

LM25KBV60FR

Bridge Diodes

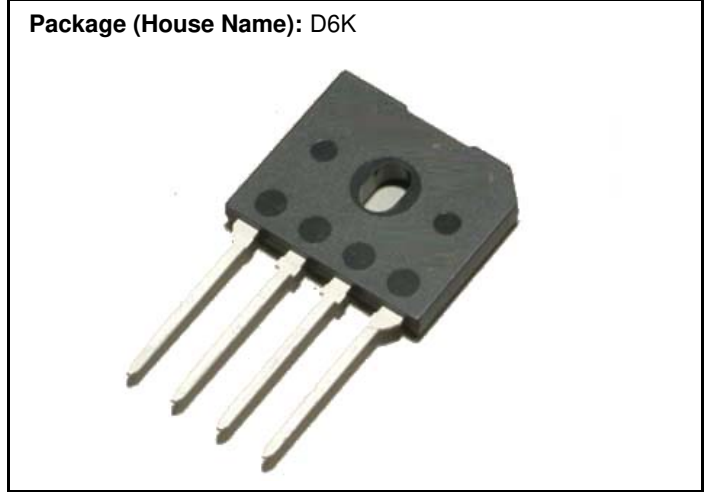
600V, 25A

Feature

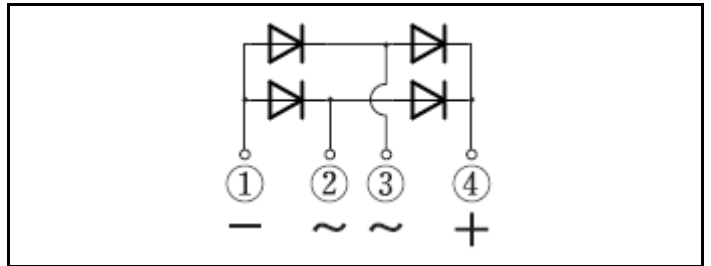
- Small・Compact SIP
- Low V_F
- Halogen free
- UL E142422
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): D6K



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : $T_C=25^{\circ}\text{C}$)

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	T_{stg}		-55 to 150	$^{\circ}\text{C}$
Junction temperature	T_j		-55 to 150	$^{\circ}\text{C}$
Repetitive peak reverse voltage	V_{RRM}		600	V
Average forward current	$I_{F(AV)}$	50Hz sine wave, Resistance load, With heatsink, $T_C=115^{\circ}\text{C}$	25	A
Average forward current	$I_{F(AV)}$	50Hz sine wave, Resistance load, On glass-epoxy substrate, $T_I=132^{\circ}\text{C}$ *	2.67	A
Average forward current	$I_{F(AV)}$	50Hz sine wave, Resistance load, On glass-epoxy substrate, $T_a=25^{\circ}\text{C}$ *	2.67	A
Surge forward current	I_{FSM}	60Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=25^{\circ}\text{C}$	350	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=25^{\circ}\text{C}$	320	A
Surge forward current	I_{FSM1}	$t_p=1\text{ms}$, sine wave, Non-repetitive, peak value, per diode, $T_j=25^{\circ}\text{C}$	620	A
Dielectric strength	V_{dis}	Terminals to case, AC 1 minute	2	kV
Mounting torque	TOR	(Recommended torque : $0.5\text{N}\cdot\text{m}$)	0.8	$\text{N}\cdot\text{m}$

