LM30KBV60FR

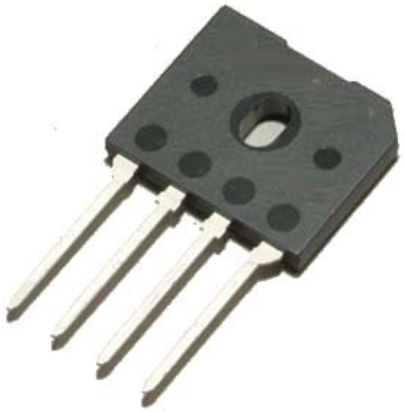
Bridge Diodes
600V, 30A

Feature

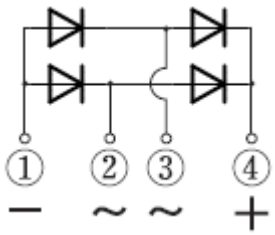
- Small･Compact SIP
- Low V_F
- Halogen free
- UL E142422
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): D6K



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : Tc=25℃)

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-55 to 150	℃
Junction temperature	Tj		-55 to 150	℃
Repetitive peak reverse voltage	V_{RRM}		600	V
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, With heatsink, Tc=106℃	30	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Tl=132℃ ※	2.67	A
Average forward current	I_F(AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25℃ ※	2.67	A
Surge forward current	I_{FSM}	60Hz sine wave, Non-repetitive 1 cycle peak value, Tj=25℃	350	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=25℃	320	A
Surge forward current	I_{FSM1}	tp=1ms, sine wave, Non-repetitive, peak value, per diode, Tj=25℃	620	A
Dielectric strength	Vdis	Terminals to case, AC 1 minute	2	kV
Mounting torque	TOR	(Recommended torque : 0.5N･m)	0.8	N･m

※ :See the original Specifications

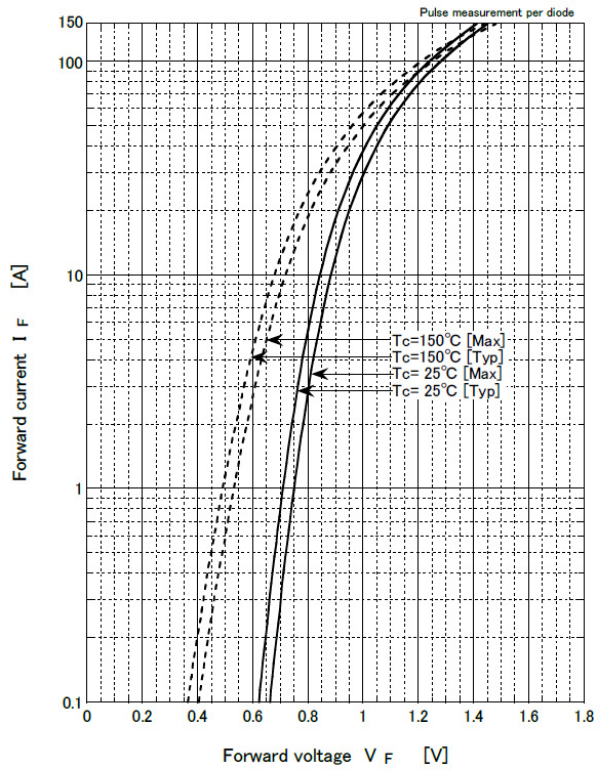
Electrical Characteristics (unless otherwise specified : Tc=25℃)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=15A, Pulse measurement, per diode		0.88	0.92	V
Forward voltage	V_F	IF=15A, Pulse measurement, per diode, Tc=125℃		0.76		V
Reverse current	I_R	VR=600V, Pulse measurement, per diode			10	μA
Total capacitance	Ct	f=1MHz, VR=10V, per diode		170		pF
Reverse recovery time	trr	IF=0.1A, IR=0.1A, 0.1IR, per diode			3000	ns
Thermal resistance	Rth(j-c)	Junction to case, With heatsink			0.8	℃/W
Thermal resistance	Rth(j-l)	Junction to lead, On glass-epoxy substrate ※			5	℃/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			35	℃/W

