

Applications

- High speed switching and rectification
- Switching mode power supply
- Free wheeling diode and snubber circuit

Features

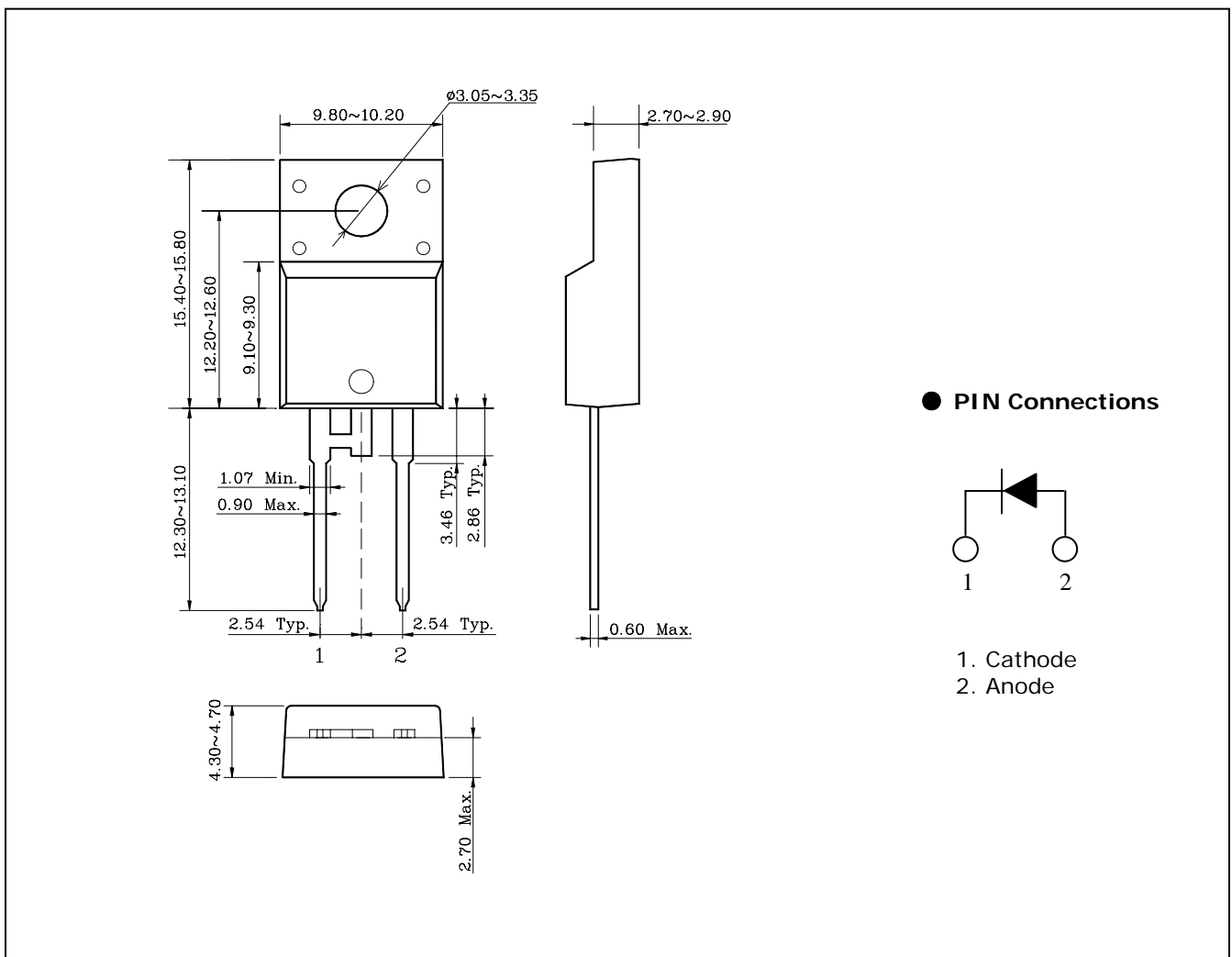
- Ultra-fast reverse recovery time: $t_{rr}=50\text{ns}$ Max.
- Low forward voltage & low reverse current
- Low switching loss

Ordering Information

Type No.	Marking	Package Code
SF10A600H	SF10A600H	TO-220F-2L

Outline Dimensions

unit : mm



Absolute Maximum Ratings

[Ta=25°C]

