

Applications

- High speed switching and rectification
- Switching mode power supply

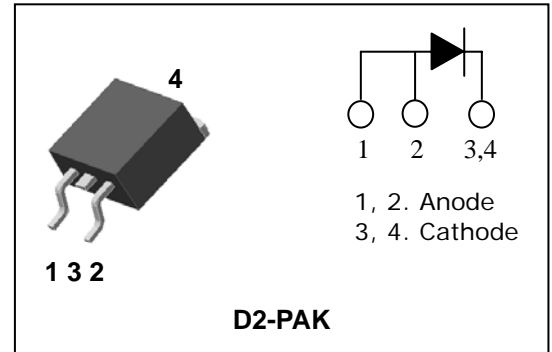
Features

- Ultra-fast reverse recovery time: $t_{rr}=30\text{ns}$ Max.
- Low forward voltage & low reverse current
- Low switching loss

Ordering Information

Type No.	Marking	Package Code
SF10A400HDS	SF10A400HDS	D2-PAK

PIN Connection



Absolute Maximum Ratings

[T_c=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

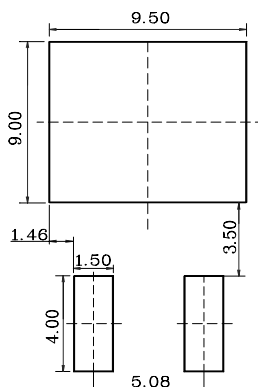
Electrical Characteristics

[T_c=25°C]

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward voltage	$V_F^{1)}$	T _c =25 °C	-	-	1.4	V
		T _c =125 °C	-	-	1.3	
Reverse current	$I_R^{1)}$	T _c =25 °C	-	-	20	μA
		T _c =125 °C	-	-	200	
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	-	-	3.0	°C/W

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

※ Recommend PCB solder land [Unit: mm]



