

## Applications

- High speed switching and rectification
- Switching mode power supply

## Features

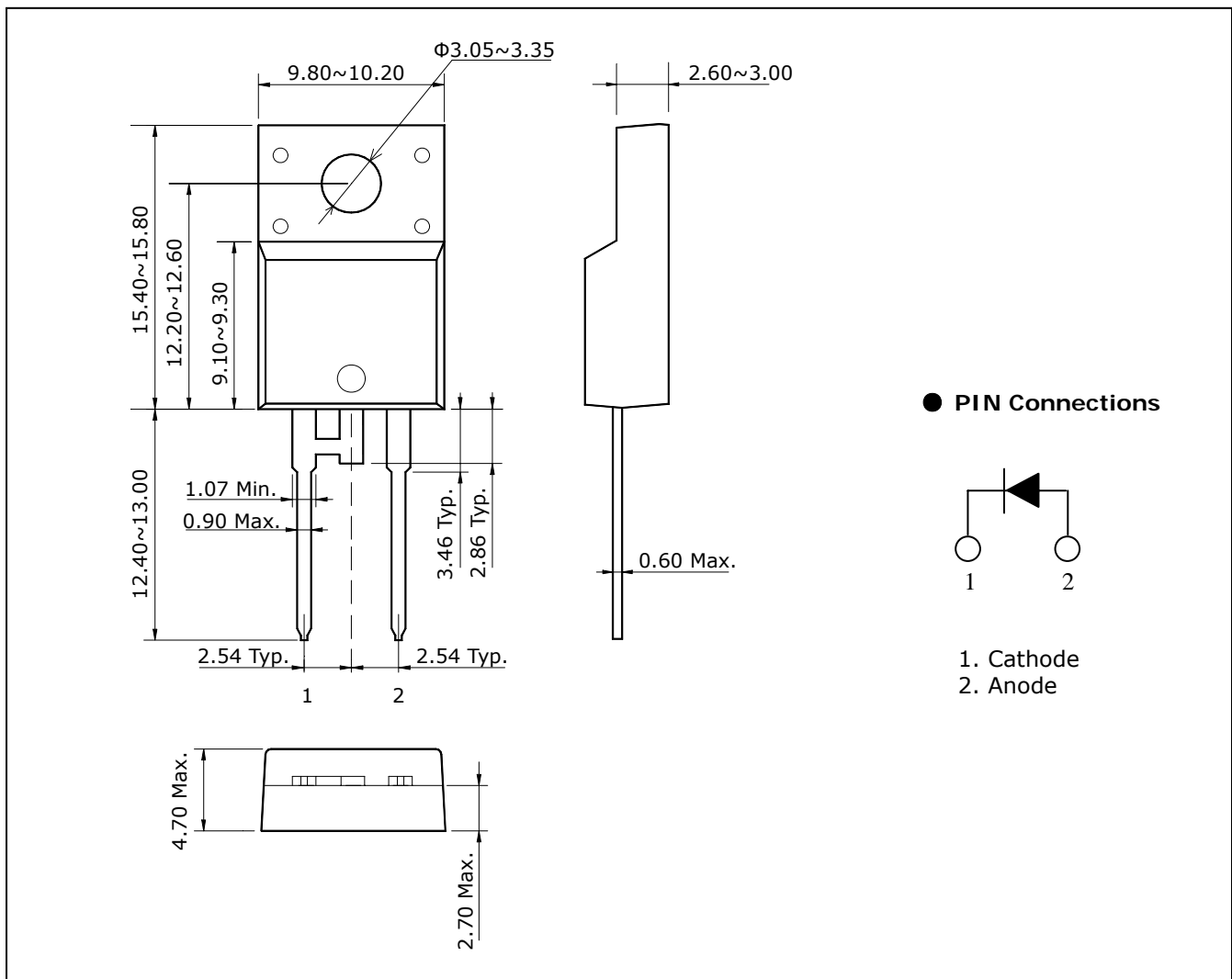
- Ultra-fast reverse recovery time:  $t_{rr}=50\text{ns}$  Max.
- Low forward voltage & low reverse current
- Low switching loss