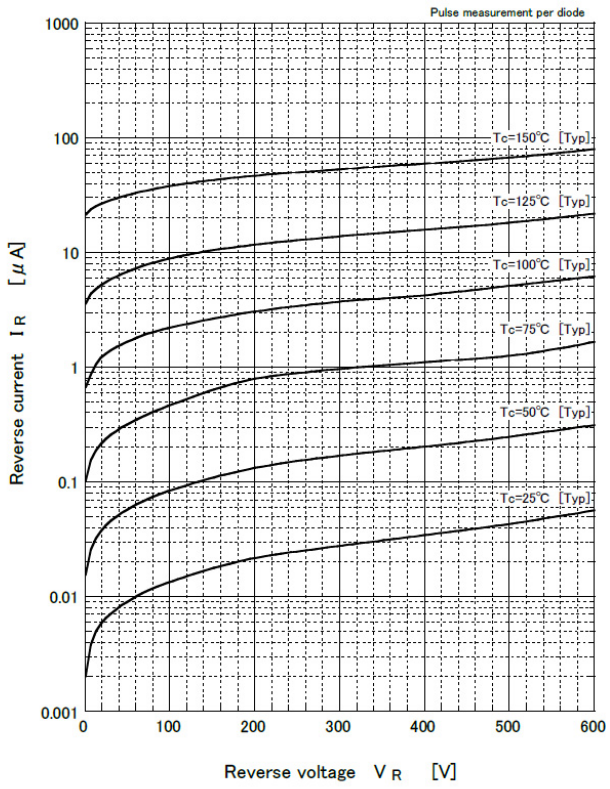
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

