

LK25XB60

Bridge Diodes

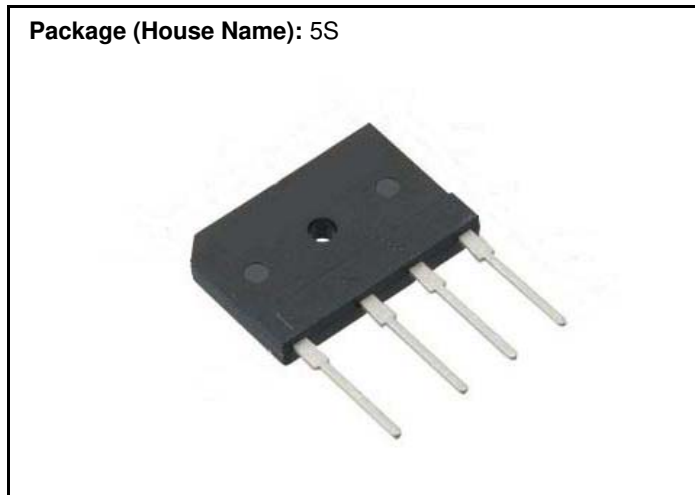
600V, 25A

Feature

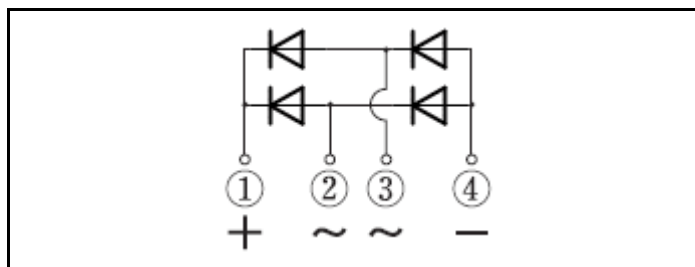
- Compact SIP
- Low V_F
- High lightning surge capability
- UL E142422
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): 5S



Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	T _{stg}		-55 to 150	°C
Junction temperature	T _j		-55 to 150	°C
Repetitive peak reverse voltage	V _{RRM}		600	V
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, With heatsink, T _c =114°C	25	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On glass-epoxy substrate, T _l =25°C ※	15	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On glass-epoxy substrate, T _a =25°C ※	3.5	A
Surge forward current	I _{FSM}	60Hz sine wave, Non-repetitive 1 cycle peak value, per diode, T _j =25°C	603	A
Surge forward current	I _{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, per diode, T _j =25°C	550	A
Surge forward current	I _{FSM1}	t _p =1ms, sine wave, Non-repetitive, peak value, per diode, T _j =25°C	1738	A
Current squared time	I ² t	1ms≤t<10ms, T _j =25°C, per diode	1512	A ² s
Dielectric strength	V _{dis}	Terminals to case, AC 1 minute	2.5	kV
Mounting torque	TOR	(Recommended torque : 0.5N·m)	0.8	N·m