※ :See the original Specifications

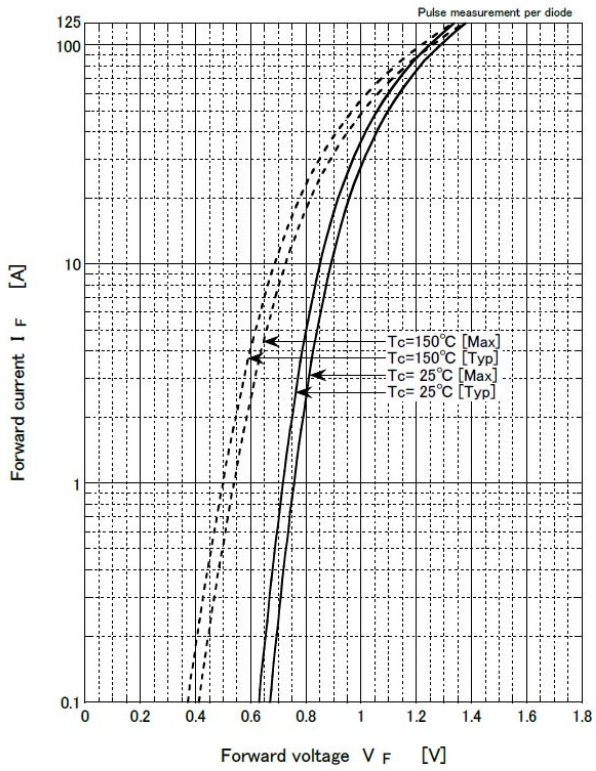
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V _F	I _F =12.5A, Pulse measurement, per diode		0.87	0.91	V
Forward voltage	V _F	I _F =12.5A, Pulse measurement, per diode, Tc=125°C		0.74		V
Reverse current	I _R	V _R =600V, Pulse measurement, per diode			10	μA
Total capacitance	C _t	f=1MHz, V _R =10V, per diode		170		pF
Reverse recovery time	t _{rr}	I _F =0.1A, I _R =0.1A, 0.1I _R , per diode			3000	ns
Thermal resistance	R _{th(j-c)}	Junction to case, With heatsink			0.8	°C/W
Thermal resistance	R _{th(j-l)}	Junction to lead, On glass-epoxy substrate ※			5	°C/W
Thermal resistance	R _{th(j-a)}	Junction to ambient, On glass-epoxy substrate ※			35	°C/W

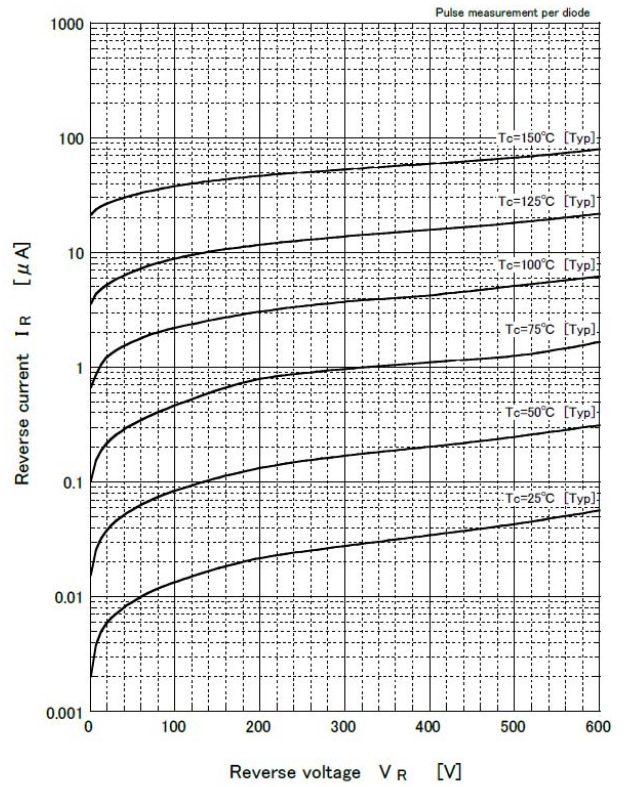
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

