

## Applications

- Switching mode power supply application
- Converter & chopper application

## Features

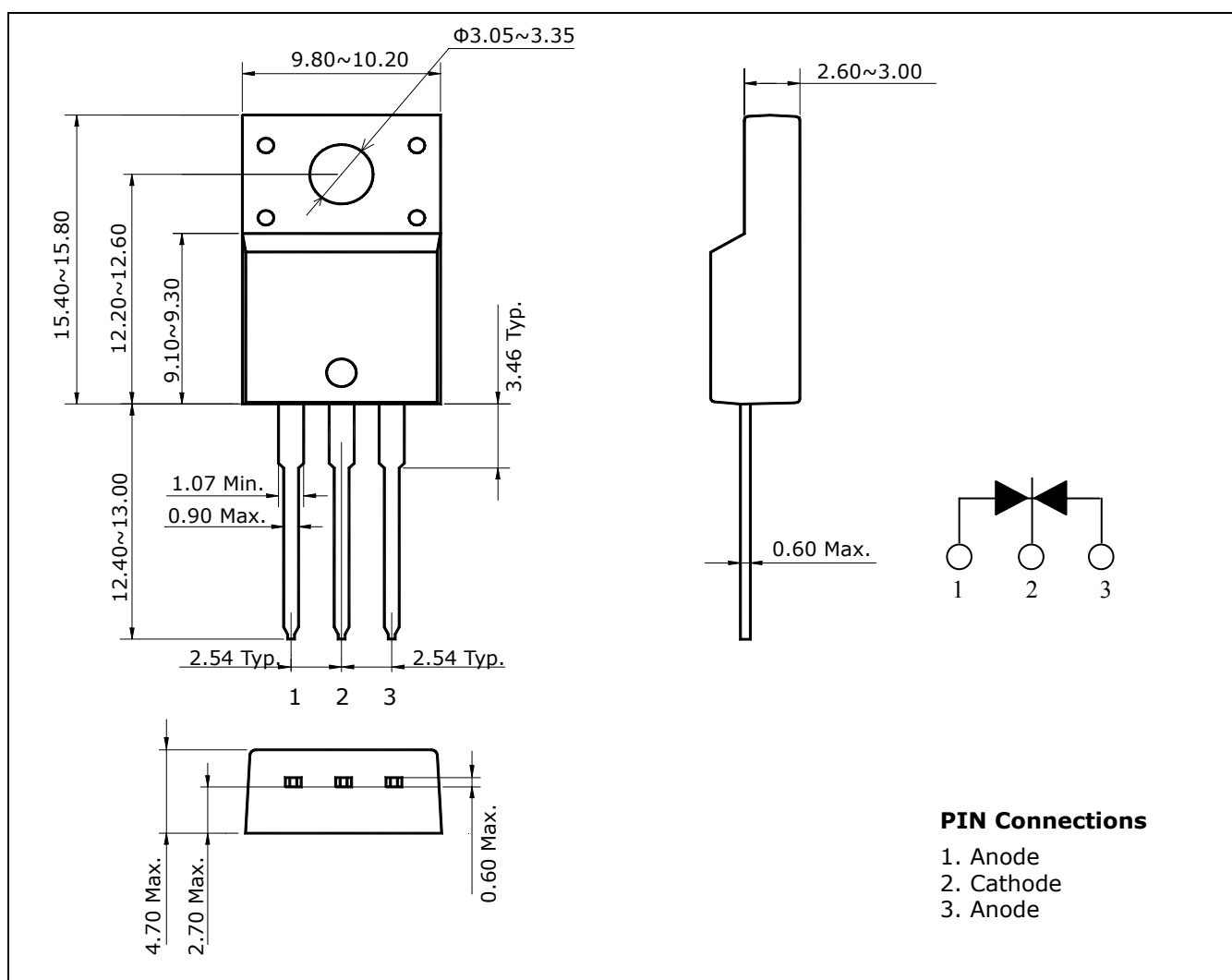
- Low forward voltage:  $V_{FM}=0.55V$  Max.
- Low reverse current:  $I_{RRM}=0.5mA$  Max.
- Low switching loss

