

D20FR4ST

Schottky Barrier Diodes

40V, 20A

Feature

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

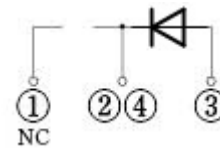
OUTLINE

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, $T_c=149^{\circ}\text{C}$	20	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive, 1 cycle, Peak value, $T_j=25^{\circ}\text{C}$	400	A
Surge forward current	I_{FSM1}	$t_p=1\text{ms}$, Sine wave, Non-repetitive, Peak value, $T_j=25^{\circ}\text{C}$	890	A

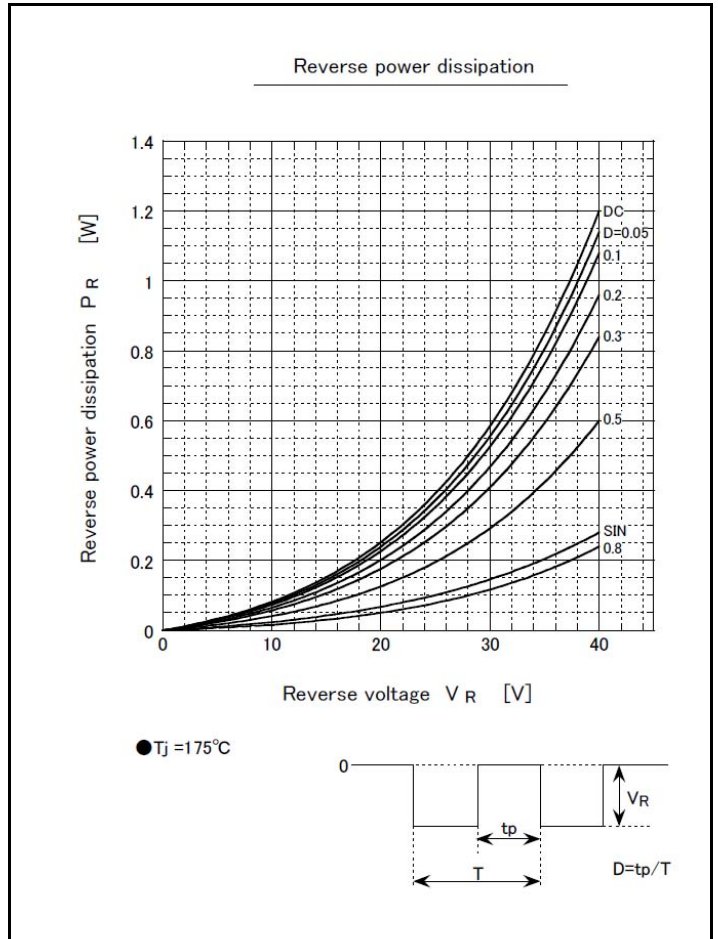
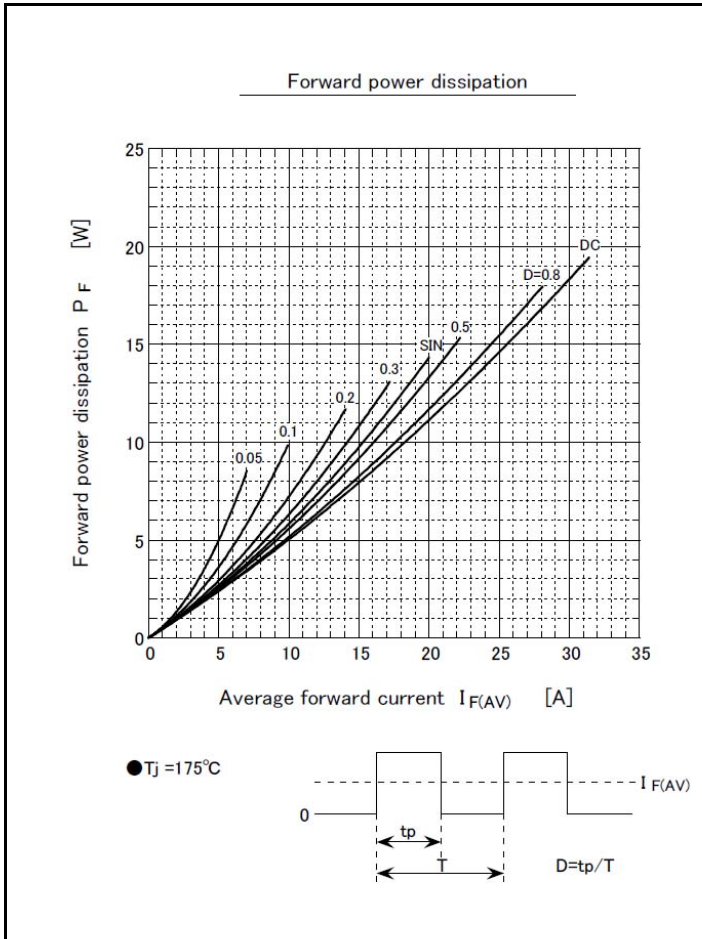
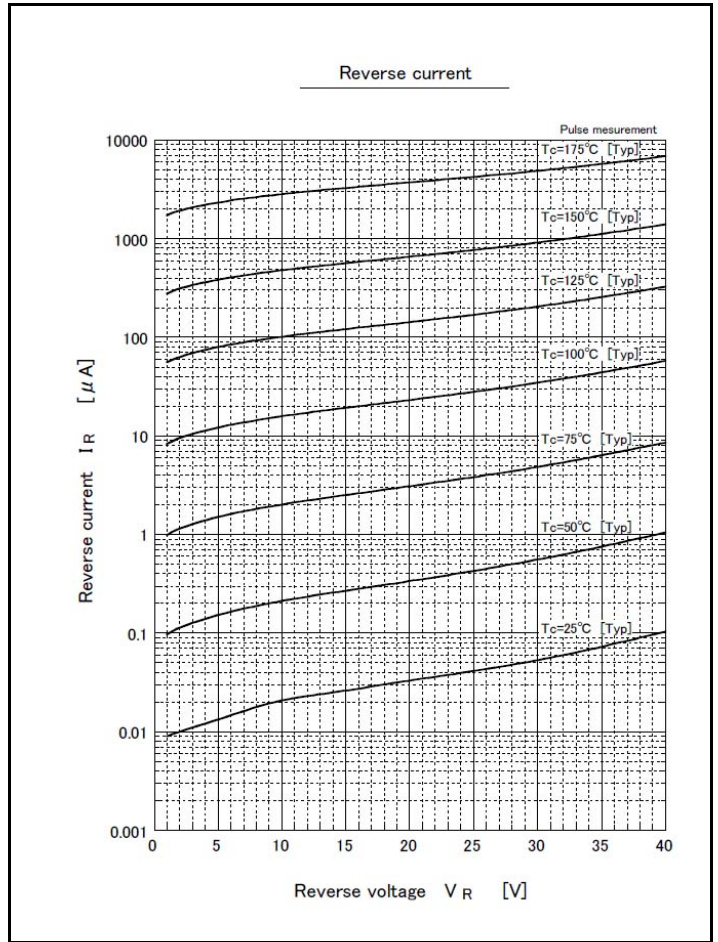
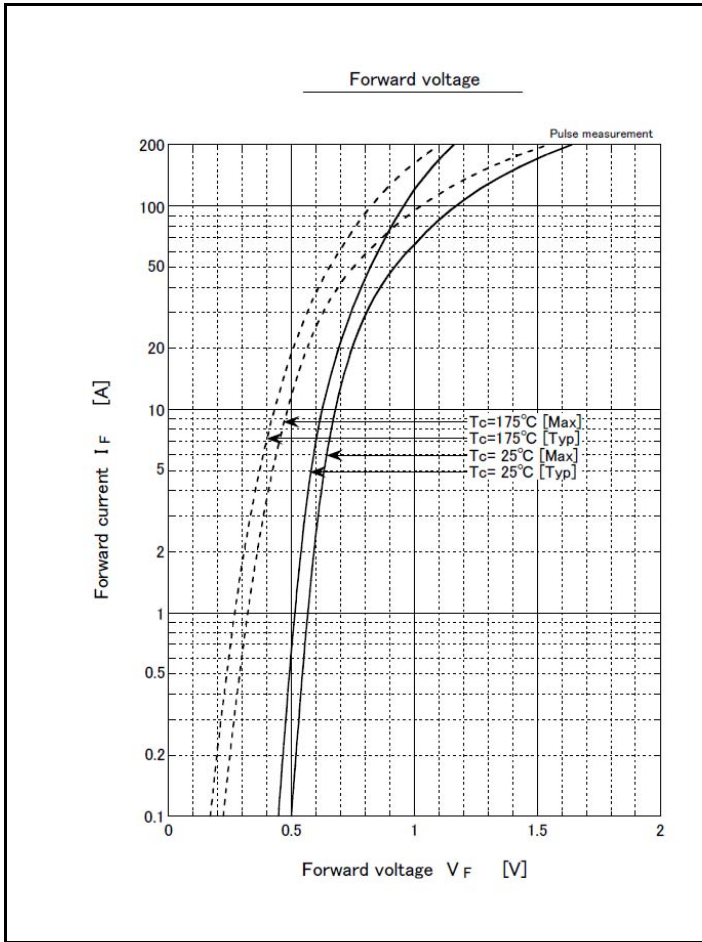
※ :See the original Specifications

