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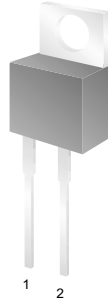
ON Semiconductor®

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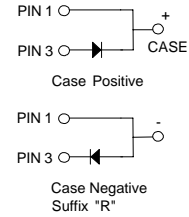
FES16AT - FES16JT



TO-220AC

Features

- Low forward voltage drop.
- High surge current capacity.
- High current capability.
- High reliability.



Fast Rectifiers (Glass Passivated)

Absolute Maximum Ratings*

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value								Units
		16AT	16BT	16CT	16DT	16FT	16GT	16HT	16JT	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	150	200	300	400	500	600	V
$I_{F(AV)}$	Average Rectified Forward Current, .375" lead length @ $T_A = 100^\circ\text{C}$	16								A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	250								A
T_{stg}	Storage Temperature Range	-65 to +150								V
T_J	Operating Junction Temperature	-65 to +150								pF

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	7.81	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	16	$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	1.2	$^\circ\text{C}/\text{W}$

Electrical Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Device								Units
		16AT	16BT	16CT	16DT	16FT	16GT	16HT	16JT	
V_F	Forward Voltage @ 8.0A	0.95				1.3	1.5			V
t_{rr}	Reverse Recovery Time $I_F = 0.5\text{ A}, I_R = 1.0\text{ A}, I_{RR} = 0.25\text{ A}$	35				50				ns
I_R	Reverse Current @ rated V_R $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	10				500				μA μA
C_T	Total Capacitance $V_R = 4.0, f = 1.0\text{ MHz}$	170						145		pF

Typical Characteristics

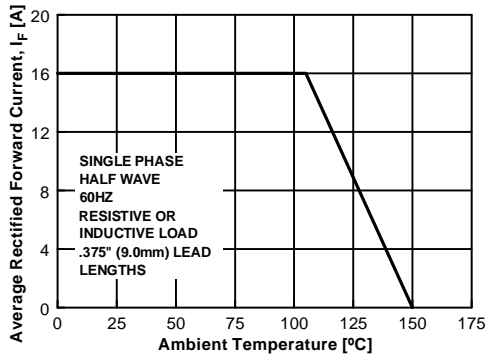


Figure 1. Forward Current Derating Curve

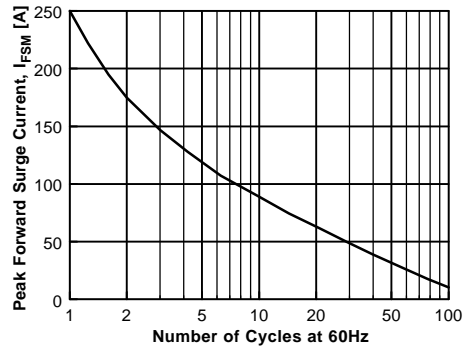


Figure 2. Non-Repetitive Surge Current

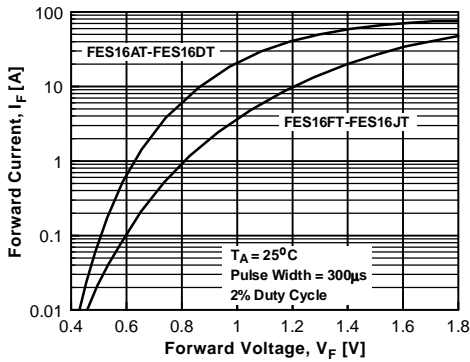


Figure 3. Forward Voltage Characteristics

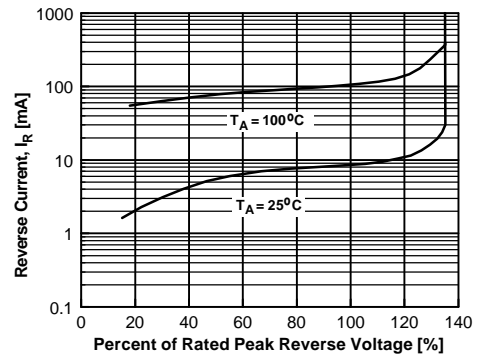


Figure 4. Reverse Current vs Reverse Voltage

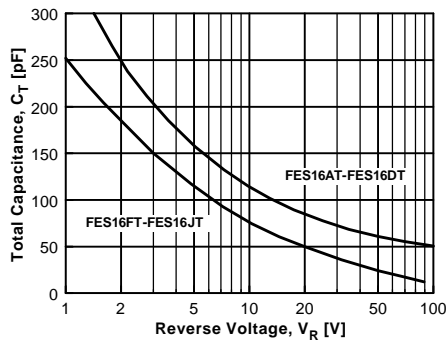
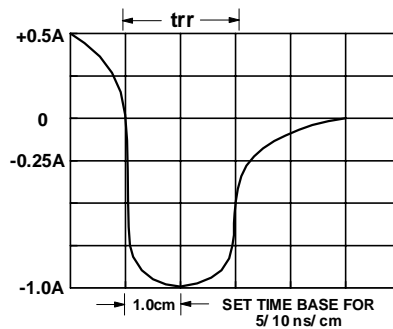
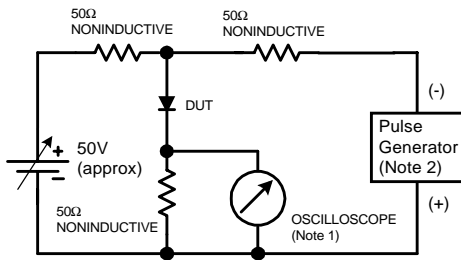


Figure 5. Total Capacitance



Reverse Recovery Time Characteristic and Test Circuit Diagram

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