## Ordering Information

Type No.	Marking	Package Code
SF10A400H	SF10A400H	TO-220F-2L

## Outline Dimensions

unit : mm



## Absolute Maximum Ratings

[Ta=25°C]

Characteristic	Symbol	Rating	Unit
Repetitive peak reverse voltage	$V_{RRM}$	400	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

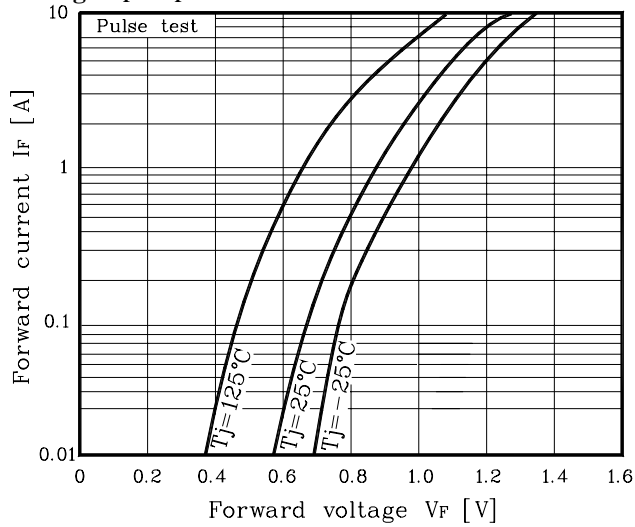
[Ta=25°C]

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Peak forward voltage	$V_{FM}^{1)}$	$I_F=10A$	-	-	1.4	V
Repetitive peak reverse current	$I_{RRM}$	$V_R=400V$	-	-	20	$\mu A$
Reverse recovery time	$t_{rr}$	$I_F=1A, di/dt=100A/\mu s$	-	-	50	ns
Total capacitance	$C_T$	$V_R=10V, f=1MHz$	-	65	-	pF
Thermal resistance	$R_{th}$	Junction to ambient	-	-	62.5	°C/W
		Junction to case	-	-	3.5	

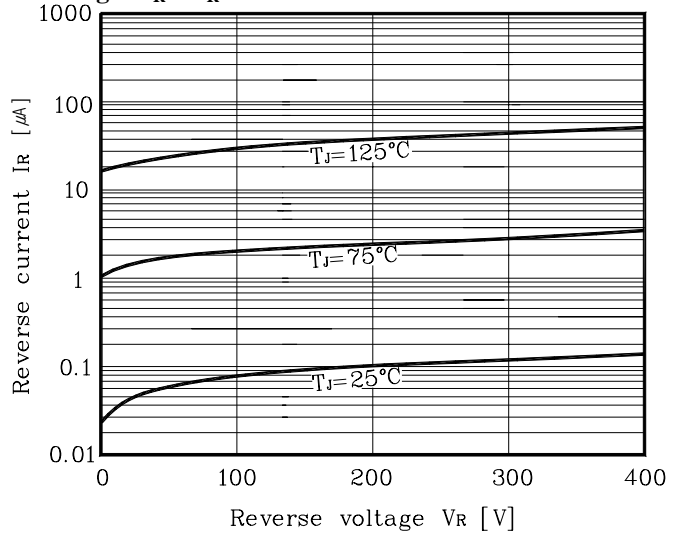
1) Pulse test :  $t_p \leq 380 \mu s$ , Duty cycle  $\leq 2\%$