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

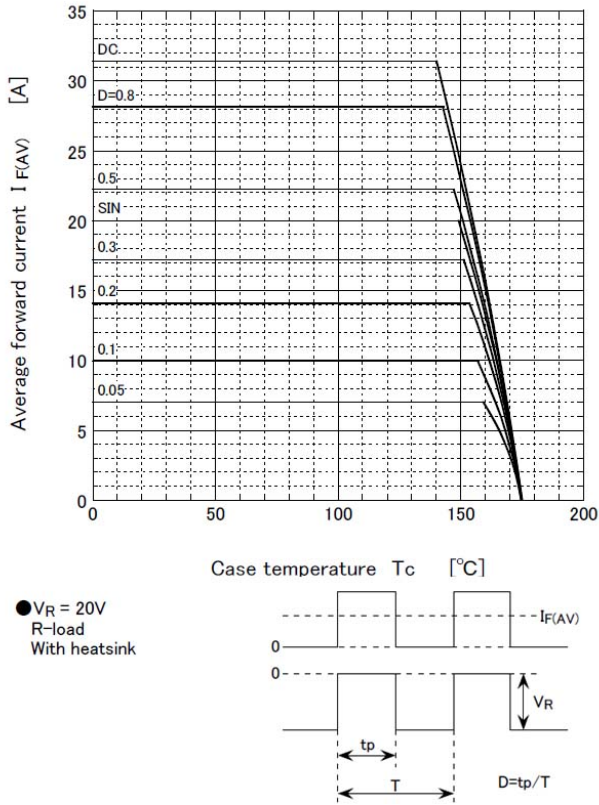
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V _F	I _F =20A, Pulse measurement			0.74	V
Reverse current	I _R	V _R =40V, Pulse measurement			0.06	mA
Total capacitance	C _t	f=1MHz, V _R =10V		600		pF
Thermal resistance	R _{th(j-c)}	Junction to case, With heatsink			1.8	°C/W