※ :See the original Specifications

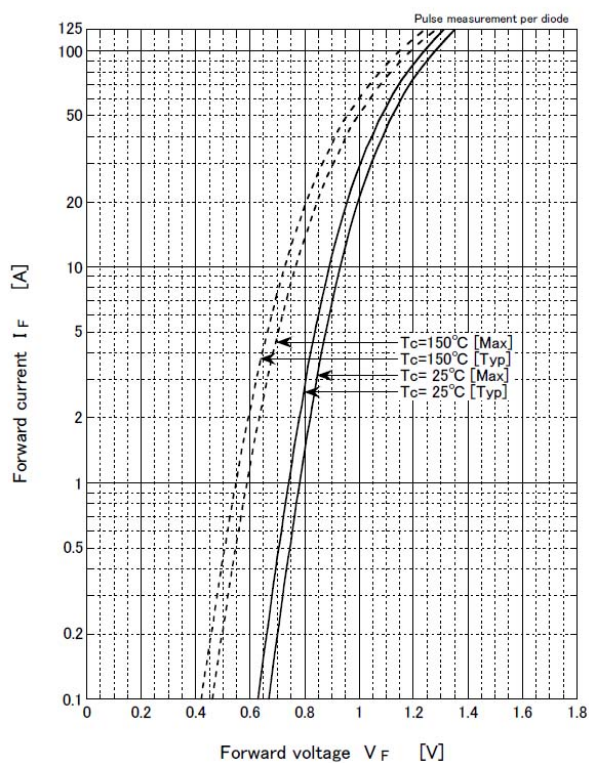
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V _F	I _F =12.5A, Pulse measurement, per diode			0.95	V
Reverse current	I _R	V _R =600V, Pulse measurement, per diode			10	μA
Reverse recovery time	t _{rr}	I _F =0.1A, I _R =0.1A, 0.1I _R , per diode			5000	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 ※			5.2	°C/W
Thermal resistance	R _{th(j-a)}	Junction to ambient, On glass-epoxy substrate ※			25	°C/W
EMC surge immunity	V _{EMS}	※		10		kV

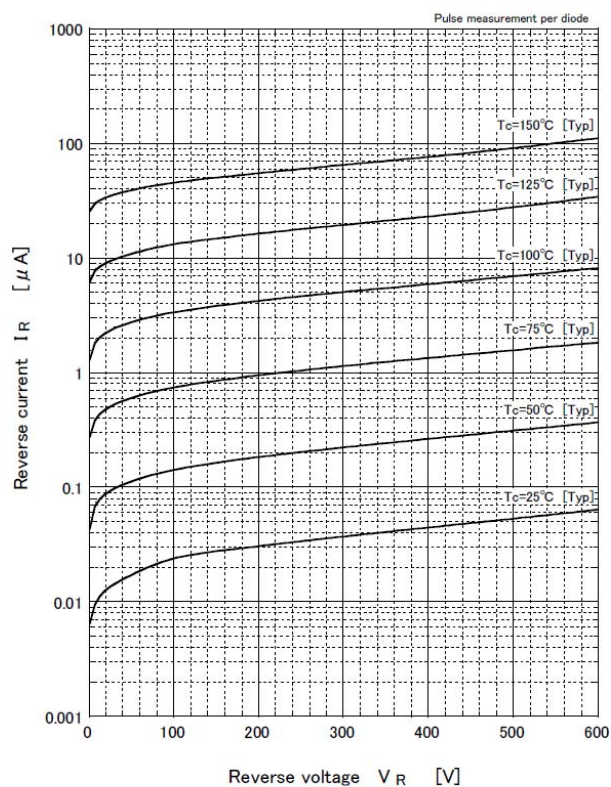
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