## Electrical Characteristic Curves

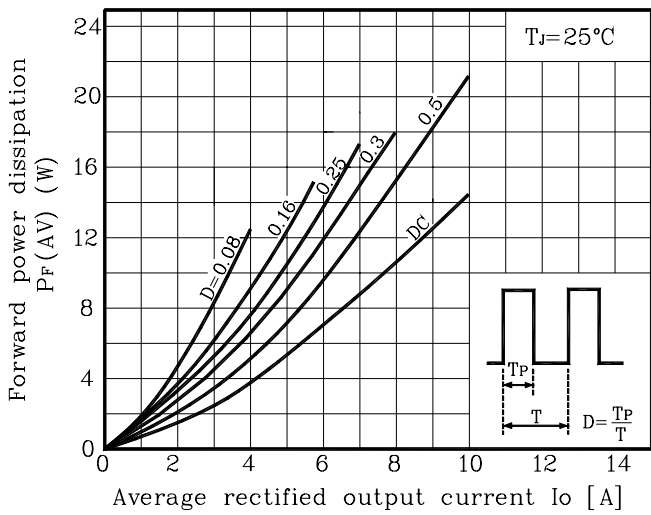
**Fig.1  $I_F - V_F$**



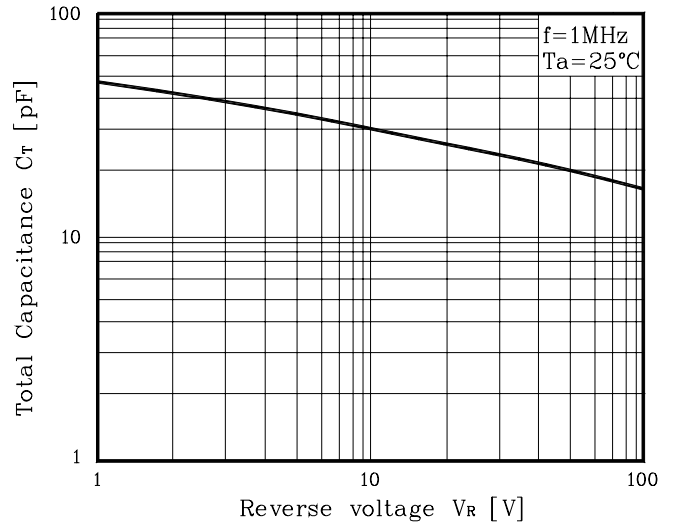
**Fig. 2  $I_R - V_R$**



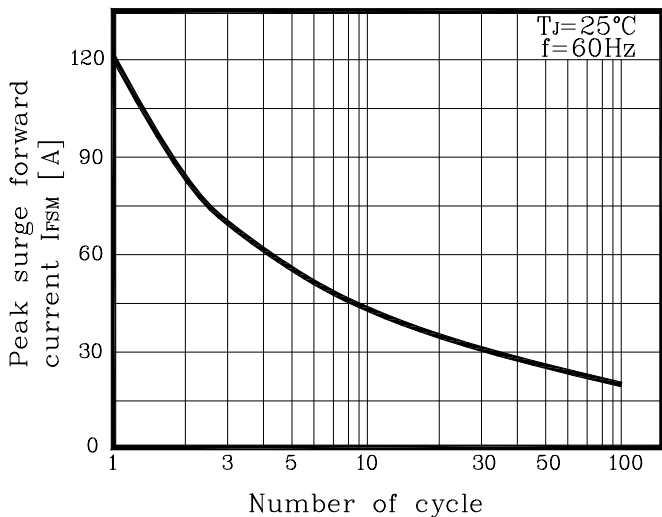
**Fig. 3  $P_F - I_O$**



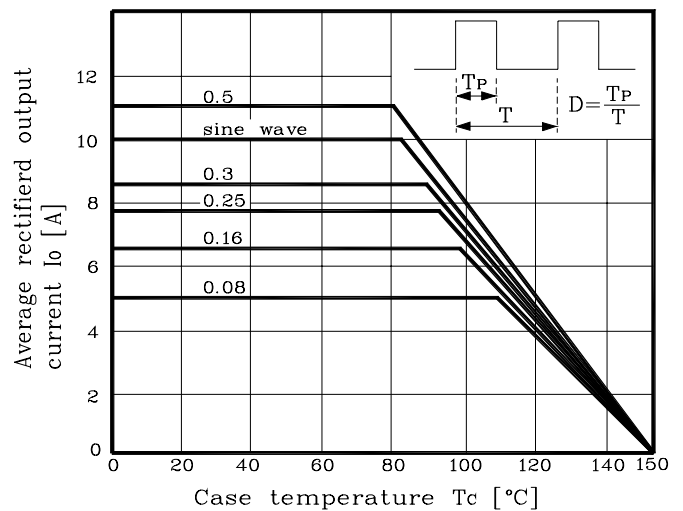
**Fig. 4  $C_T - V_R$**



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



**Fig. 6  $I_O$  derating -  $T_c$**



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