* : See the original Specifications

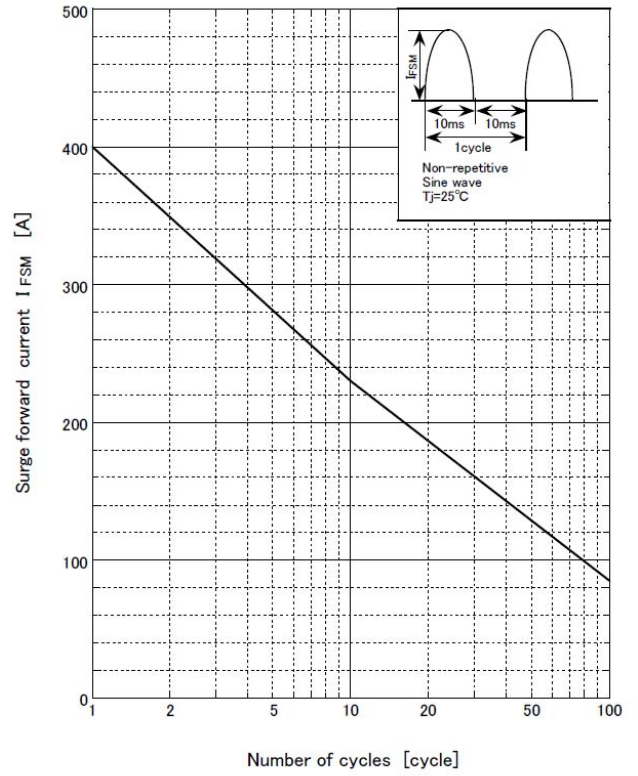
CHARACTERISTIC DIAGRAMS



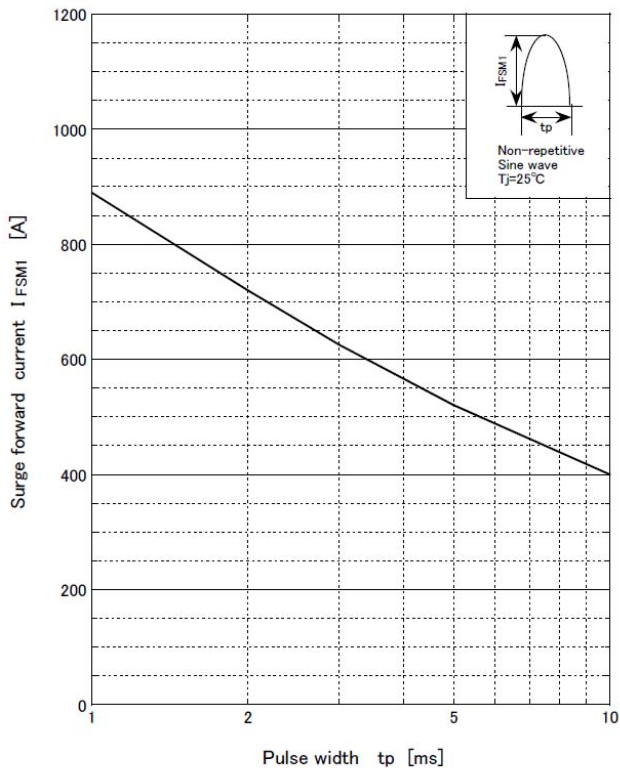
Derating curve