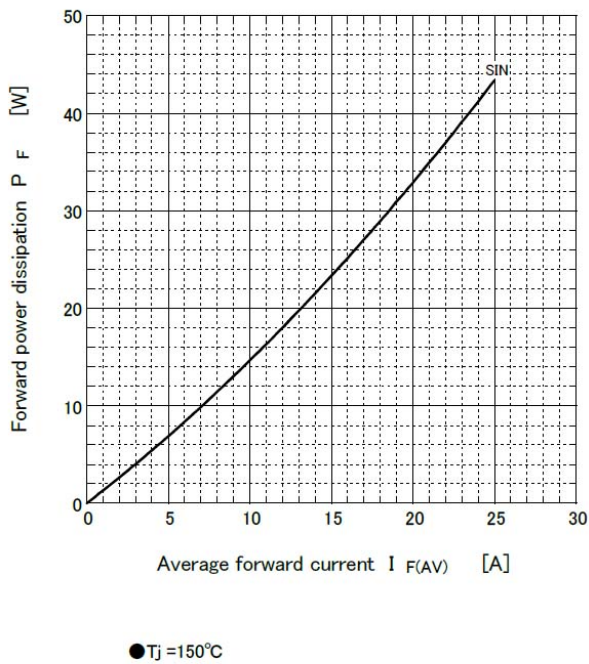
Forward voltage



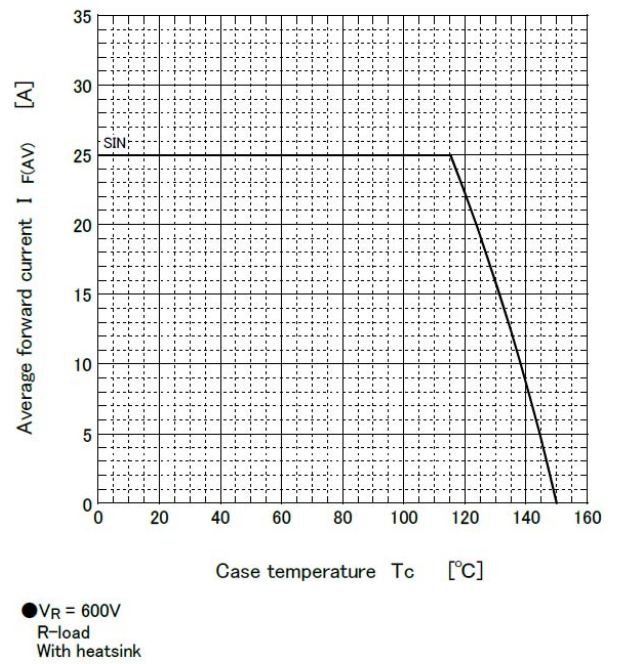
Reverse current



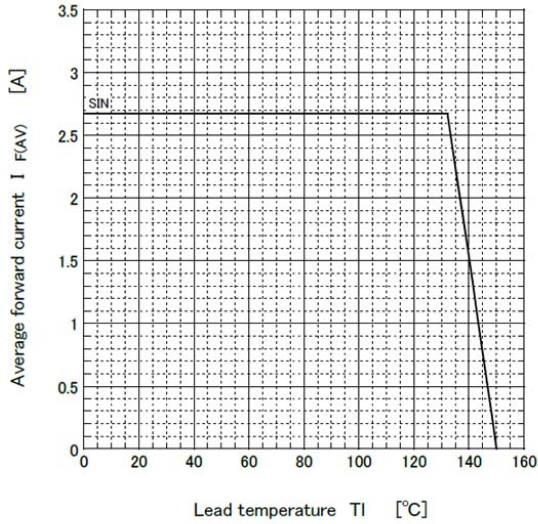
Forward power dissipation



Derating curve



Derating curve

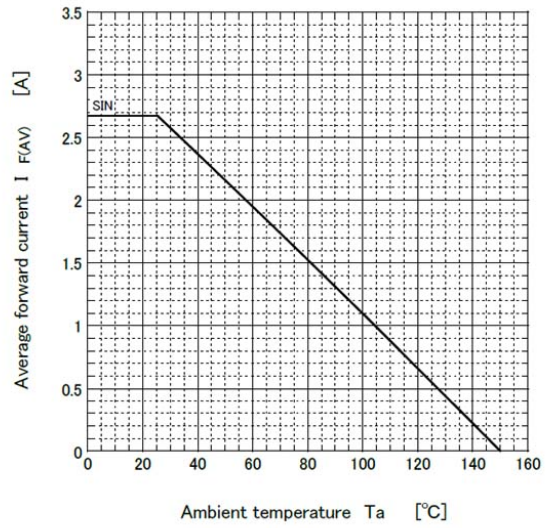


● $V_R = 600V$
R-load
Free in air

● Substrate detail

Type	Glass-epoxy
Size	90mm × 150mm
Thickness	1mm
Conductor thickness	35 μm
Pattern area	160mm ²

