

Applications

- High speed switching and rectification
- Switching mode power supply

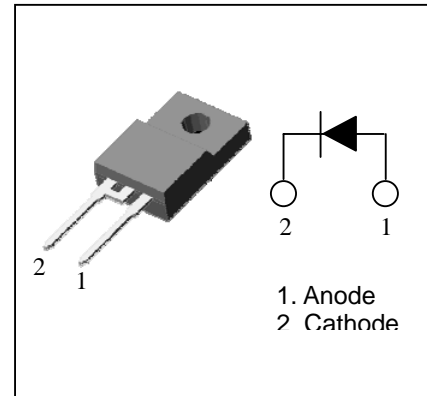
Features

- Ultra-fast reverse recovery time: $t_{rr}=30\text{ns}$ Max.
- Low V_{FM} : 1.4V & Low I_{RRM} : 20 μA Max.
- Low switching loss

Ordering Information

Type No.	Marking	Package Code
SF5A400H	SF5A400H	TO-220F-2L

PIN Connection



Absolute Maximum Ratings

[Ta=25°C]

Characteristic	Symbol	Rating	Unit
Repetitive peak reverse voltage	V_{RRM}	400	V
Average forward current	$I_{F(AV)}$	5	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}	$I_F=5\text{A}$	-	-	1.4	V
Repetitive peak reverse current	I_{RRM}	$V_R=400\text{V}$	-	-	20	μA
Reverse recovery time	t_{rr}	$I_F=1\text{A}$, $di/dt=100\text{A}/\mu\text{s}$	-	-	30	ns
Thermal resistance	R_{th}	Junction to case	-	-	4.0	°C/W

