

### Applications

- High speed switching and rectification
- Switching mode power supply

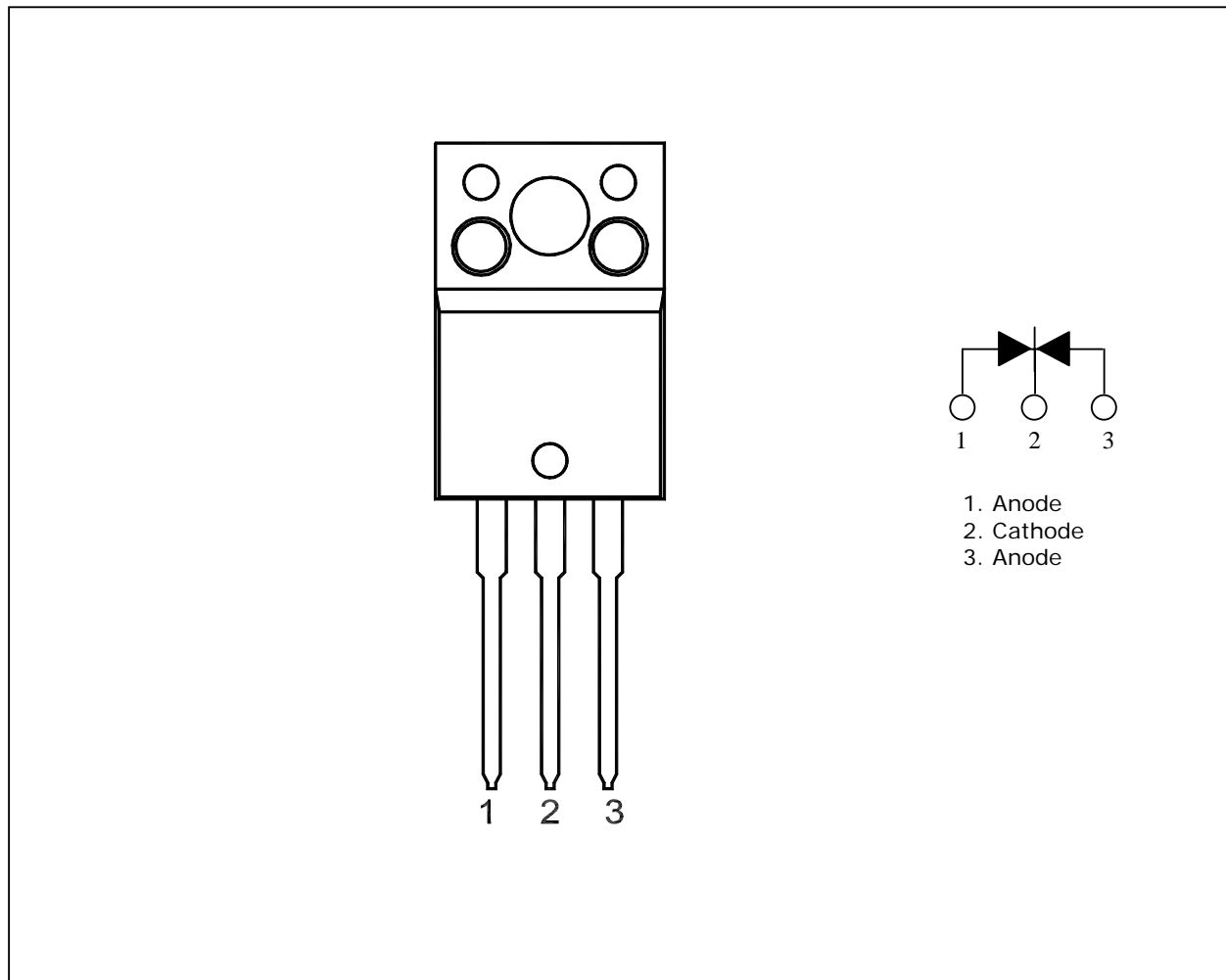
### Features

- Ultra-fast reverse recovery time:  $t_{rr}=30\text{ns}$  Max.
- Low forward voltage & low reverse current:  $V_{FM}=0.98\text{V}$ ,  $I_{RRM}=10\ \mu\text{A}$
- Low switching loss

### Ordering Information

Type No.	Marking	Package Code
SF10A200HPI	SF10A200HPI	TO-220F-3L

### PIN Connections



## Absolute Maximum Ratings

[Ta=25°C]

Characteristic	Symbol	Rating	Unit
Repetitive peak reverse voltage	$V_{RRM}$	200	V
Average rectified output current	$I_O$	10	A
Peak forward surge current (Non-repetitive 60Hz sine wave)	$I_{FSM}$	60	A
Junction temperature	$T_J$	150	°C
Storage temperature range	$T_{stg}$	-45 ~ 150	°C

## Electrical Characteristics

[Ta=25°C]

