

D15FR4ST

Schottky Barrier Diodes

40V, 15A

Feature

- Permit high current with a small package
- $T_j=175^{\circ}\text{C}$
- Ultra low I_R
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

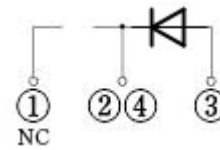
OUTLINE

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 175	$^{\circ}\text{C}$
Junction temperature	T_j		-55 to 175	$^{\circ}\text{C}$
Repetitive peak reverse voltage	V_{RRM}		40	V
Average forward current	$I_F(AV)$	50Hz sine wave, Resistance load, With heatsink, $T_c=152^{\circ}\text{C}$	15	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1 cycle, Peak value, $T_j=25^{\circ}\text{C}$	250	A
Surge forward current	I_{FSM1}	$t_p=1\text{ms}$, Sine wave, Non-repetitive, Peak value, $T_j=25^{\circ}\text{C}$	570	A

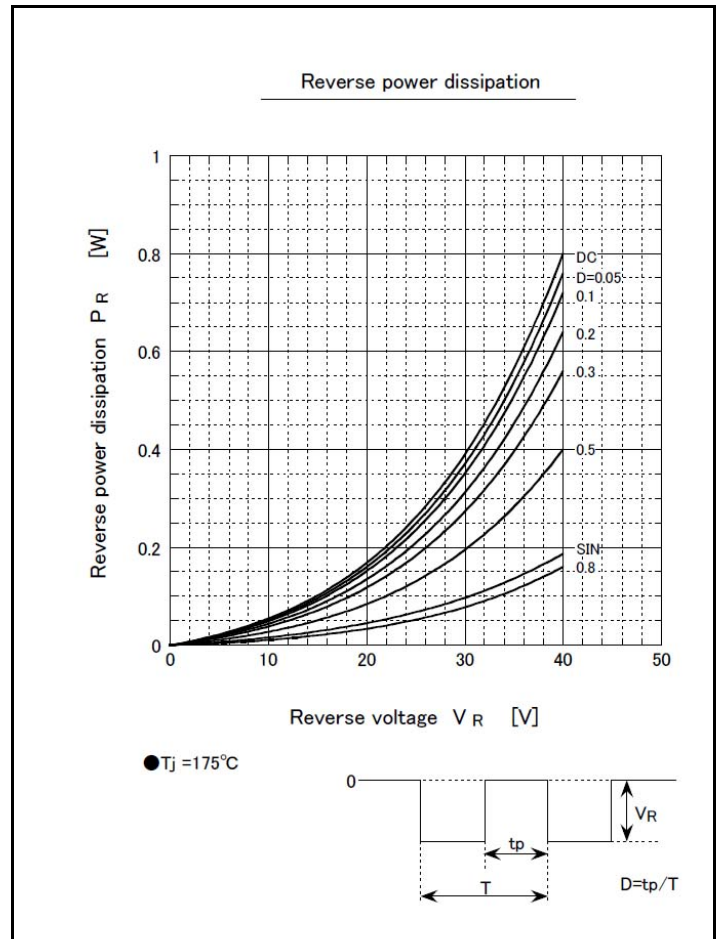
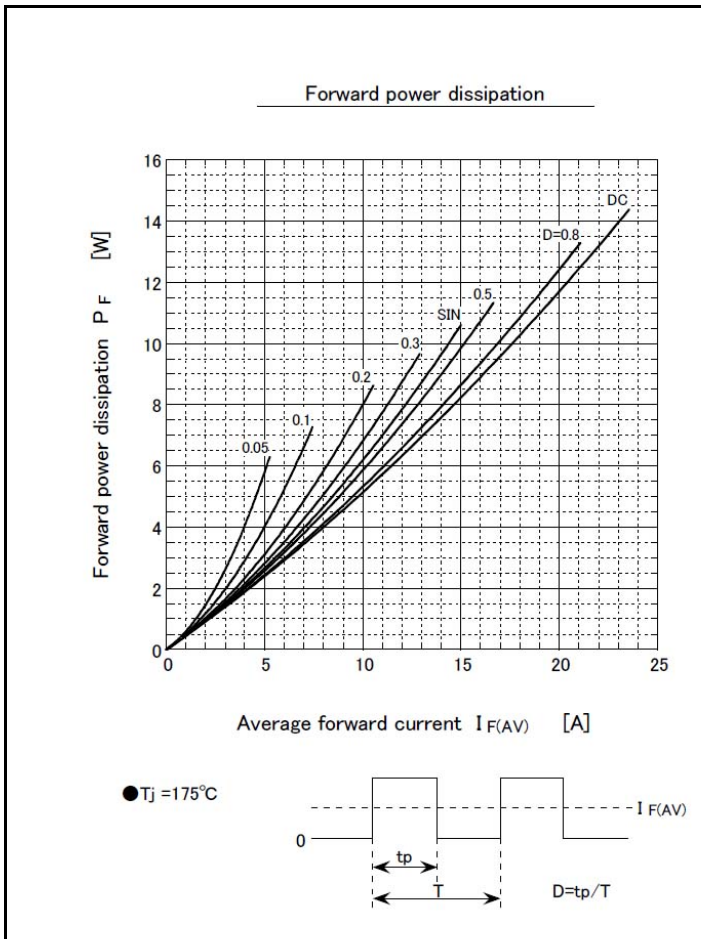
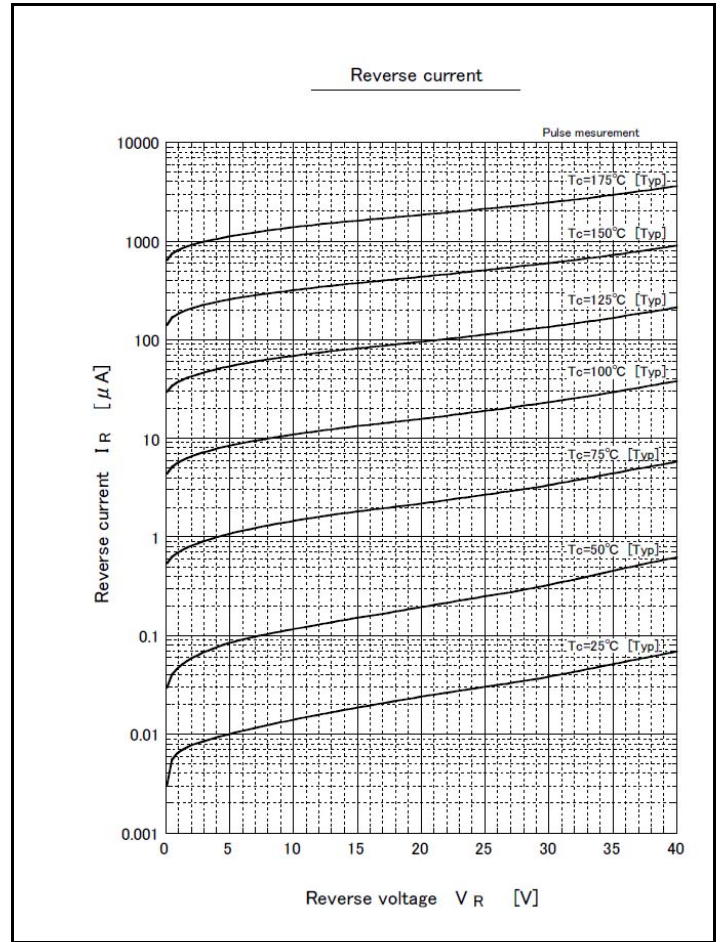
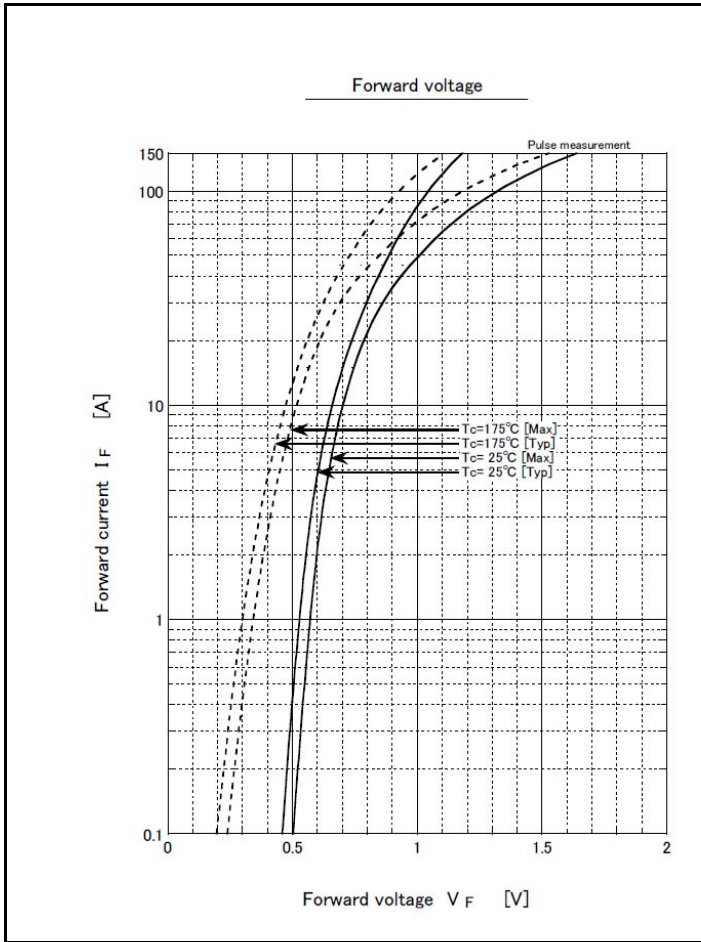
※ : See the original Specifications