## Ordering Information

Type No.	Marking	Package Code
SDB1040PI	SDB1040PI	TO-220F-3L

## Outline Dimensions

unit : mm



## Absolute Maximum Ratings

Ta=25°C

Characteristic	Symbol	Rating	Unit
Repetitive peak reverse voltage	$V_{RRM}$	40	V
Average rectified output current	$I_O$	10	A
Peak surge forward current (Non-repetitive 60Hz sine wave)	$I_{FSM}$	60	A
Junction temperature	$T_J$	150	°C
Storage temperature range	$T_{stg}$	-55 ~ 150	°C

## Electrical Characteristics

Ta=25°C

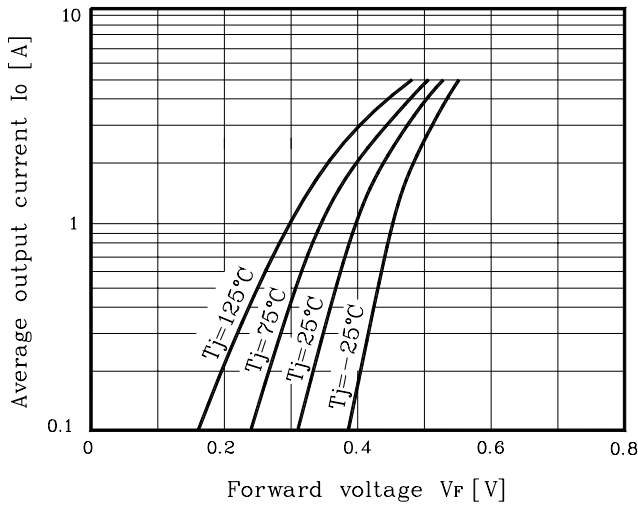
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Peak forward voltage	$V_{FM}^{1)}$	$I_{FM}=5A^{2)}$	-	-	0.55	V
Repetitive peak reverse current	$I_{RRM}^{1)}$	$V_{RRM}=40V$	-	-	0.5	mA
Junction capacitance	$C_J$	$V_R=10V, f=1.0MHz$	-	200	-	pF
Thermal resistance	$R_{th(j-c)}$	Junction to ambient	-	-	62.5	°C/W
		Junction to case	-	-	4.0	

1) per each chip

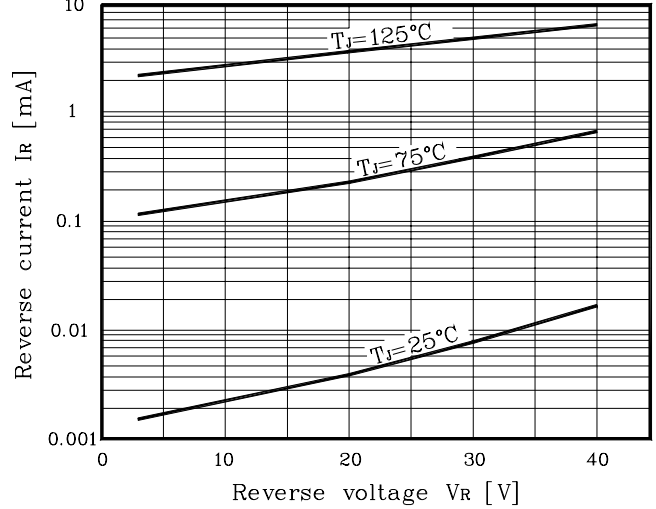
2) Pulse test :  $t_p \leq 380 \mu s$ , Duty cycle  $\leq 2\%$