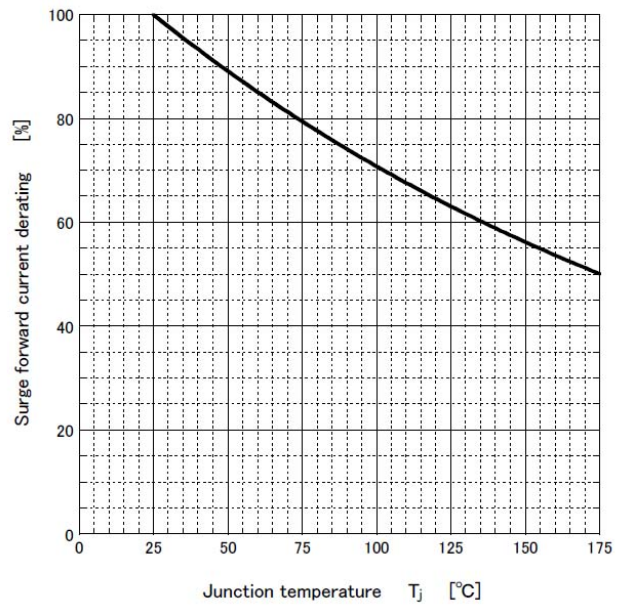
Surge forward current capability

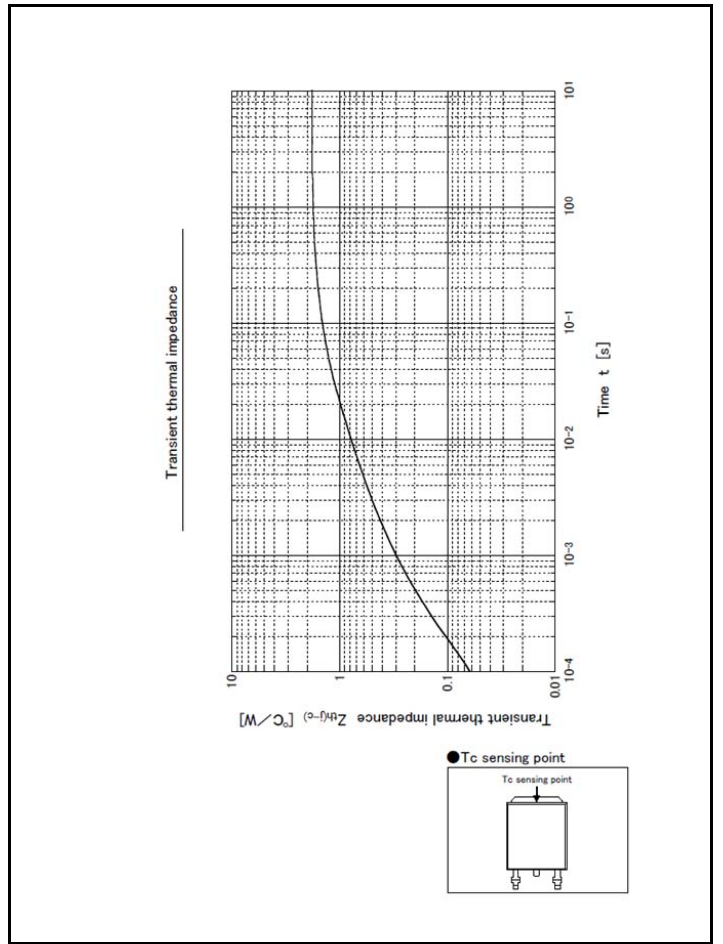
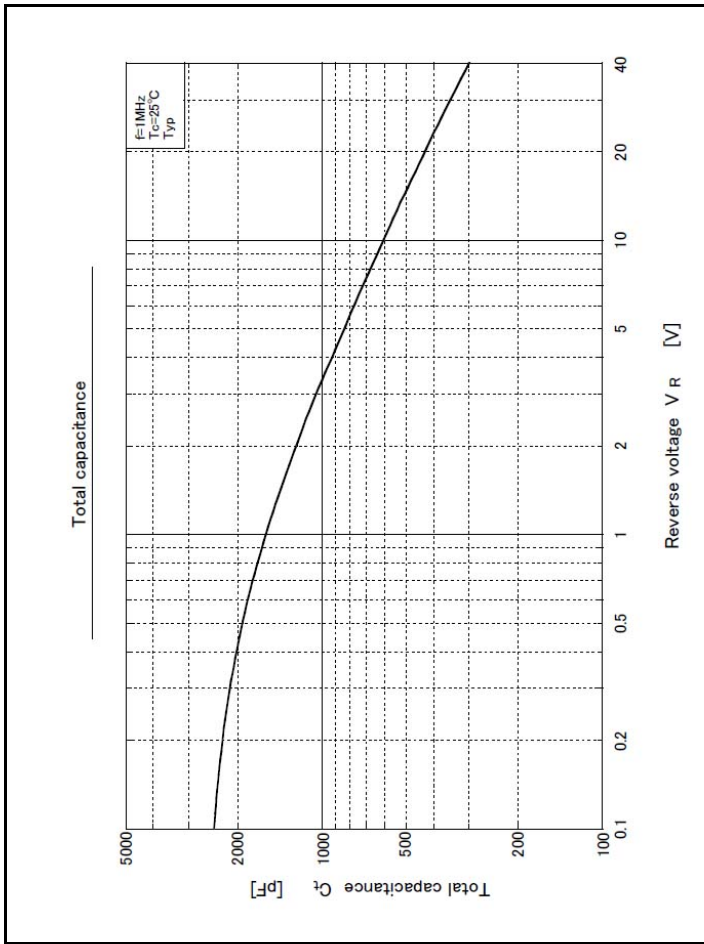