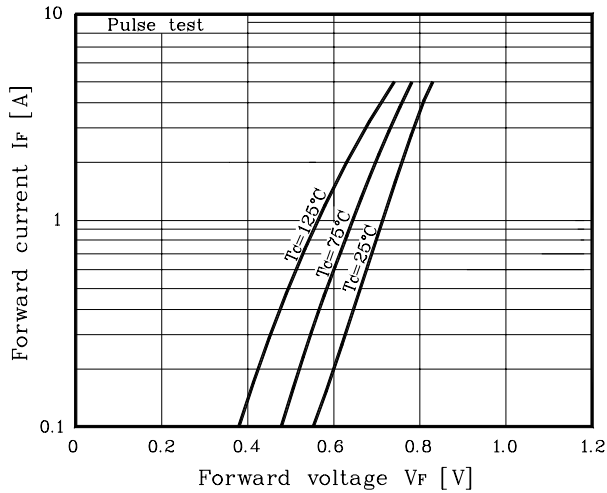
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Peak forward voltage	$V_{FM}^{1)}$	$I_F=5A^{2)}$	-	-	0.98	V
Repetitive peak reverse current	$I_{RRM}^{1)}$	$V_R=200V^{2)}$	-	-	10	$\mu A$
Reverse recovery time	$t_{rr}^{1)}$	$I_F=1A, di/dt=-100A/\mu s$	-	-	30	ns
Thermal resistance	$R_{th}^{1)}$	Junction to case	-	-	4	°C/W

1) Per Diode

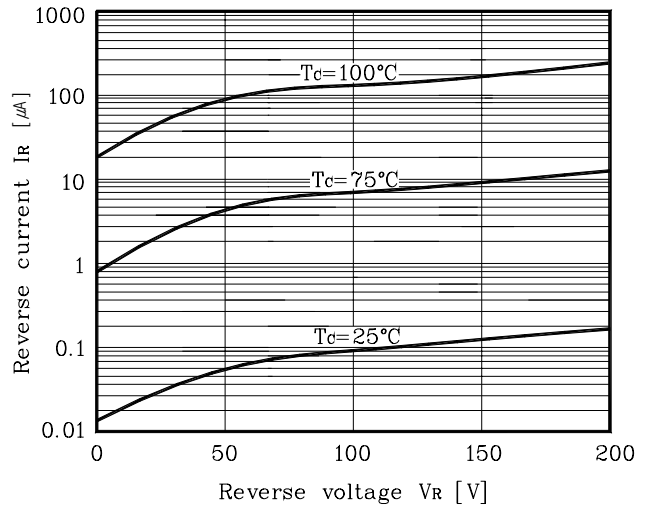
2) Pulse test :  $t_p \leq 380 \mu s$ , Duty cycle  $\leq 2\%$