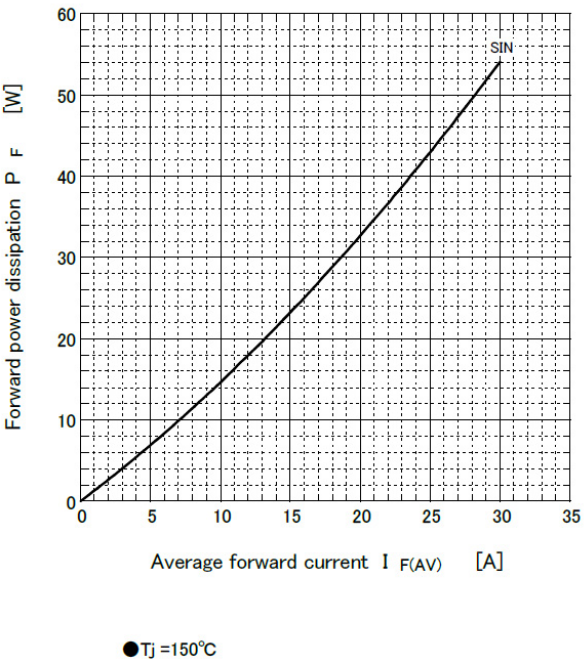
Forward voltage



Reverse current

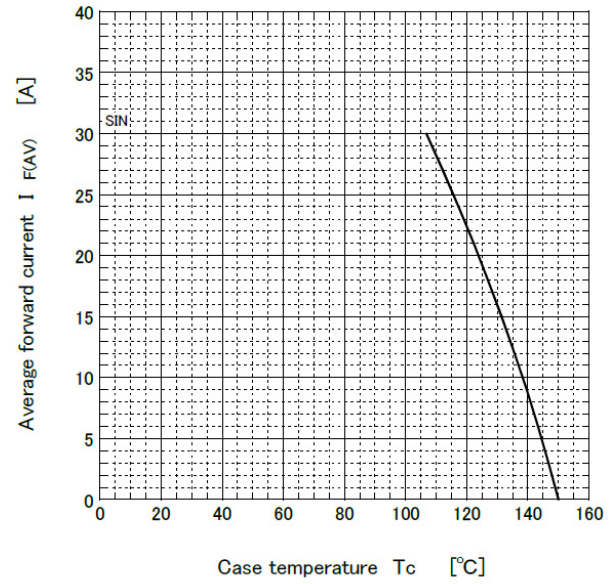


Forward power dissipation



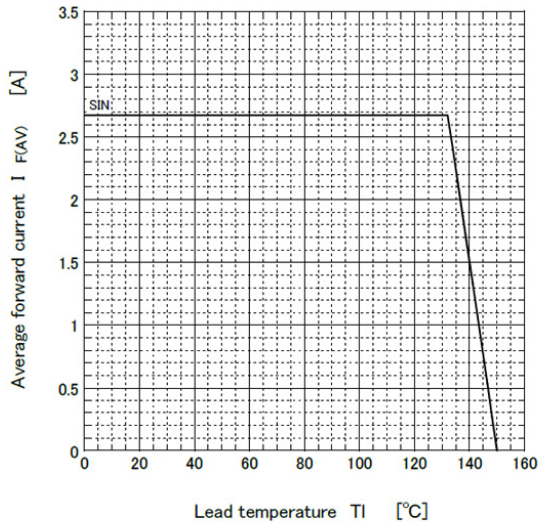
●Tj =150℃

Derating curve



●V_R = 600V
R-load
With heatsink

Derating curve

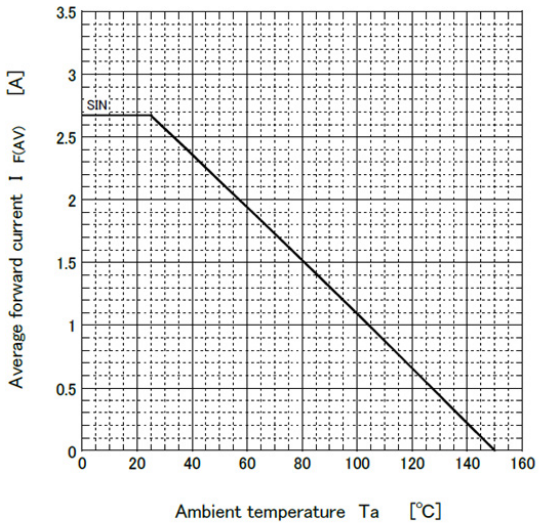


●V_R = 600V
R-load
Free in air

●Substrate detail

Type	Glass-epoxy
Size	90mm × 150mm
Thickness	1mm
Conductor thickness	35 μm
Pattern area	160mm²