Surge forward current capability



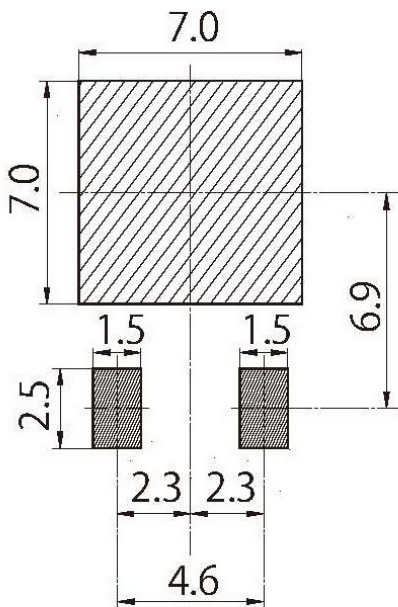
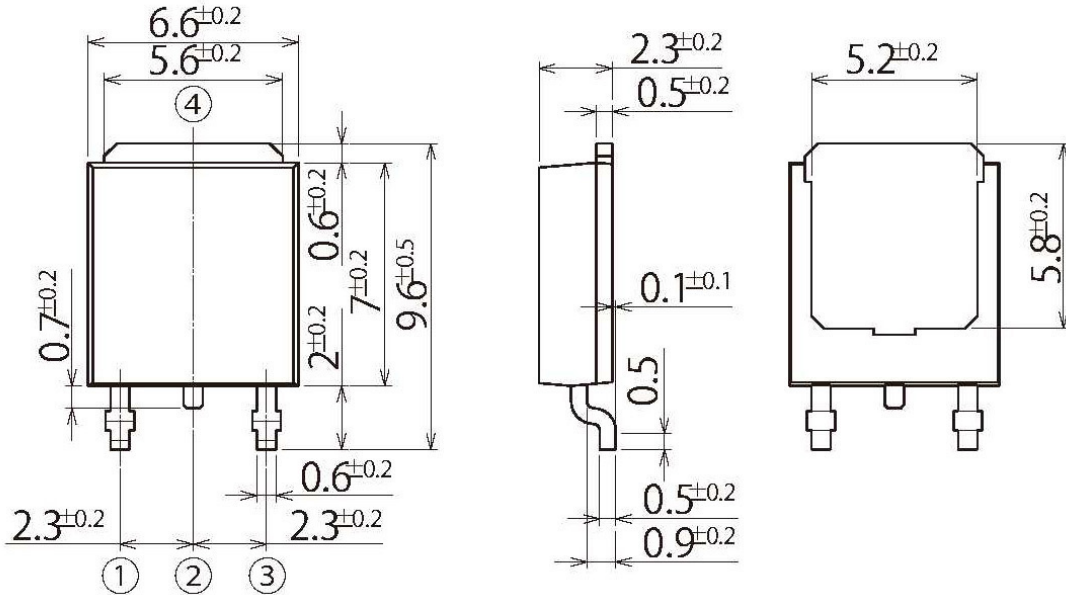
Surge forward current derating vs Junction temperature





G5

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



Referential Soldering Pad

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

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