Derating curve

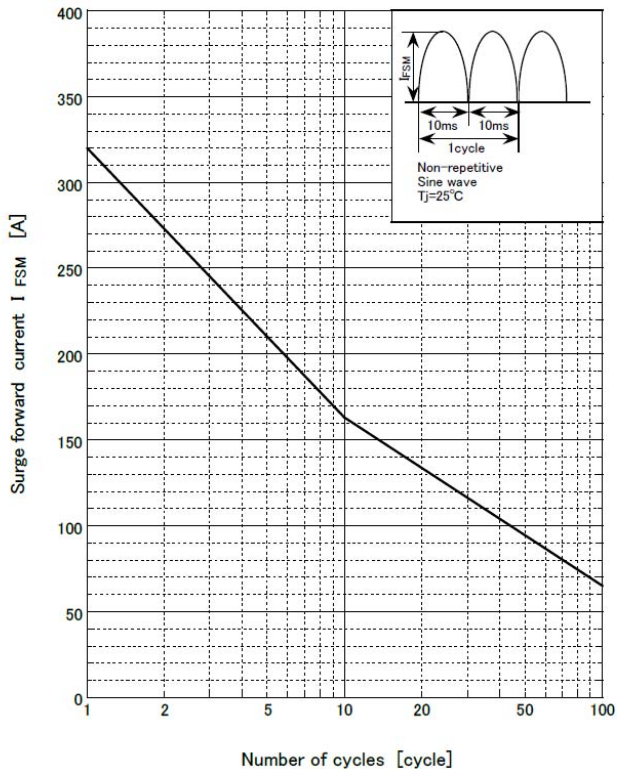


● $V_R = 600V$
R-load
Free in air

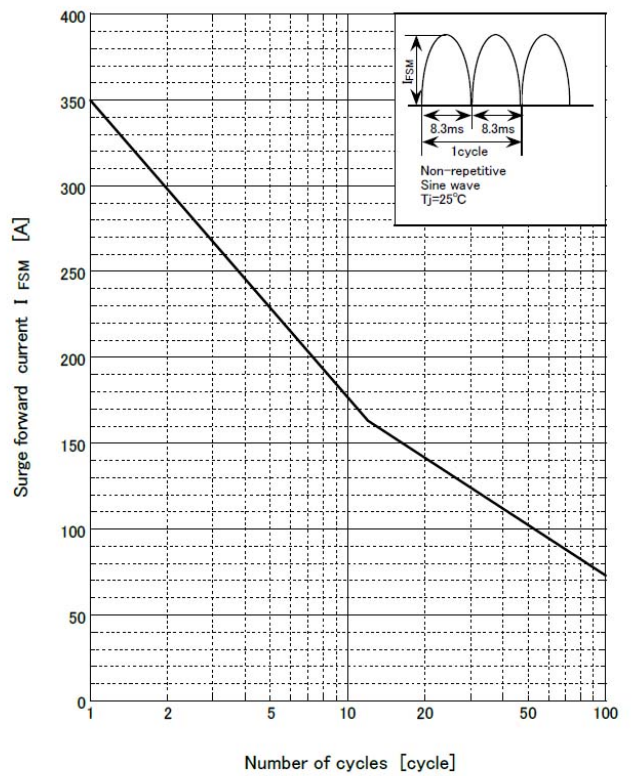