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

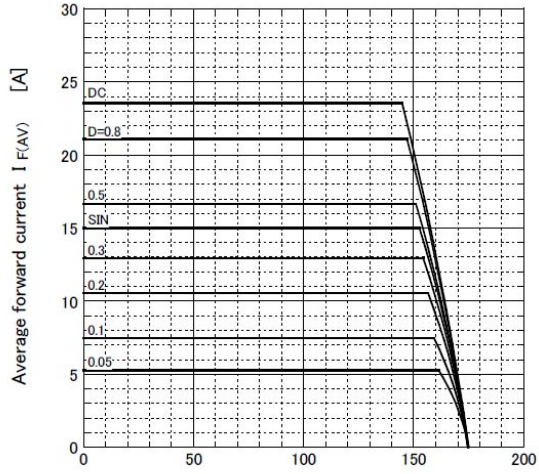
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V _F	I _F =15A, Pulse measurement			0.74	V
Reverse current	I _R	V _R =40V, Pulse measurement			0.04	mA
Total capacitance	C _t	f=1MHz, V _R =10V		398		pF
Thermal resistance	R _{th(j-c)}	Junction to case			2.1	°C/W

* : See the original Specifications

CHARACTERISTIC DIAGRAMS

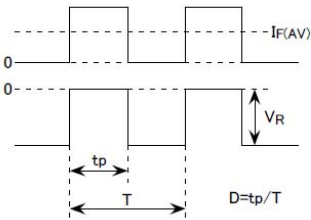


Derating curve

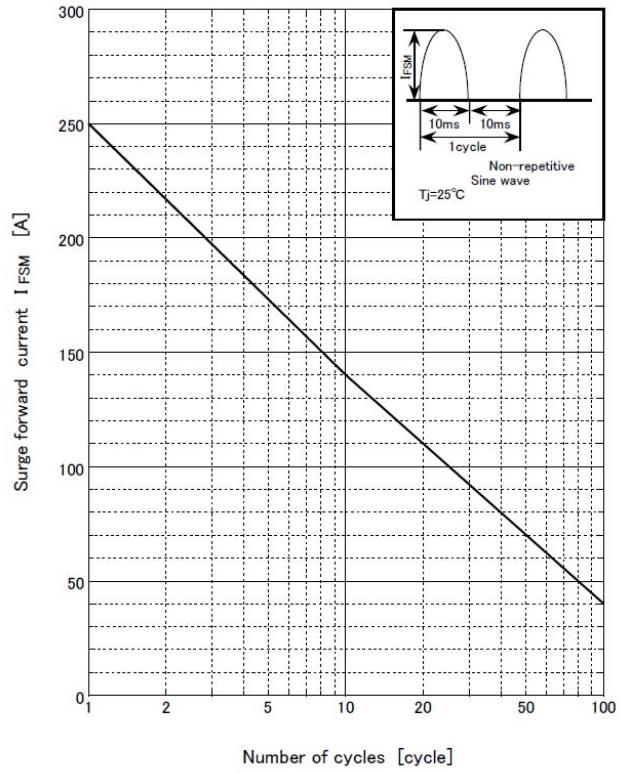


● $V_R = 20V$

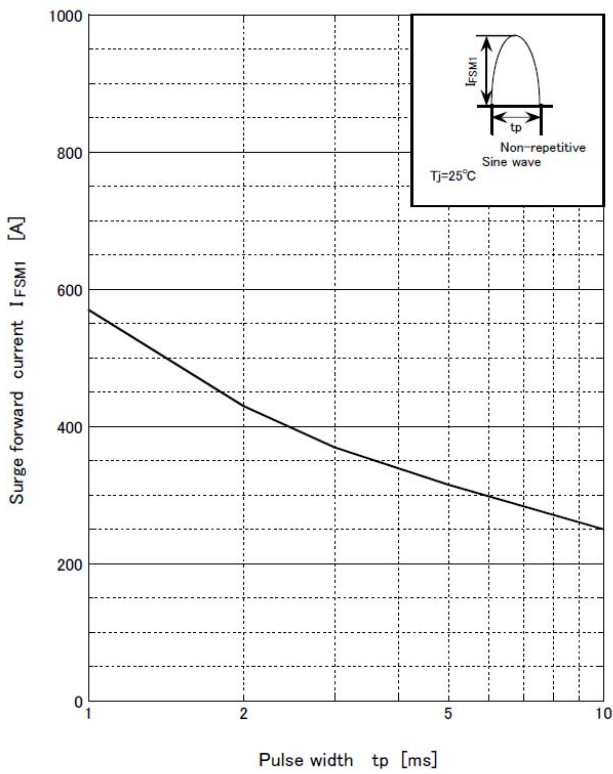
R-load
With heatsink



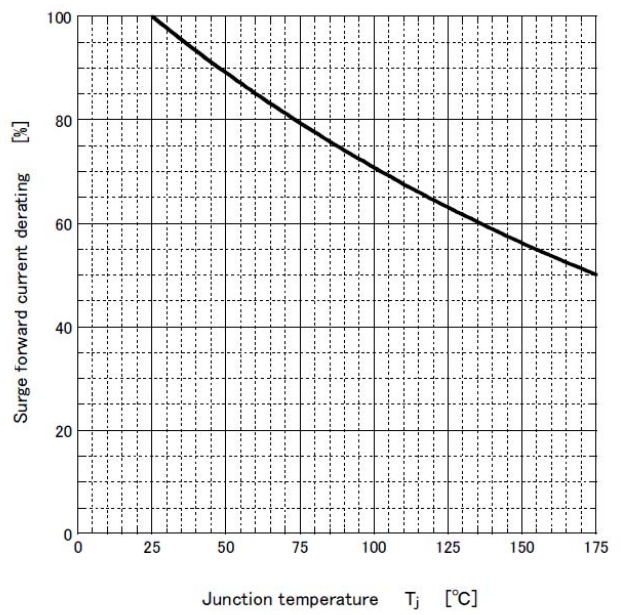
Surge forward current capability