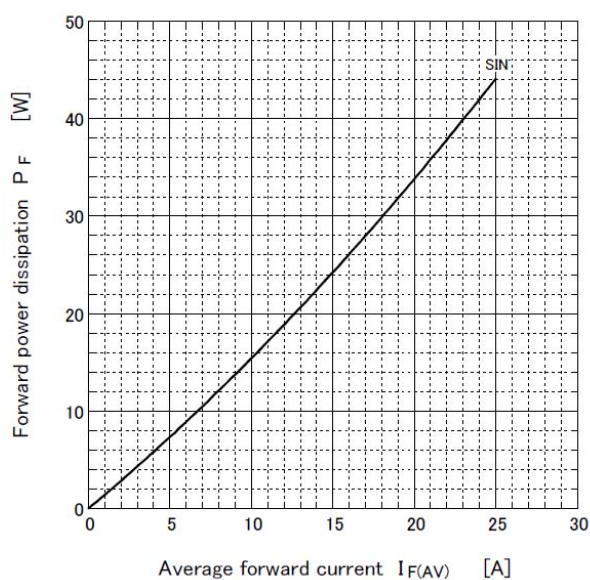
Forward voltage



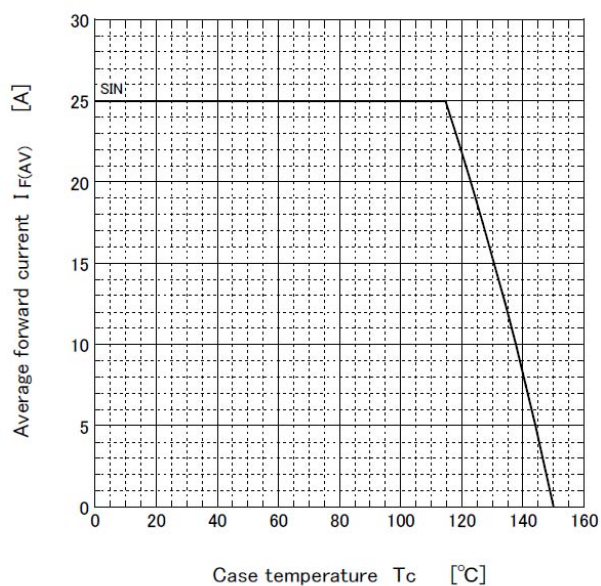
Reverse current



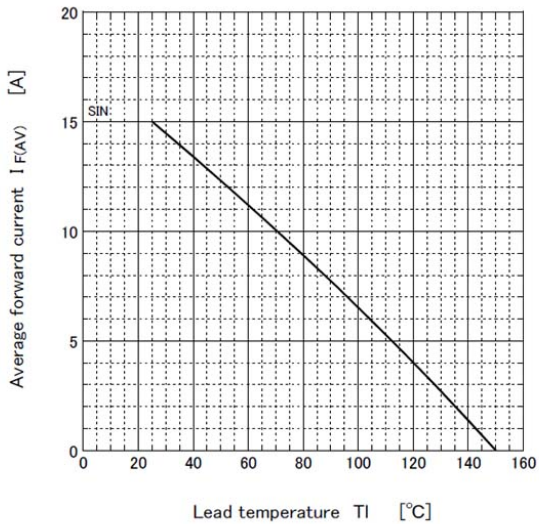
Forward power dissipation



Derating curve



Derating curve

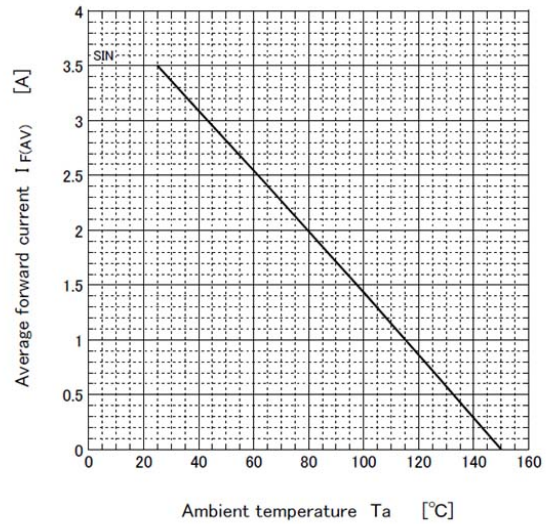


● $V_R = 600V$
R-load
Free in air

● Substrate detail

Type	Glass-epoxy
Size	90mm × 150mm
Thickness	1mm
Conductor thickness	35 μm
Pattern area	1107mm ²