● Substrate detail

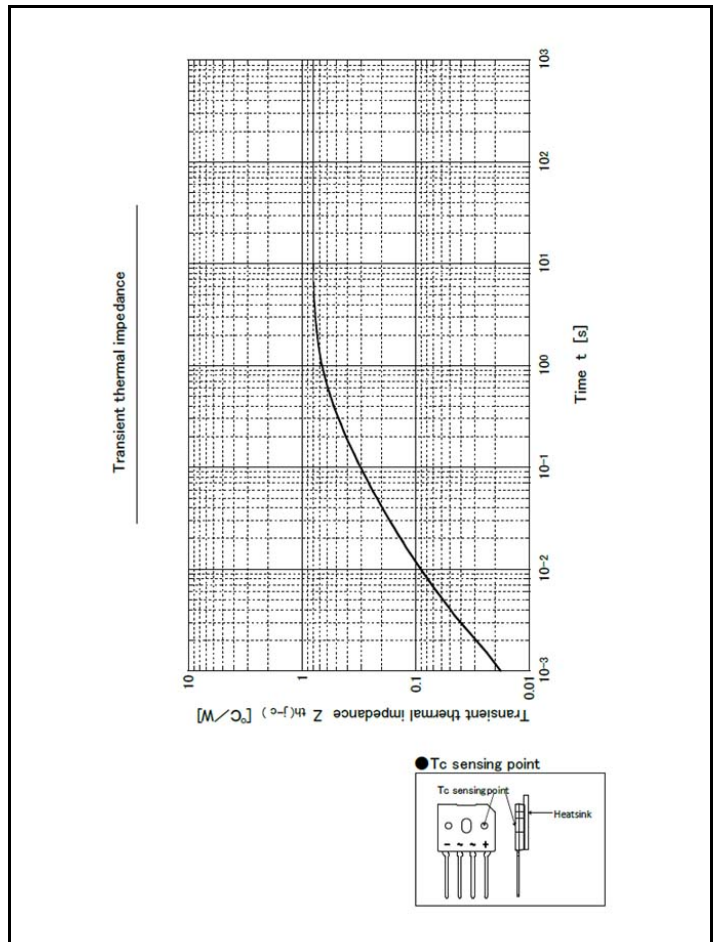
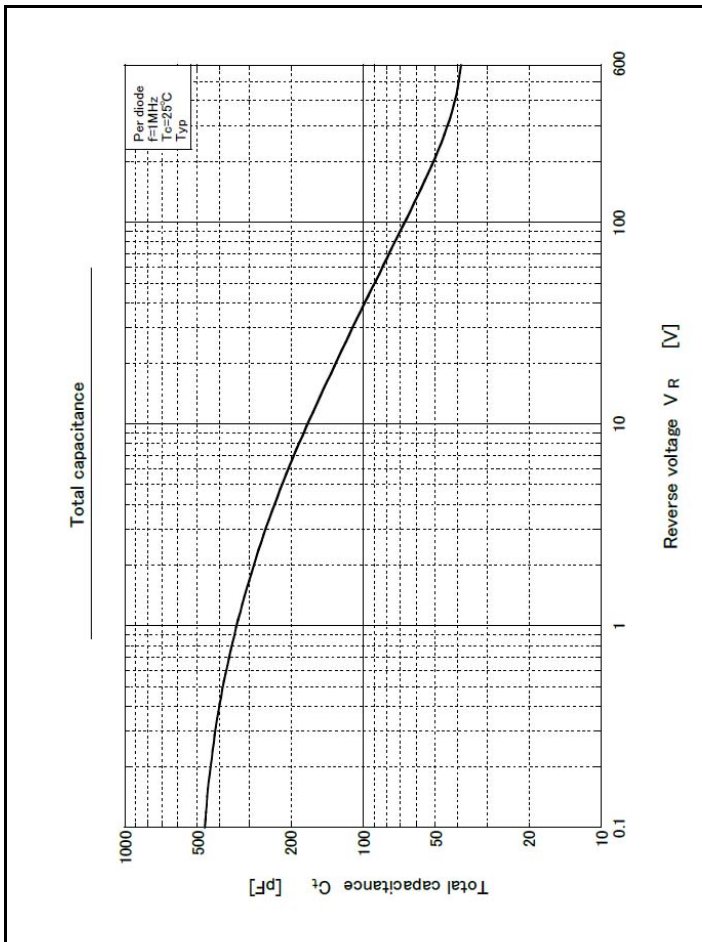
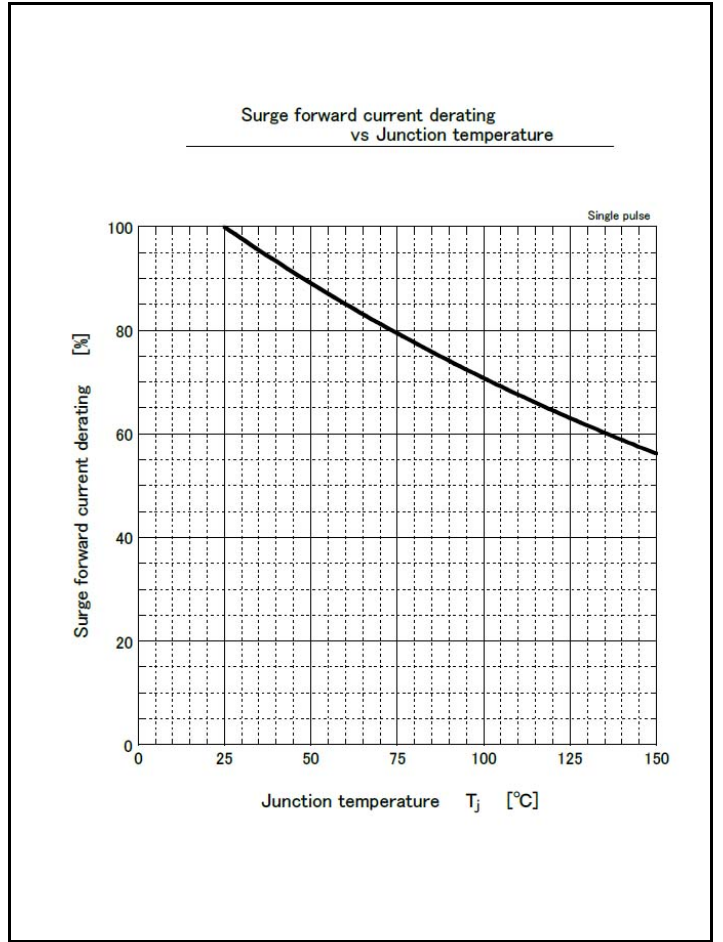
