ShinDengen

US30KB80R

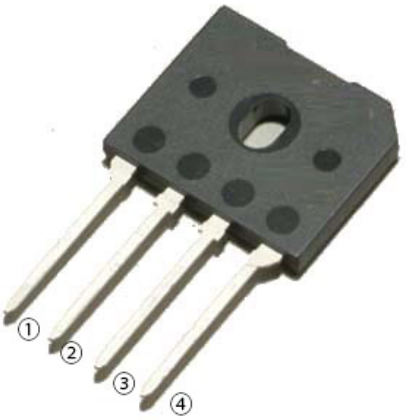
Bridge Diodes
800V, 30A

Feature

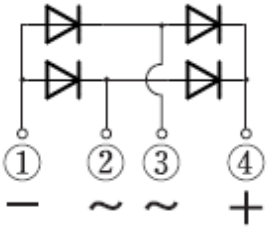
- Small･Compact SIP
- UL E142422
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): D6K



Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-55 to 150	°C
Junction temperature	Tj		-55 to 150	°C
Repetitive peak reverse voltage	V_{RRM}		800	V
Average forward current	I_F(AV)	60Hz sine wave, Resistance load, With heatsink, Tc=97°C	30	A
Average forward current	I_F(AV)	60Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=27°C ※	2.1	A
Surge forward current	I_{FSM}	60Hz sine wave, Non-repetitive 1 cycle peak value, Tj=25°C	350	A
Surge forward current	I_{FSM1}	tp=1ms, sine wave, Non-repetitive, peak value, per diode, Tj=25°C	1000	A
Current squared time	I^2t	1ms≦tp＜8.3ms, Tj=25°C, per diode	510	A^2s
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

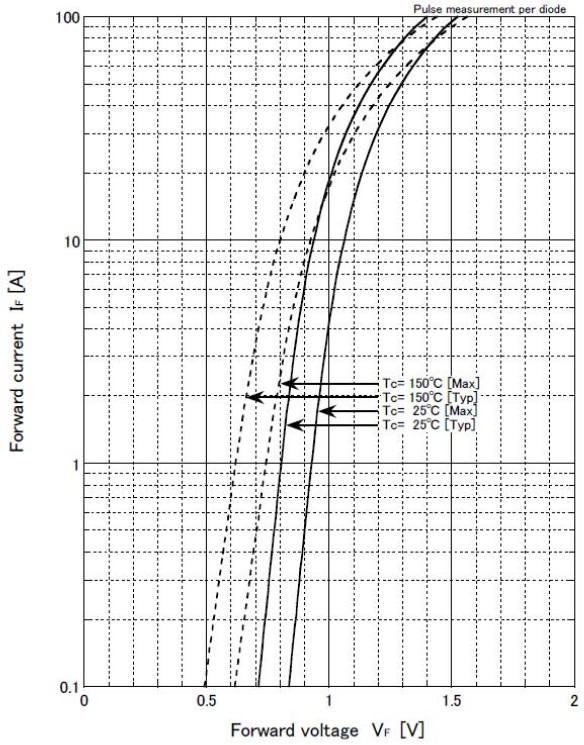
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=15A, Pulse measurement, per diode			1.1	V
Reverse current	I_R	VR=800V, Pulse measurement, per diode			10	μA
Thermal resistance	Rth(j-c)	Junction to case, With heatsink			0.8	°C/W
Thermal resistance	Rth(j-l)	Junction to lead, On glass-epoxy substrate ※			5	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			35	°C/W