Derating curve

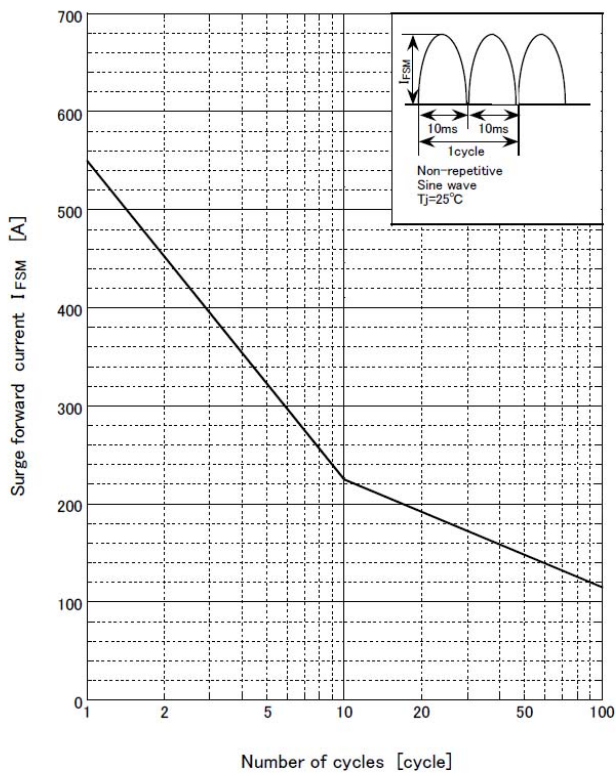


● $V_R = 600V$
R-load
Free in air

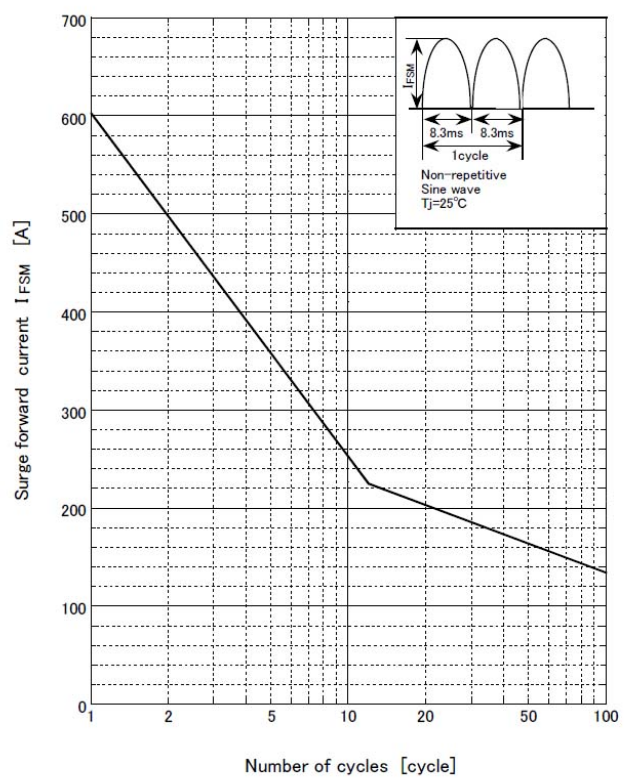