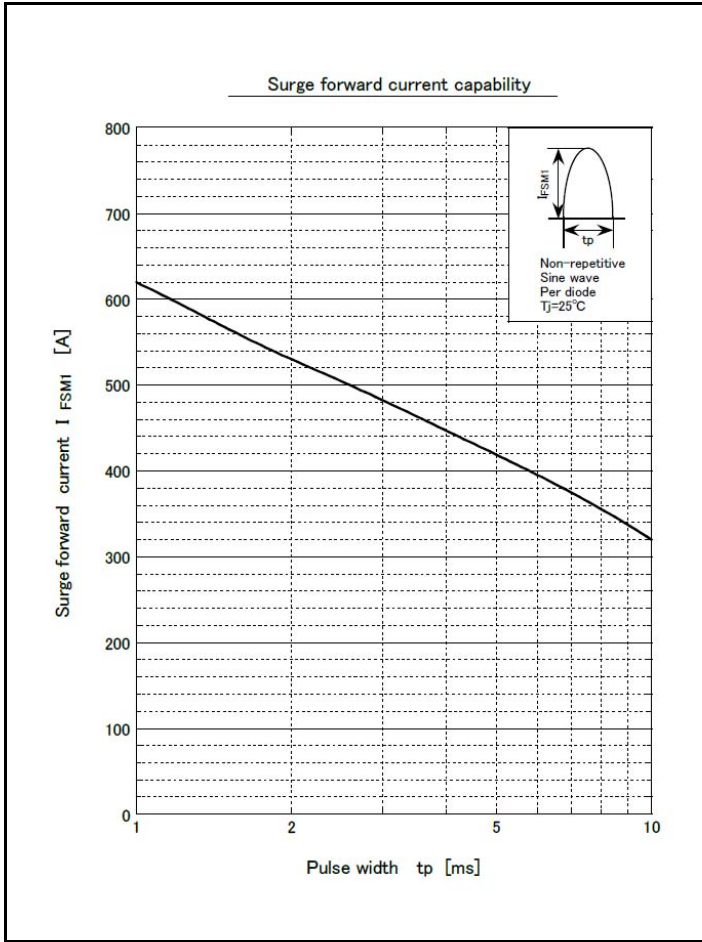
Type	Glass-epoxy
Size	90mm × 150mm
Thickness	1mm
Conductor thickness	35 μm
Pattern area	160mm ²