Electrical Characteristic Curves

Fig.1 $I_F - V_F$

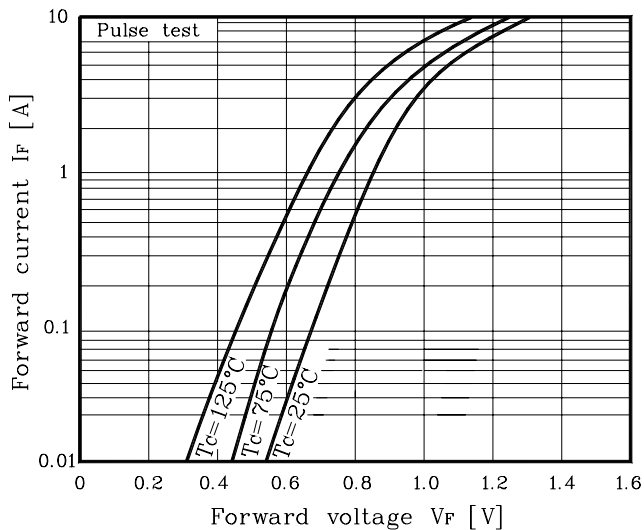


Fig. 2 $I_R - V_R$

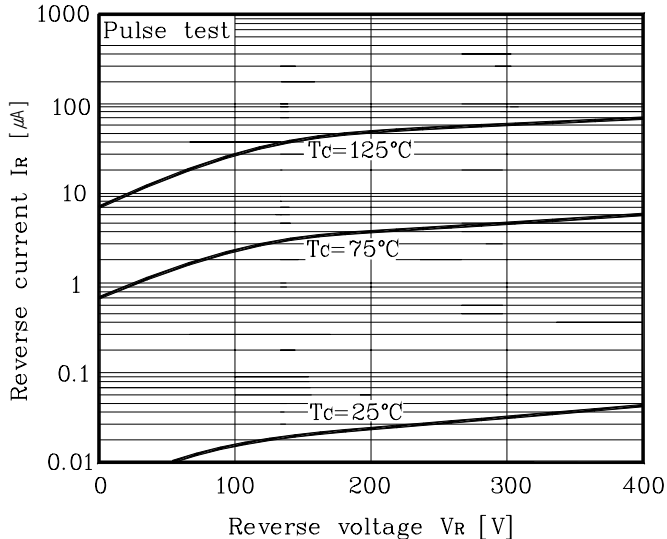


Fig. 3 $P_F - I_O$

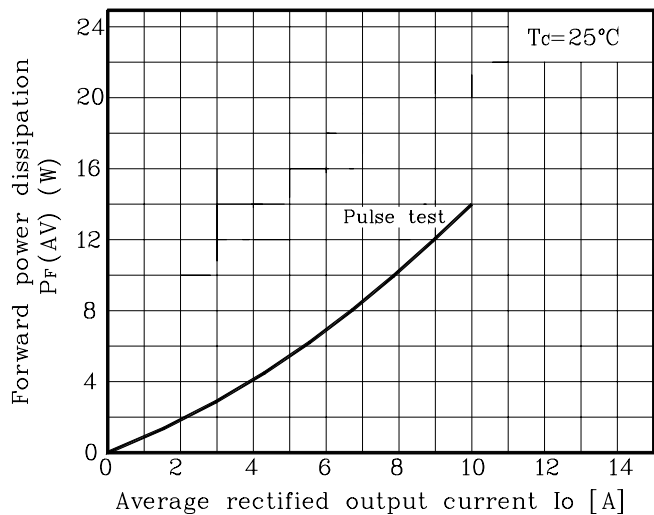


Fig. 4 $C_T - V_R$

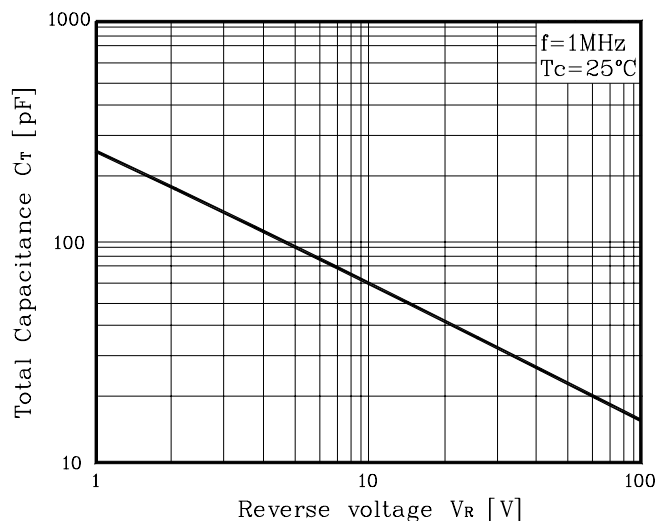


Fig. 5 $I_{FSM} - \text{Number of cycle}$

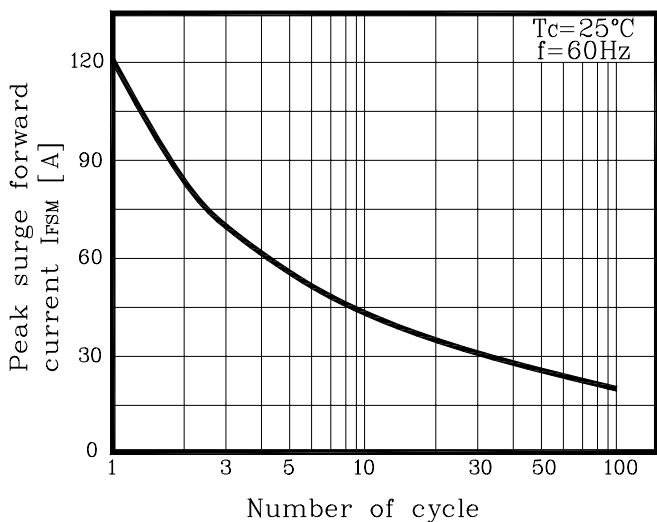
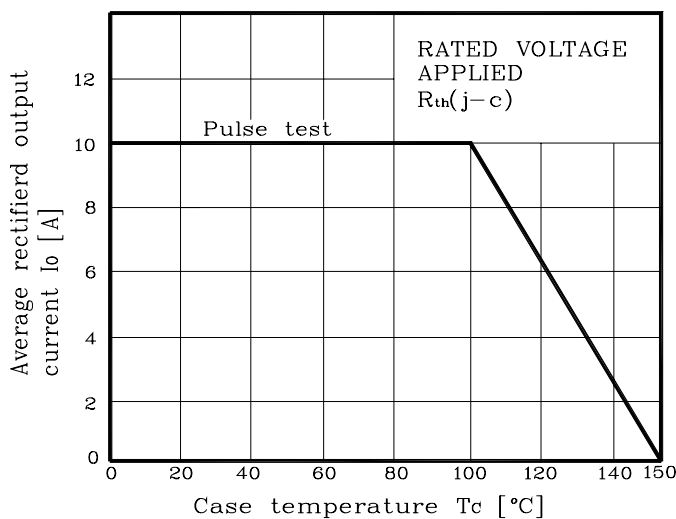
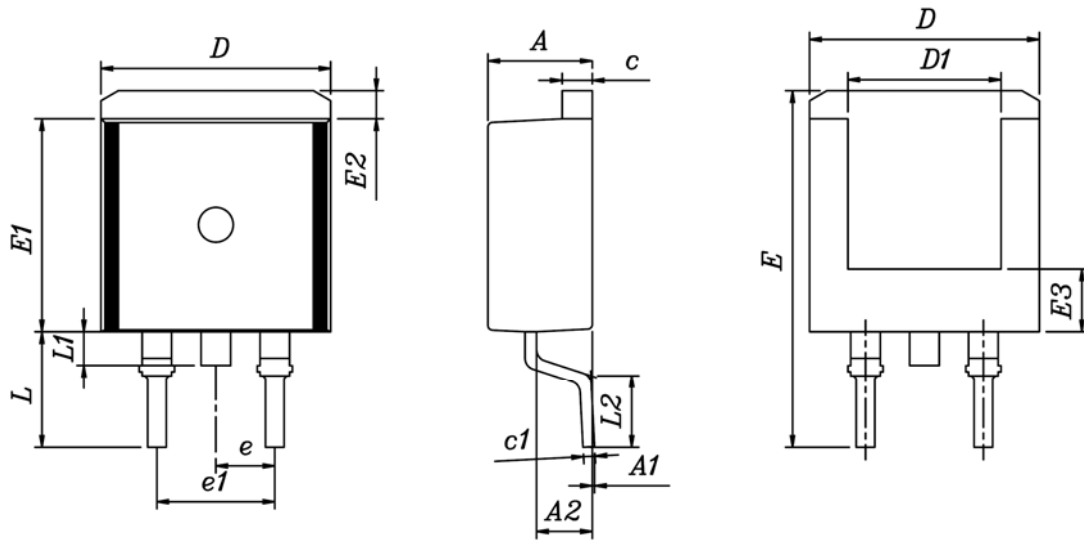


Fig. 6 I_O derating - T_c



Outline Dimension (mm)



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	4.35	4.50	4.65	
A1	—	—	0.15	
A2	2.20	2.40	2.60	
c	1.20	1.30	1.40	
c1	0.40	0.50	0.60	
D	9.80	10.00	10.20	
D1	6.40	6.60	6.80	
E	15.00	15.40	15.80	
E1	9.05	9.20	9.35	
E2	1.00	1.20	1.40	
E3	2.50	2.70	2.90	
e	2.34	2.54	2.74	
e1	4.88	5.08	5.28	
L	4.60	5.00	5.40	
L1	1.40	1.45	1.50	
L2	2.50	—	—	

NOTE

1. THESE DIMENSIONS DO NOT INCLUDE MOLD FLASH AND GATE BURR

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