● Substrate detail

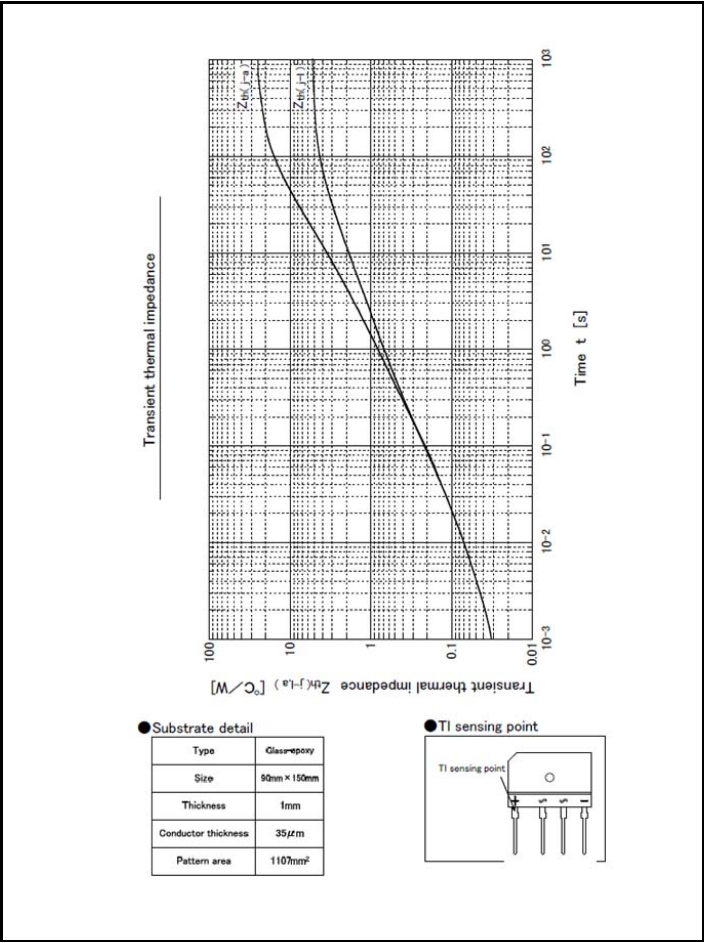
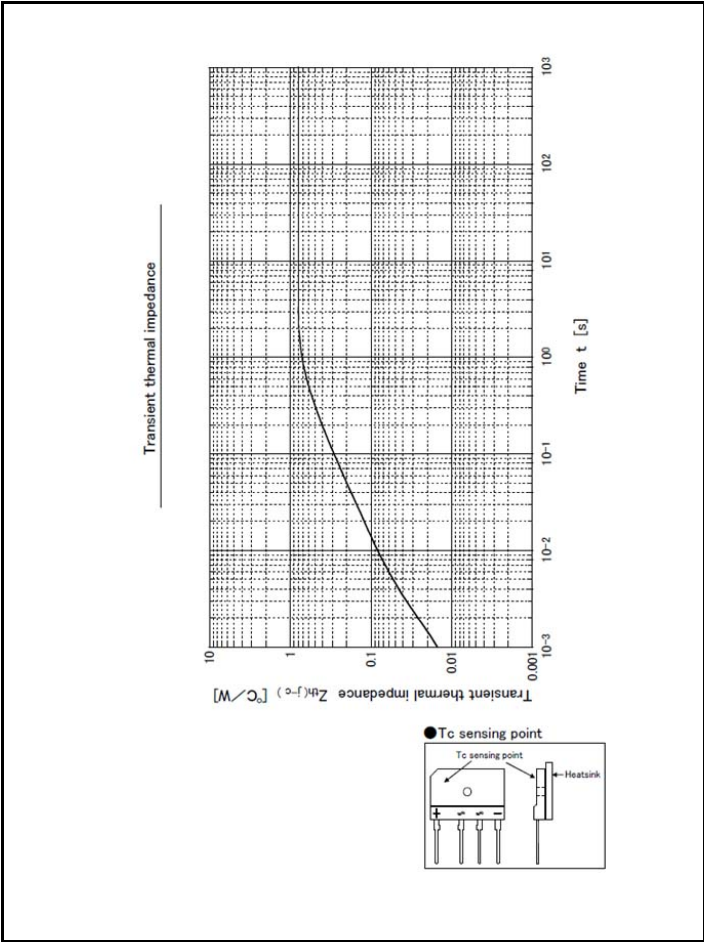
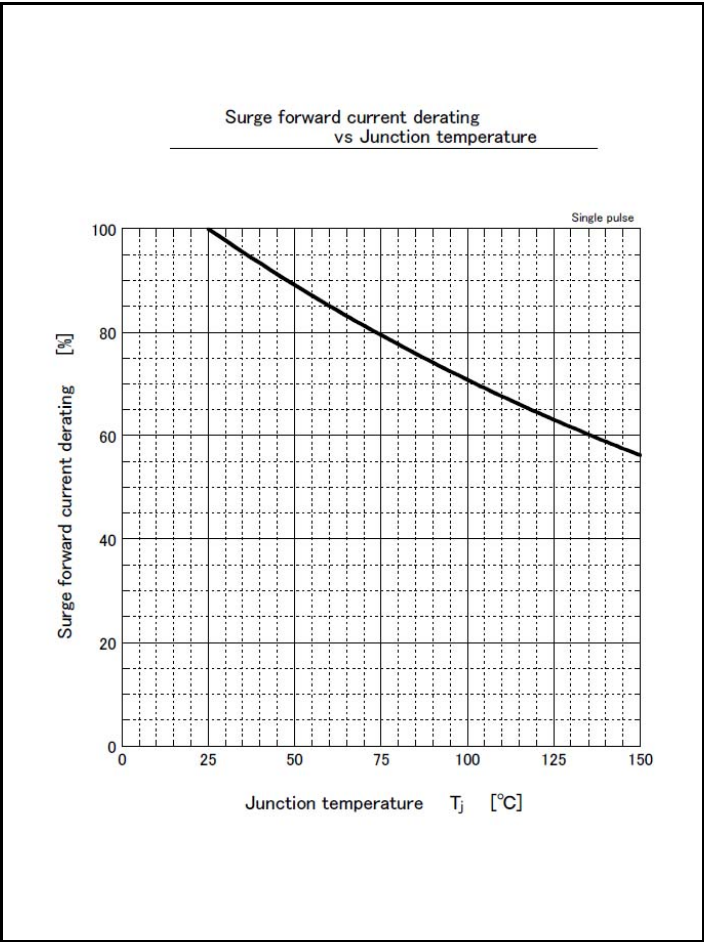