Surge forward current capability

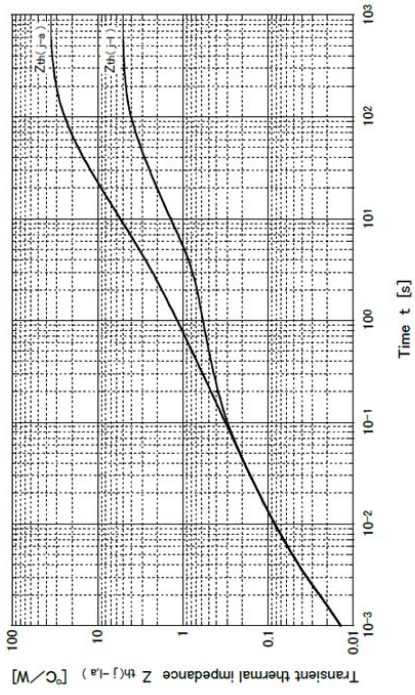


Surge forward current capability





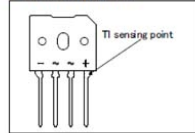
Transient thermal impedance



● Substrate detail

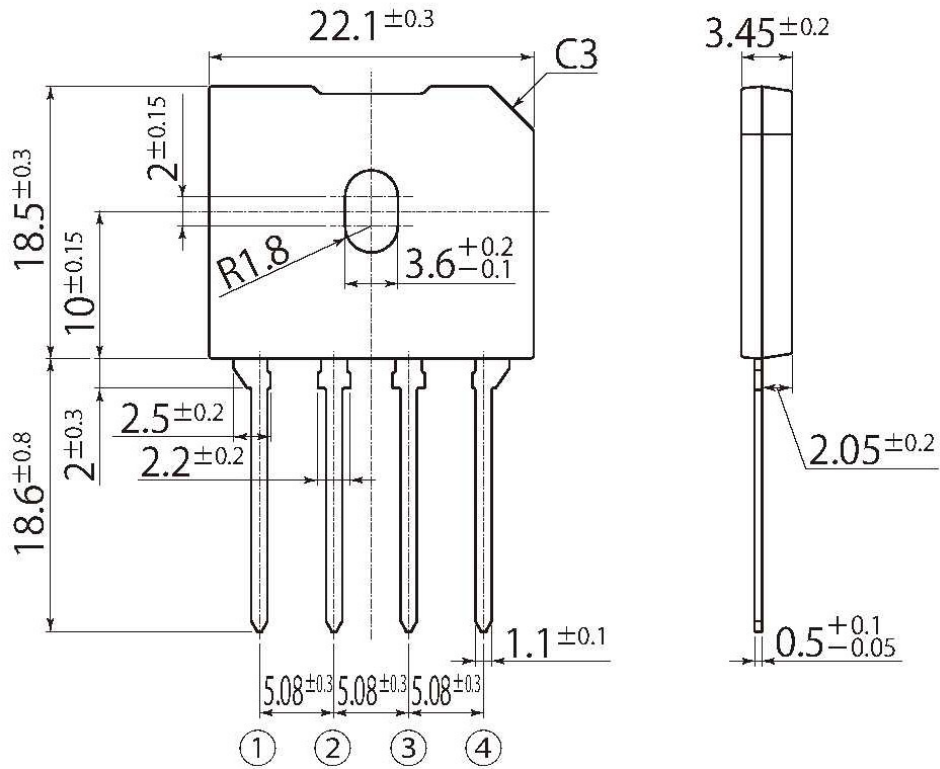
Type	Glass-epoxy
Size	80mm × 150mm
Thickness	1mm
Conductor thickness	35 μm
Pattern area	160mm ²

● TI sensing point



D11

JEDEC Code	—
JEITA Code	—
House Name	D6K



Notes

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