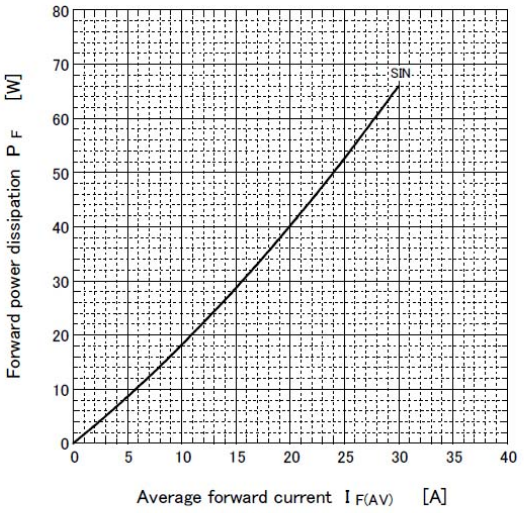
※ ：See the original Specifications

CHARACTERISTIC DIAGRAMS

Forward voltage

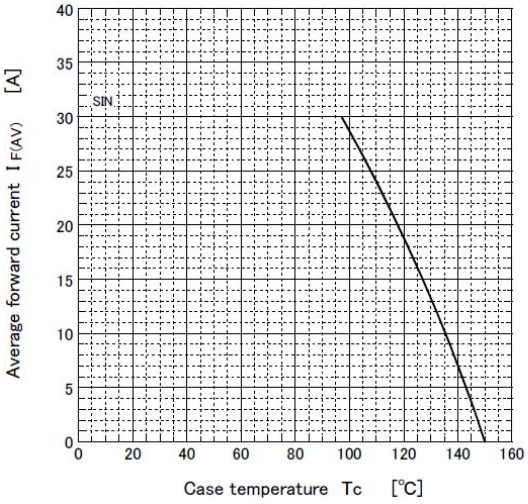


Forward power dissipation



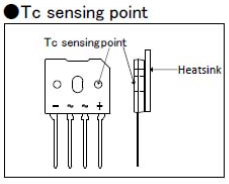
●Tj =150℃

Derating curve

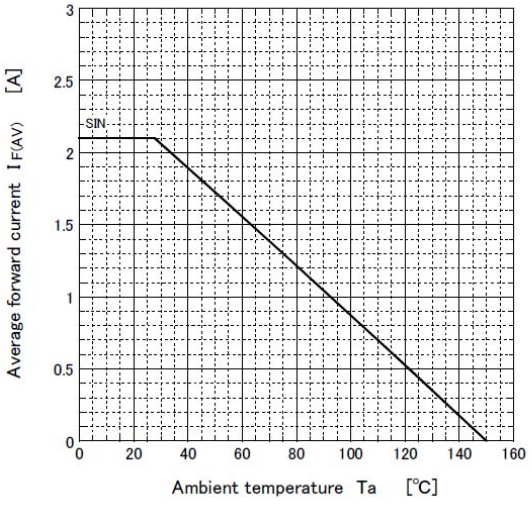


●VR = 800V
R-load
With heatsink

●Tc sensing point



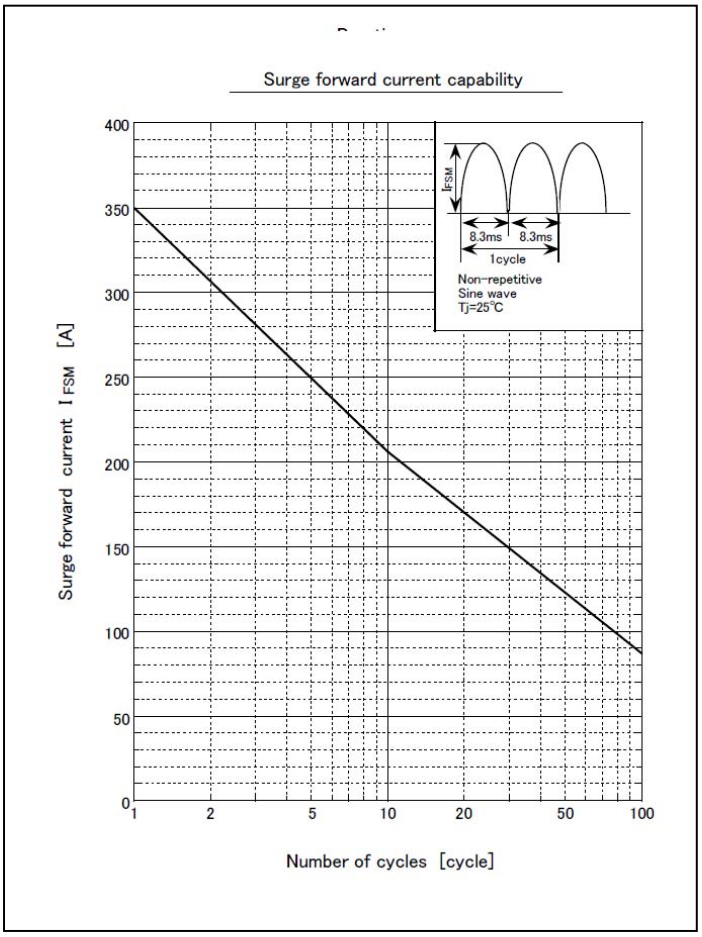
Derating curve

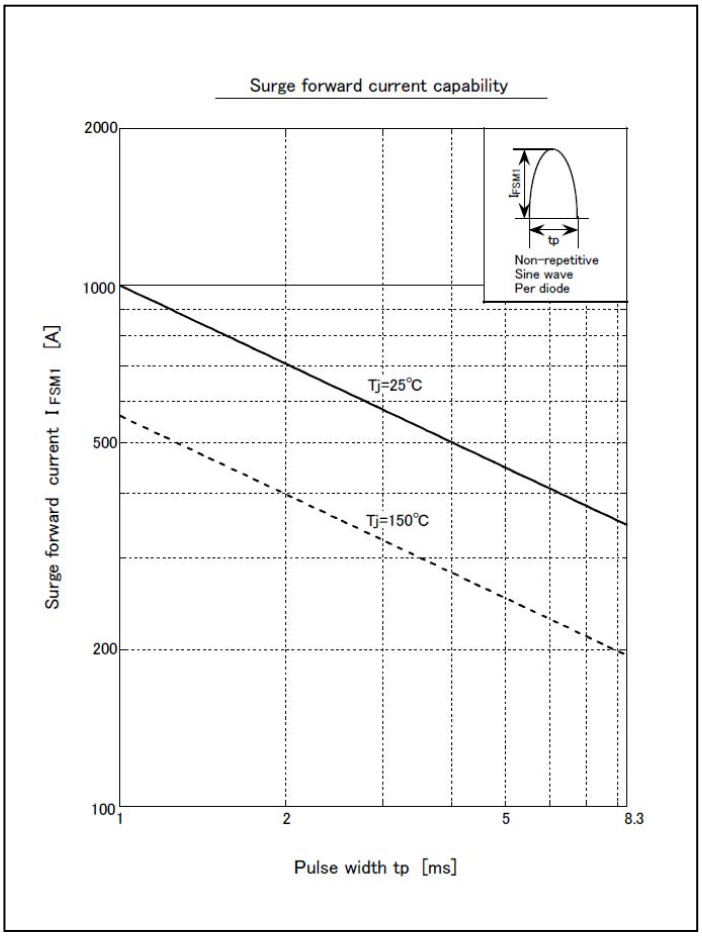


●VR = 800V
R-load
Free in air

●Substrate detail

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