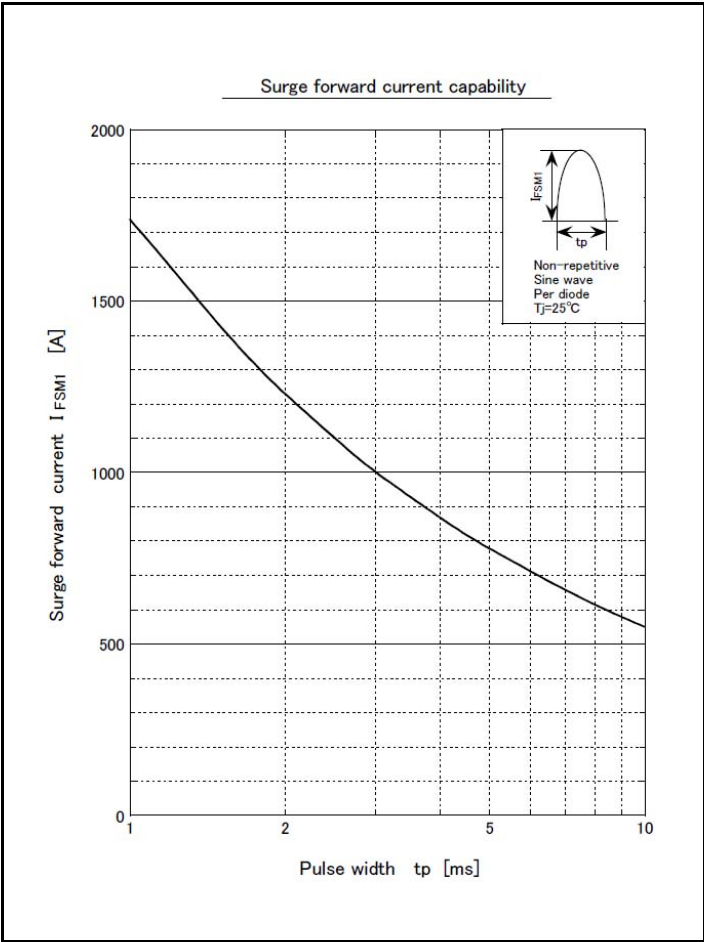
Type	Glass-epoxy
Size	90mm × 150mm
Thickness	1mm
Conductor thickness	35 μm
Pattern area	1107mm ²