Characteristic	Symbol	Rating	Unit
Repetitive peak reverse voltage	V_{RRM}	600	V
Average rectified output current	I_O	10	A
Peak forward surge current (Non-repetitive 60Hz sine wave)	I_{FSM}	120	A
Junction temperature	T_J	150	°C
Storage temperature range	T_{stg}	-45 ~ 150	°C

Electrical Characteristics

[Ta=25°C]

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Peak forward voltage	$V_{FM}^{1)}$	$I_F=10A$	-	-	1.9	V
Repetitive peak reverse current	I_{RRM}	$V_R=600V$	-	-	20	μA
Reverse recovery time	t_{rr}	$I_F=1A, di/dt=-100A/\mu s$	-	-	50	ns
Total capacitance	C_T	$V_R=10V, f=1MHz$	-	30	-	pF
Thermal resistance	R_{th}	Junction to ambient	-	-	62.5	°C/W
		Junction to case	-	-	3.5	

1) Pulse test : $t_p \leq 380 \mu s$, Duty cycle $\leq 2\%$

Electrical Characteristic Curves

Fig.1 $I_F - V_F$

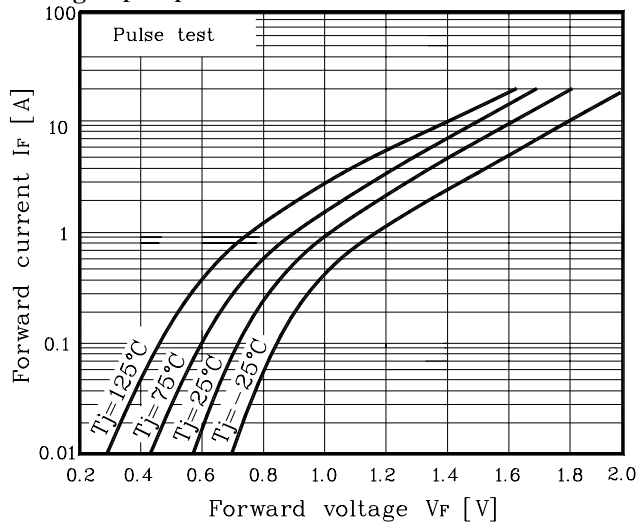


Fig. 2 $I_R - V_R$

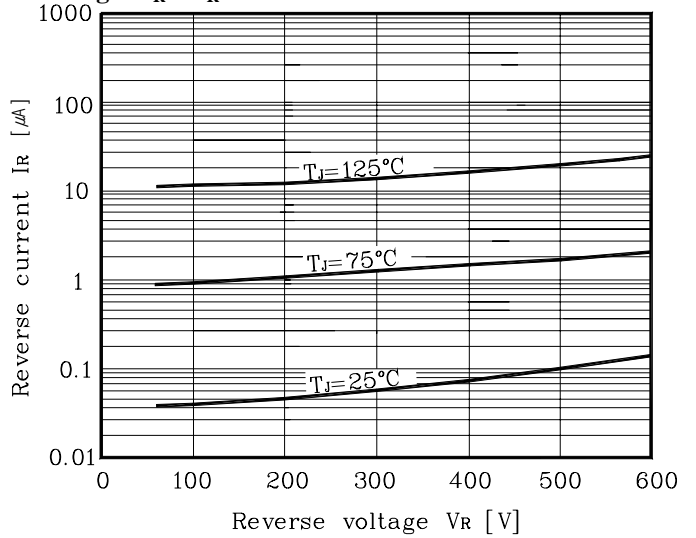


Fig. 3 $P_F - I_O$

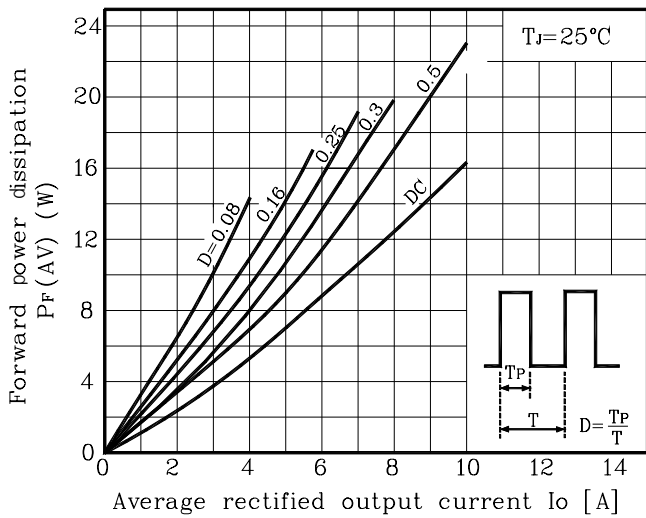


Fig. 4 $C_J - V_R$

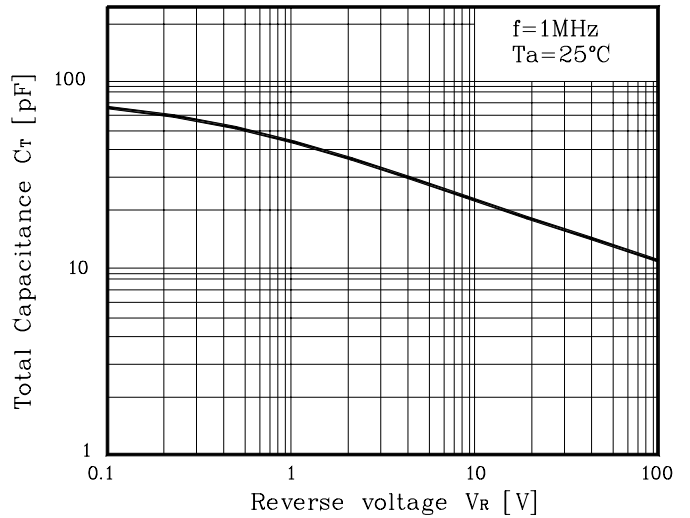


Fig. 5 $I_{FSM} - \text{Number of cycle}$

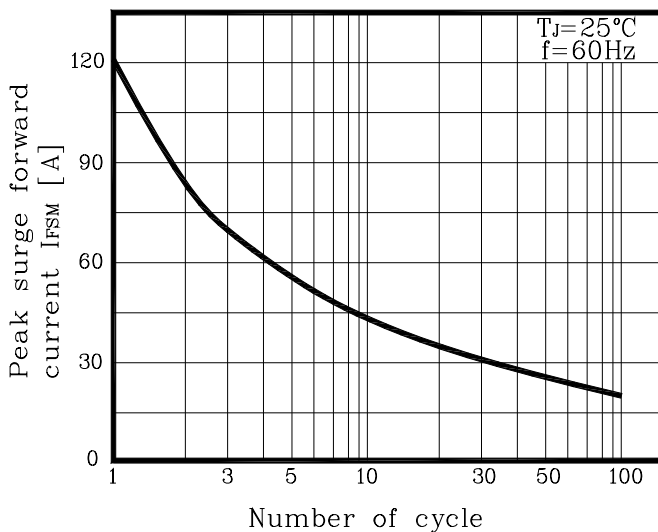
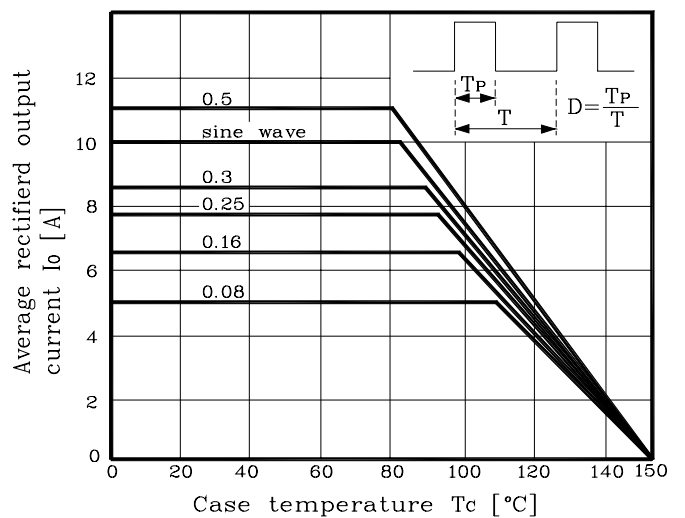


Fig. 6 I_O derating - T_C



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