## Electrical Characteristic Curves (Per each cell)

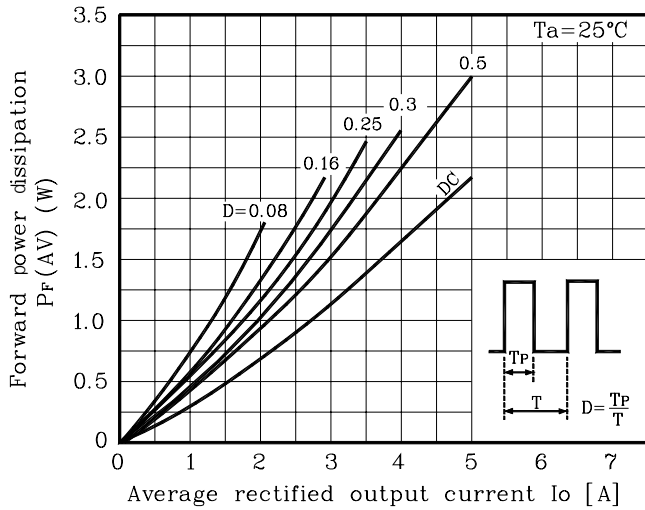
**Fig.1  $I_F - V_F$**



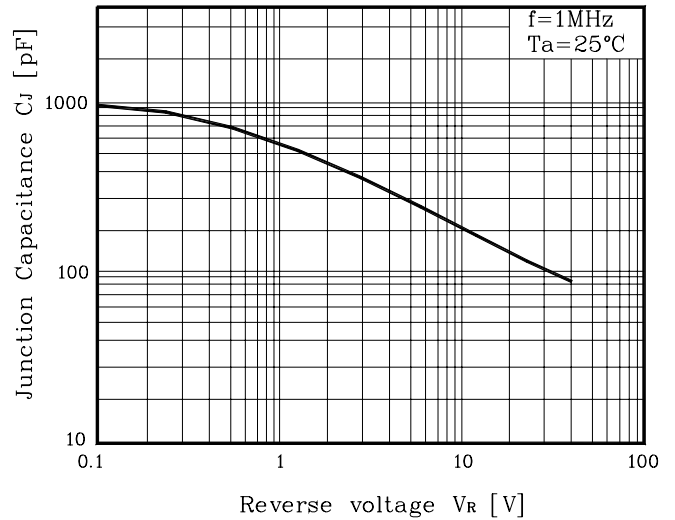
**Fig. 2  $I_R - V_R$**



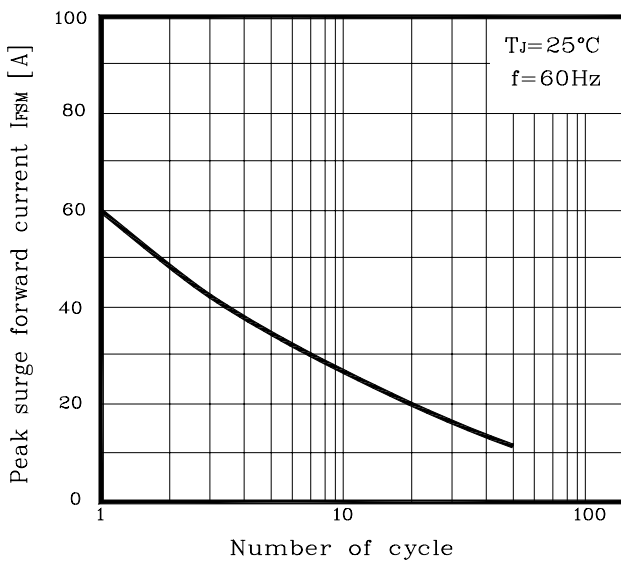
**Fig. 3  $P_F - I_O$**



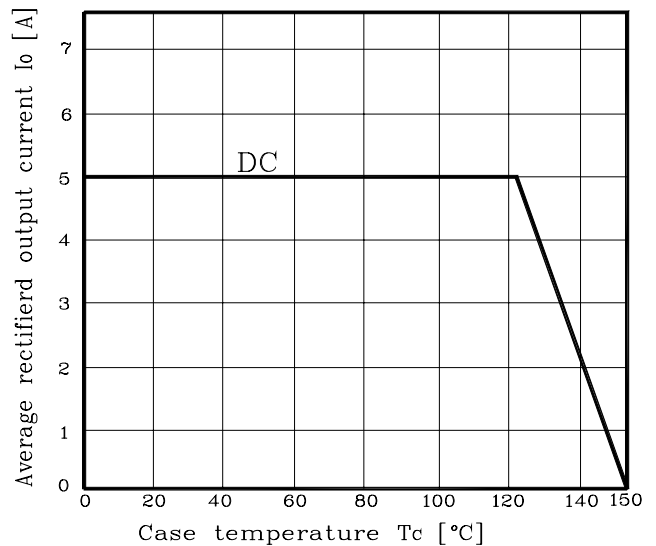
**Fig. 4  $C_J - V_R$**



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



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



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