Derating curve



●V_R = 600V
R-load
Free in air

●Substrate detail

Type	Glass-epoxy
Size	90mm × 150mm
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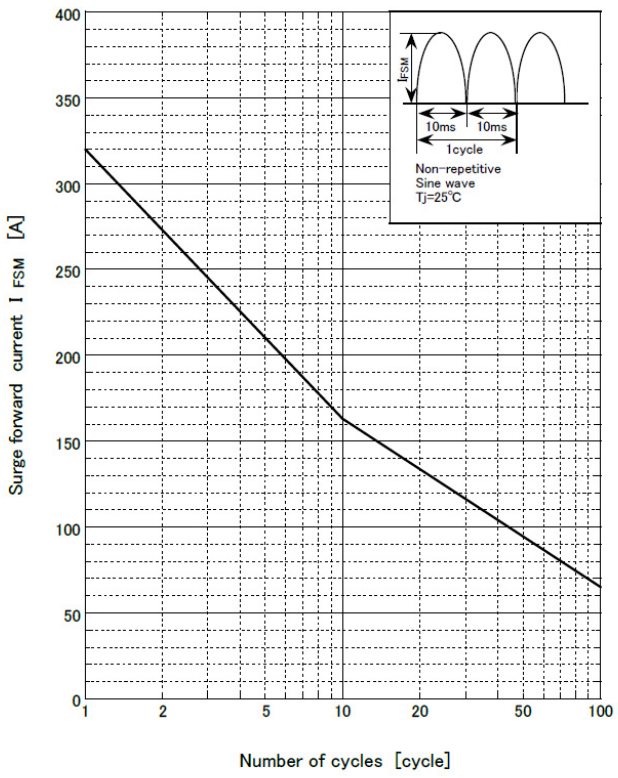
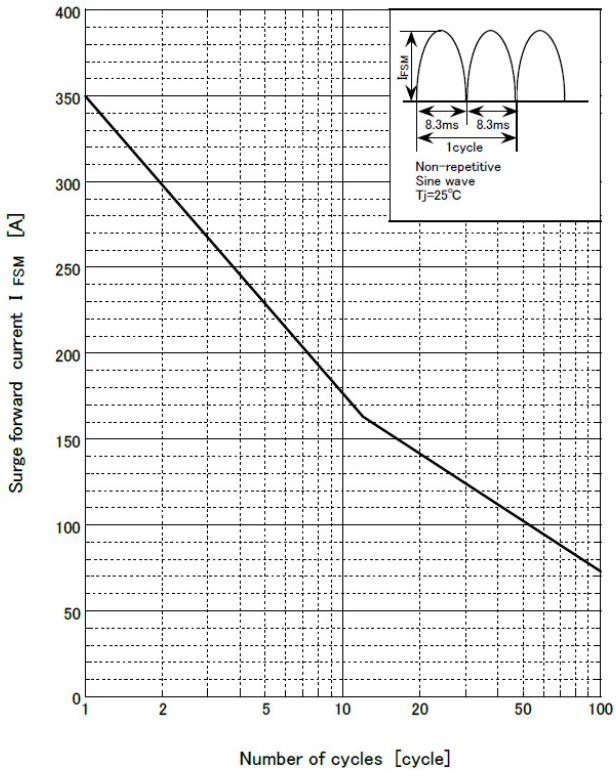
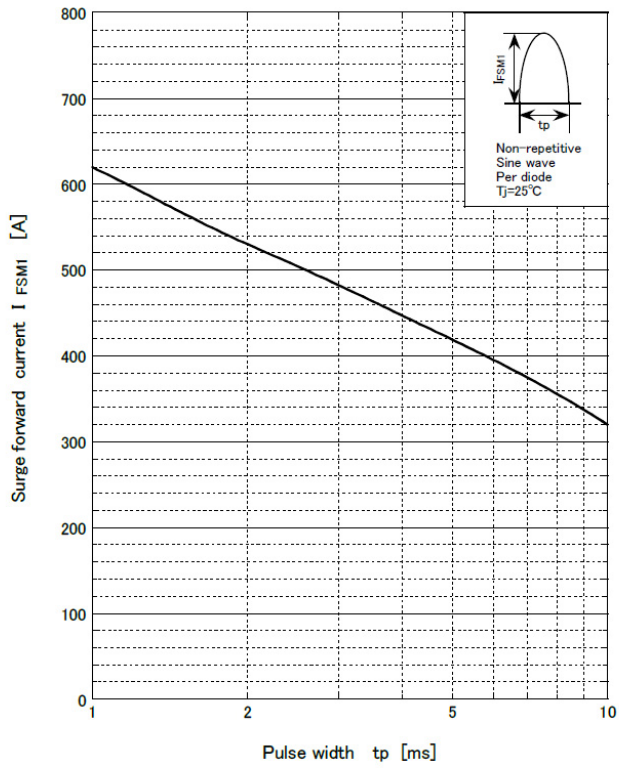
Surge forward current capability