Electrical Characteristic Curves

Fig. 1 $I_O - V_F$

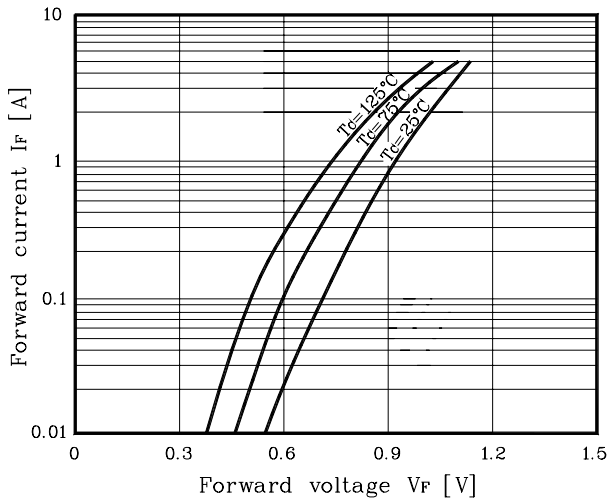


Fig. 2 $I_R - V_R$

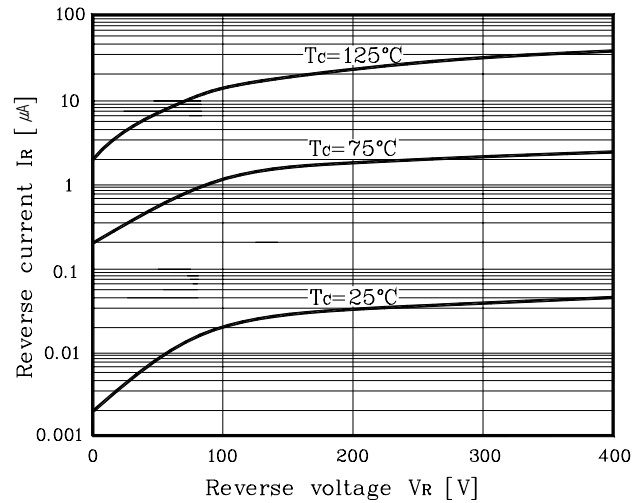


Fig. 3 $I_O - P_F$

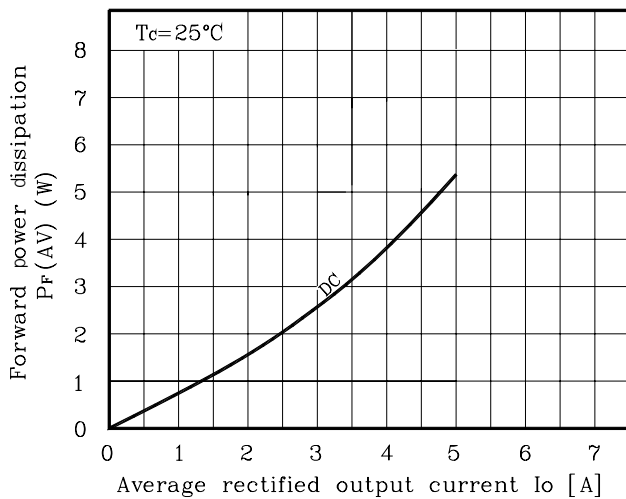


Fig. 4 $C_T - V_R$

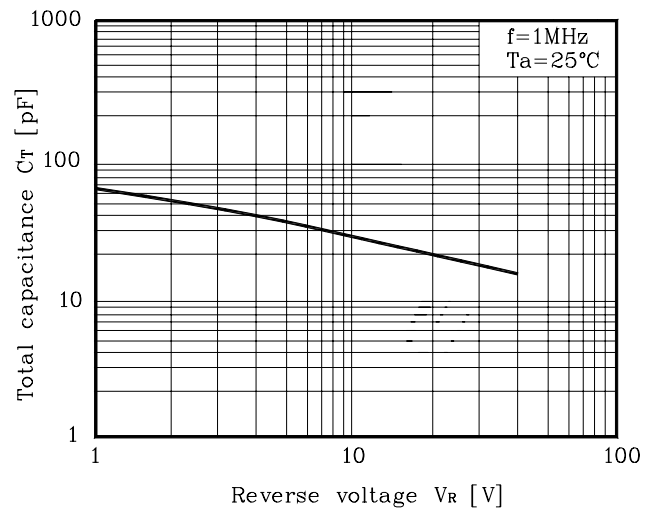


Fig. 5 $I_{FSM} - \text{Number of cycle}$

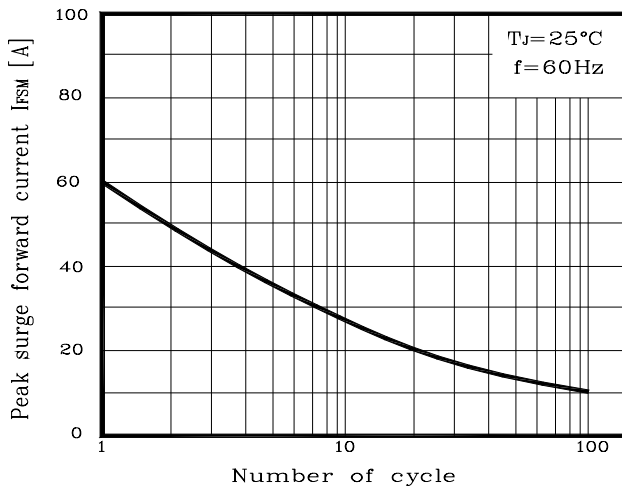
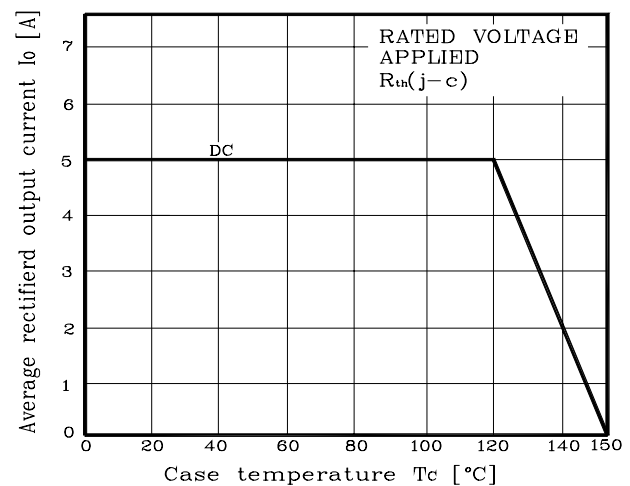
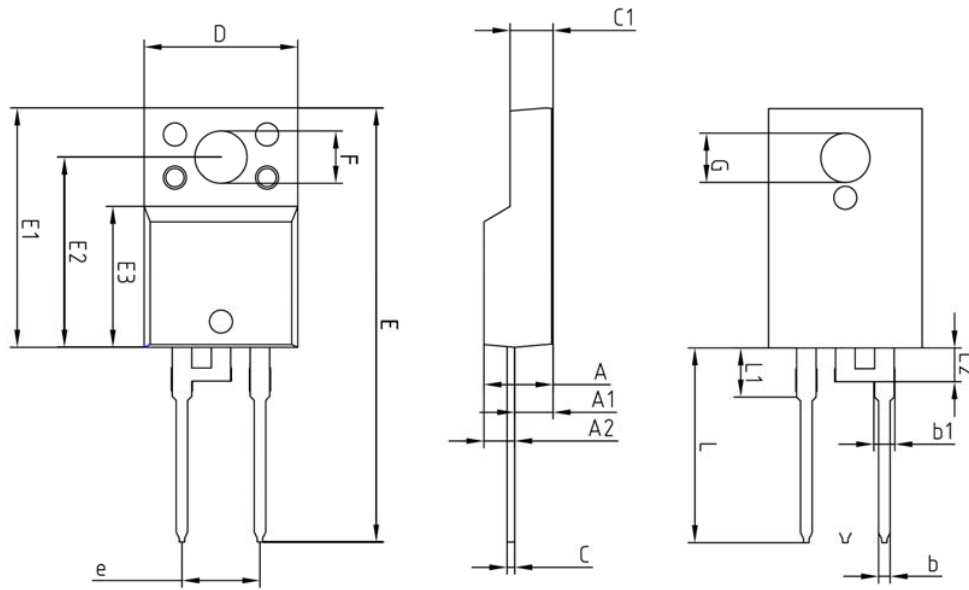


Fig. 6 I_O derating - T_C



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	5.08 BSC			
L	12.40	-	13.00	
L1	3.46 BSC			
L2	2.21 BSC			

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