## Electrical Characteristic Curves [per each unit]

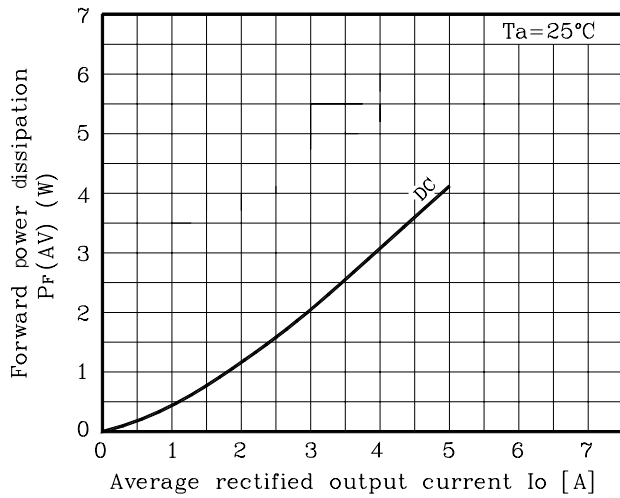
**Fig. 1  $V_F - I_F$  (Per Diode)**



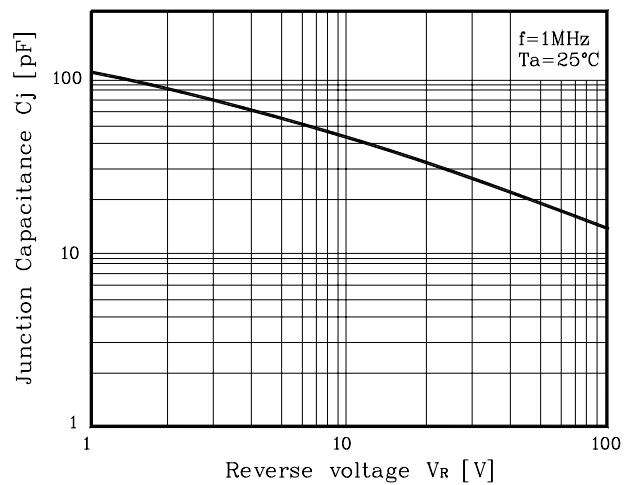
**Fig. 2  $I_R - V_R$  (Per Diode)**



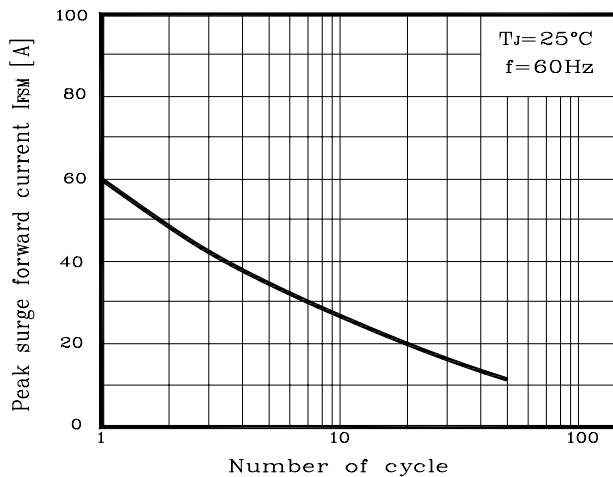
**Fig. 3  $I_O - P_F$  (Per Diode)**



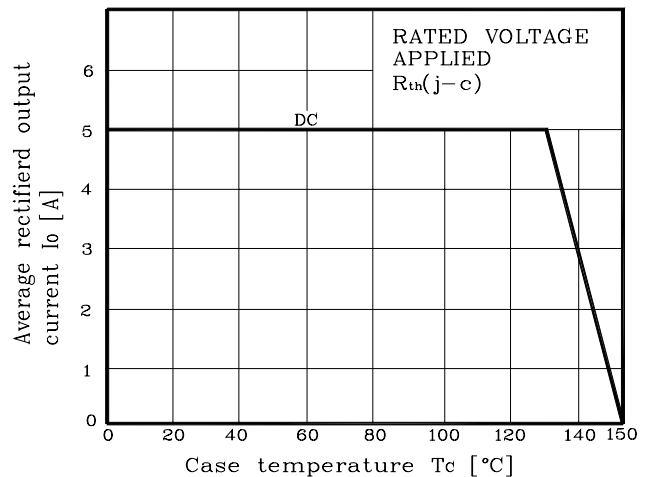
**Fig. 4  $C_T - V_R$  (Per Diode)**



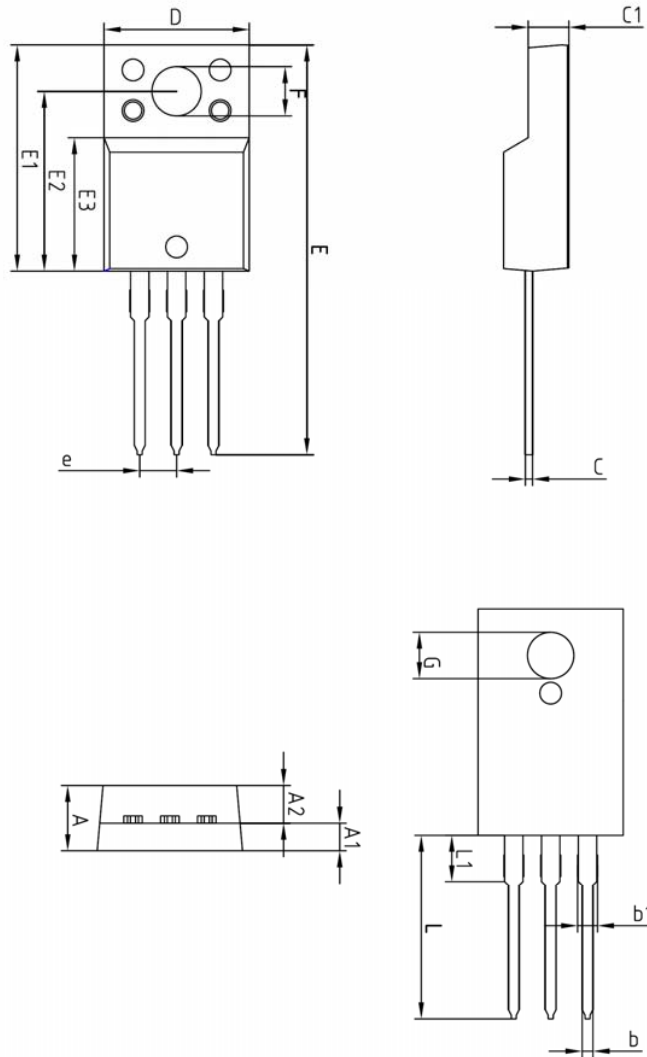
**Fig. 5  $I_{FSM} - \text{Number of cycle (Total)}$**



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



## Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	-	-	4.60	
A1	2.45	2.50	2.55	
A2	1.95	2.00	2.05	
b	0.65	0.75	0.85	
b1	1.07	1.27	1.47	
C	0.40	0.50	0.60	
C1	2.70	2.80	2.90	
D	9.90	10.00	10.10	
E	28.00	-	28.60	
E1	15.50	15.60	15.70	
E2	12.30	12.40	12.50	
E3	9.15	9.20	9.25	
F	3.30	3.40	3.50	
G	3.10	3.20	3.30	
e	2.54 BSC			
L	12.40	-	13.00	
L1	3.46 BSC			

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