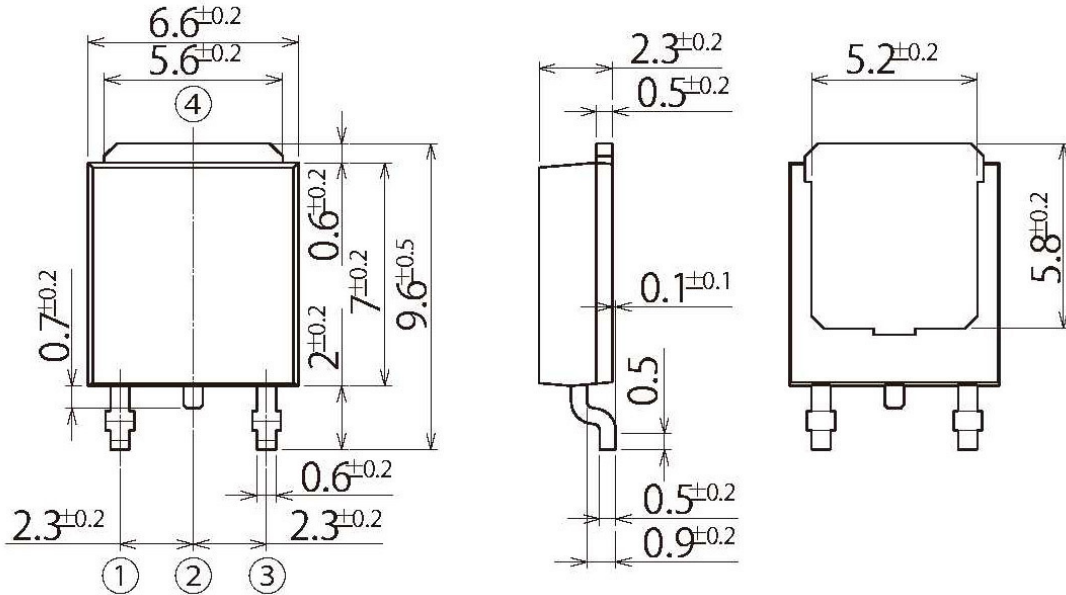
Type	Alumina
Size	1 inch ²
Thickness	0.64mm
Conductor thickness	20μm
Pattern area	65mm ²

● T_c sensing point



G5

JEDEC Code	TO-252AA similar
JEITA Code	—
House Name	FR



Referential Soldering Pad

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

Notes

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