Surge forward current capability



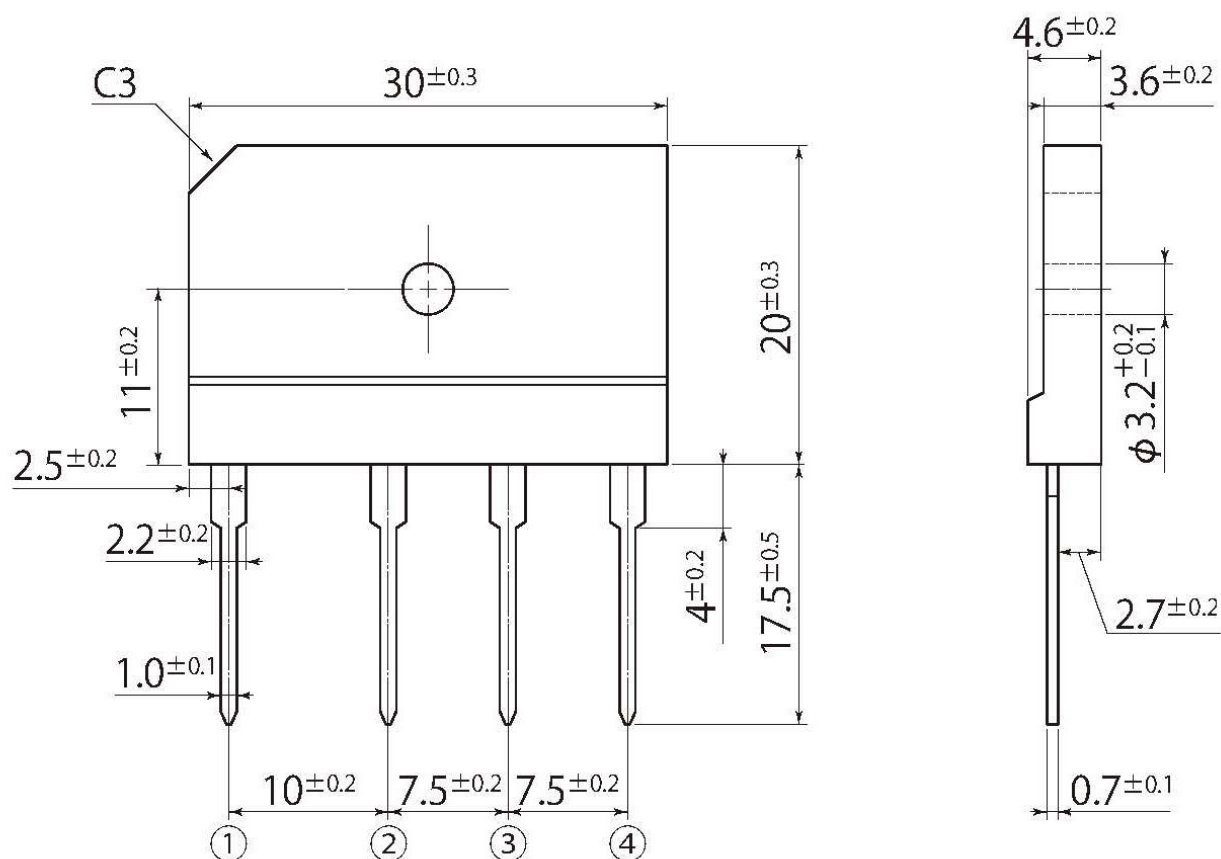
Surge forward current capability





D4

JEDEC Code	—
JEITA Code	—
House Name	5S



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