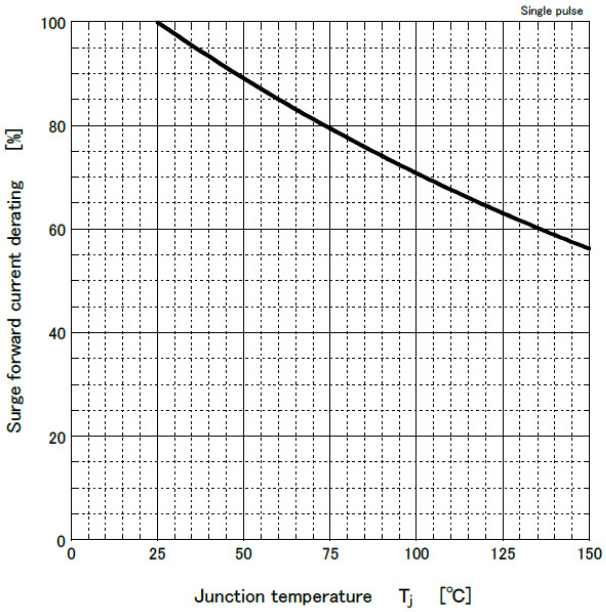
Surge forward current capability



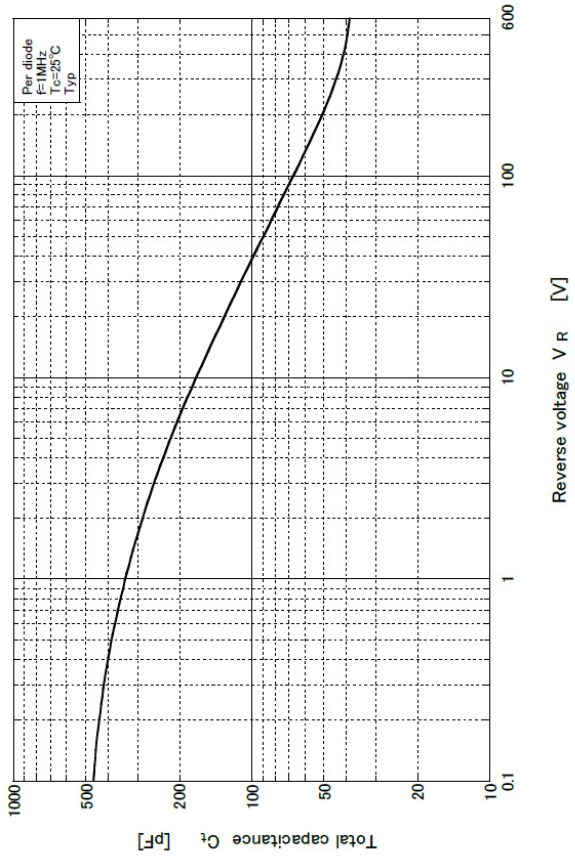
Surge forward current capability



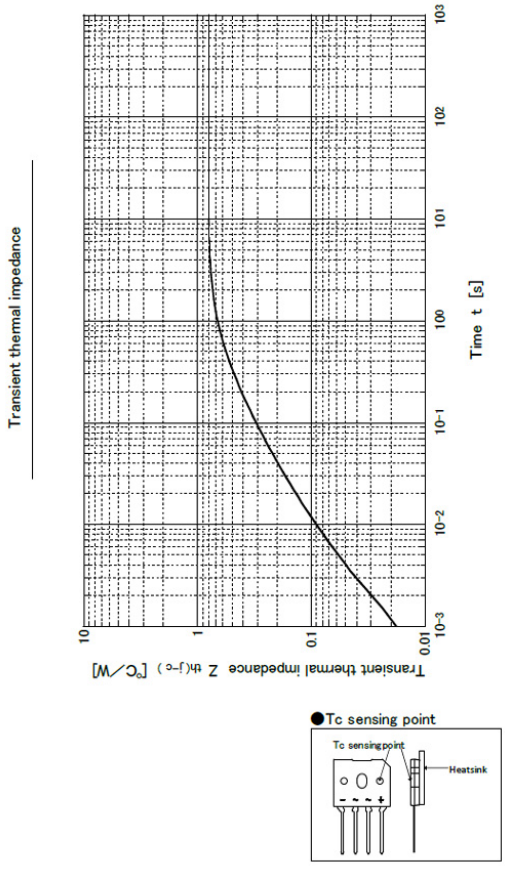
Surge forward current derating
vs Junction temperature