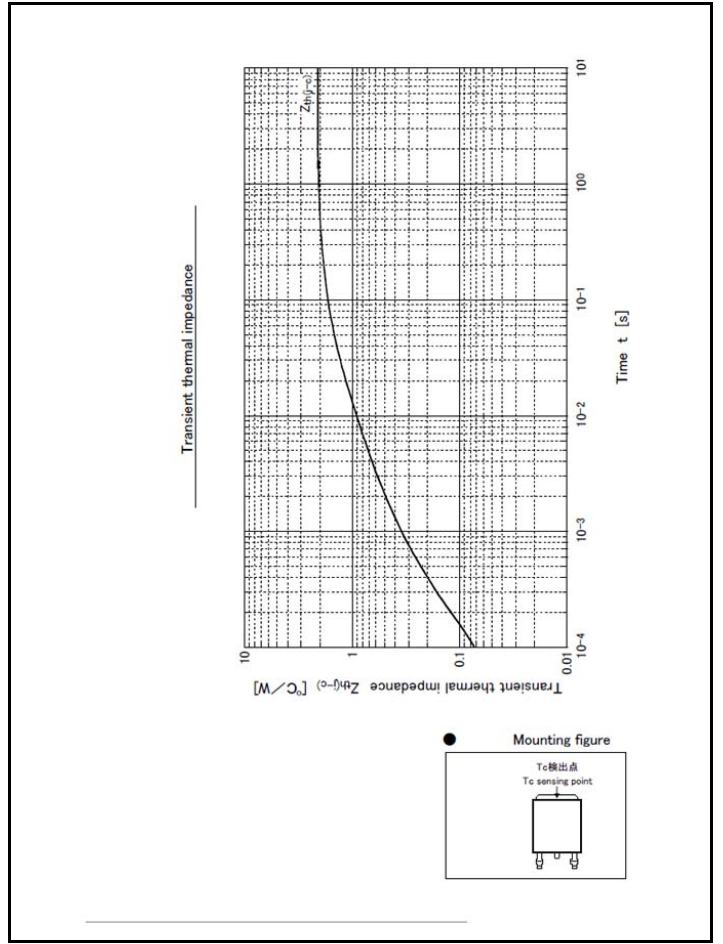
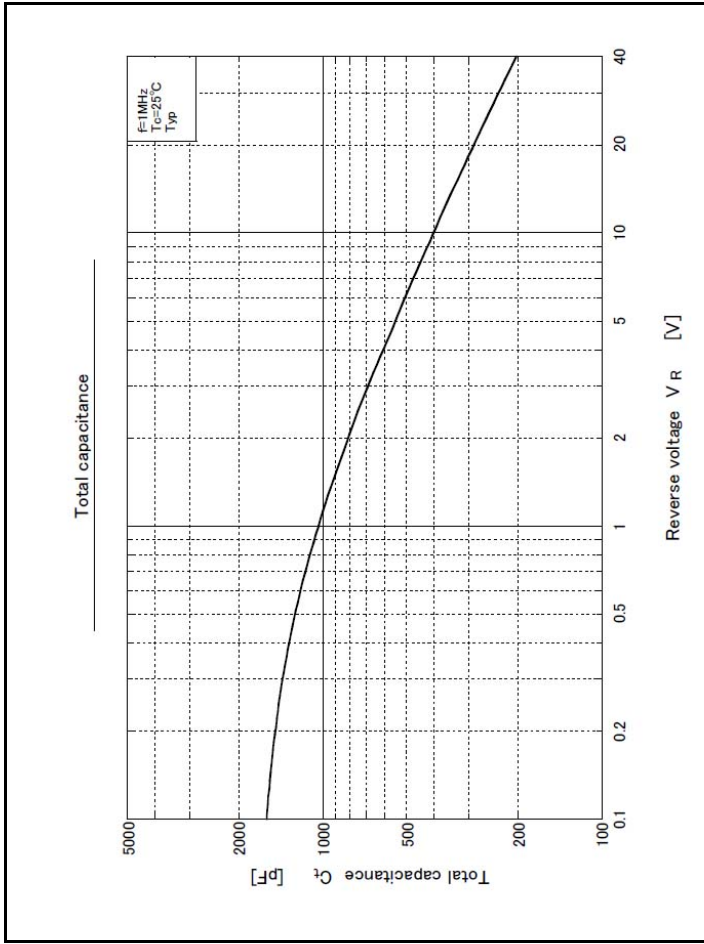


Surge forward current capability



Surge forward current derating
vs Junction temperature





Notes

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 - 【Special applications】
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