Surge forward current capability
Surge forward current I FSM [A]
400
350
300
250
200
150
100
50
0
1
2
5
10
20
50
100
Number of cycles [cycle]
IFSM
8.3ms
8.3ms
1cycle
Non-repetitive
Sine wave
Tj=25℃

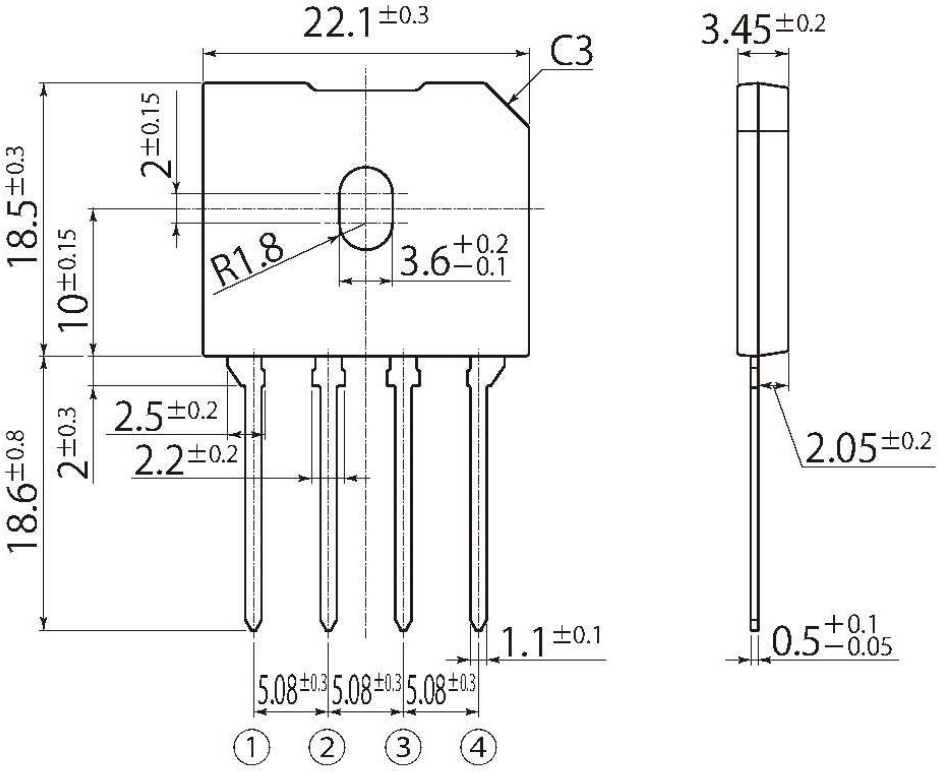

Surge forward current capability
Surge forward current I FSM1 [A]
2000
1000
500
200
100
1
2
5
8.3
Pulse width tp [ms]
IFSM1
tp
Non-repetitive
Sine wave
Per diode
Tj=25℃
Tj=150℃

Outline Dimensions

unit:mm

D11

JEDEC Code	–
JEITA Code	–
House Name	D6K



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