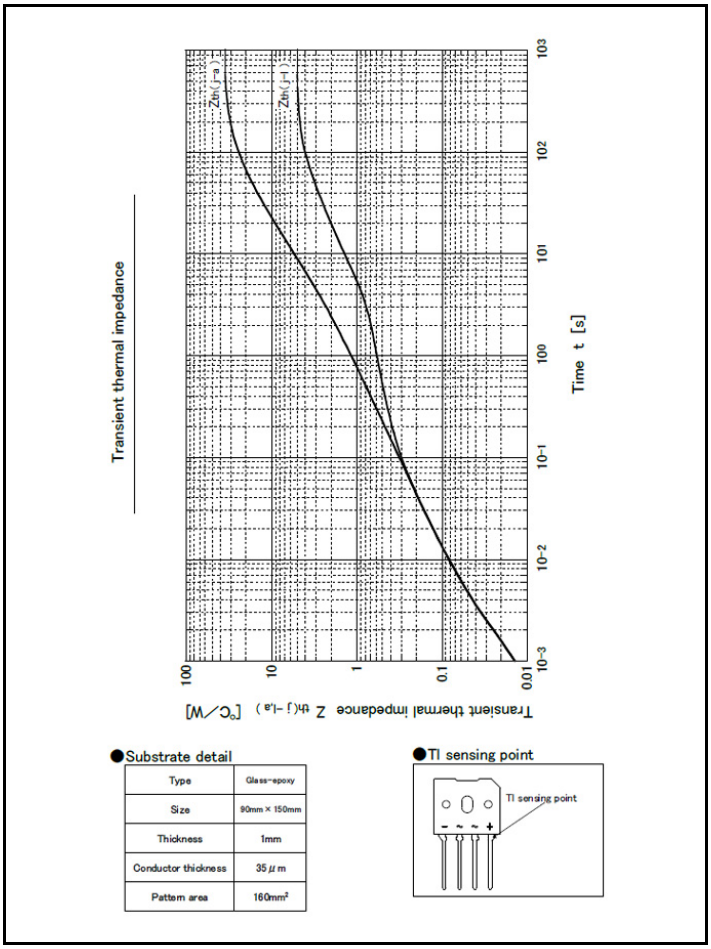


Total capacitance



Transient thermal impedance





●Substrate detail

Type	Glass-epoxy
Size	90mm × 150mm
Thickness	1mm
Conductor thickness	35 μ m
Pattern area	160mm²

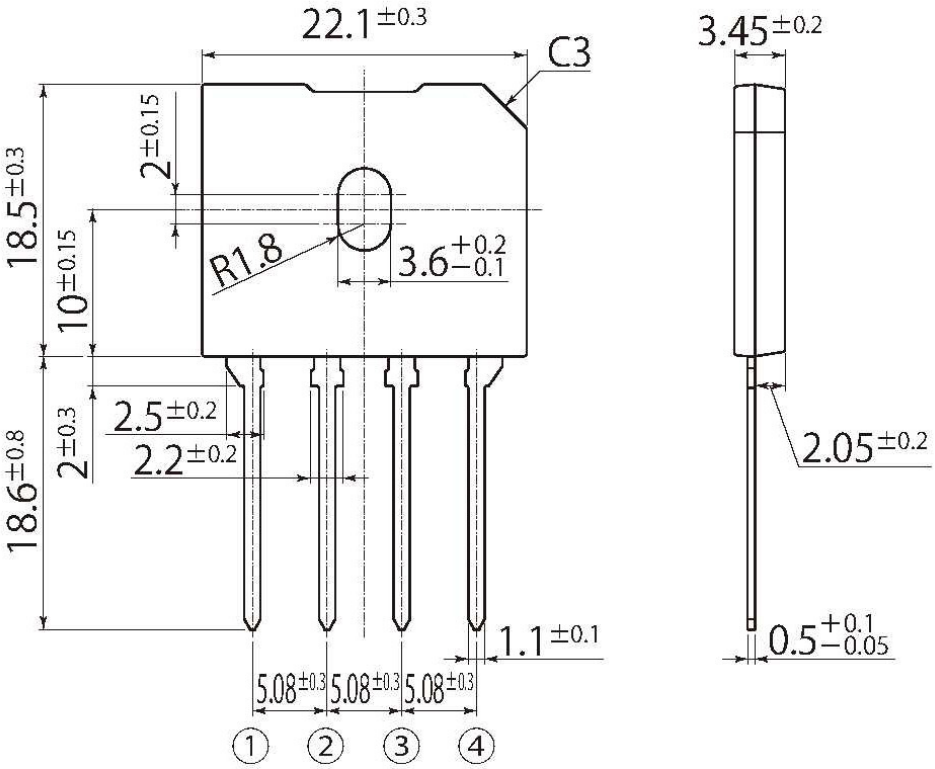
●TI sensing point

Outline Dimensions

unit:mm

D11

JEDEC Code	–
JEITA Code	–
House Name	D6K



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