

D40XB100

Bridge Diodes
1000V, 40A

Feature

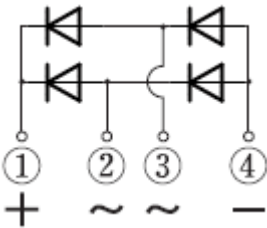
- Compact SIP
- UL E142422
- High Current
- High heat dissipation
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): 5S



Equivalent circuit



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

| Item | Symbol | Conditions | Ratings | Unit |
|---------------------------------|------------------|---|------------|------------------|
| Storage temperrature | Tstg | | -55 to 150 | °C |
| Junction temperature | Tj | | -55 to 150 | °C |
| Repetitive peak reverse voltage | VRRM | | 1000 | V |
| Average forward current | IF(AV) | 50Hz, Sine wave, Resistance load, With heatsink, Tc=85°C | 40 | A |
| Average forward current | IF(AV) | 50Hz, Sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※ | 3.1 | A |
| Surge forward current | IFSM | 50Hz, Sine wave, Non-repetitive, 1cycle, Peak value, Tj=25°C | 550 | A |
| Surge forward current | IFSM | 60Hz, Sine wave, Non-repetitive, 1cycle, Peak value, Tj=25°C | 603 | A |
| Current squared time | I ² t | 1ms≤tp<10ms, Per diode, Tj=25°C | 1512 | A ² s |
| Dielectric strength | Vdis | Terminals to case, AC 1minute | 2.5 | kV |
| Mounting torque | TOR | (Recommended torque : 0.5N・m) | 0.8 | N・m |

※ : See the original Specifications

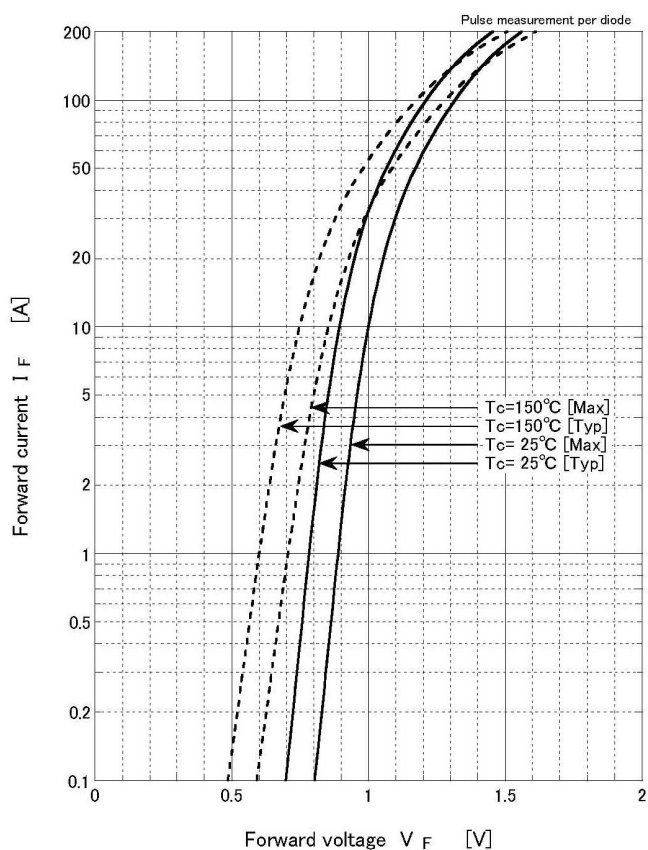
Electrical Characteristics (unless otherwise specified : Tc=25°C)

| Item | Symbol | Conditions | Ratings | | | Unit |
|-----------------------|----------|---|---------|-----|-------|------|
| | | | MIN | TYP | MAX | |
| Forward voltage | V_F | IF=20A, Pulse measurement, Per diode | | | 1.05 | V |
| Reverse current | I_R | VR=1000V, Pulse measurement, Per diode | | | 10 | μA |
| Reverse recovery time | trr | IF=0.1A, IR=0.1A, 0.1IR, Per diode | | | 27000 | ns |
| 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 ※ | | | 5.2 | °C/W |
| Thermal resistance | Rth(j-a) | Junction to ambient, On glass-epoxy substrate ※ | | | 25 | °C/W |

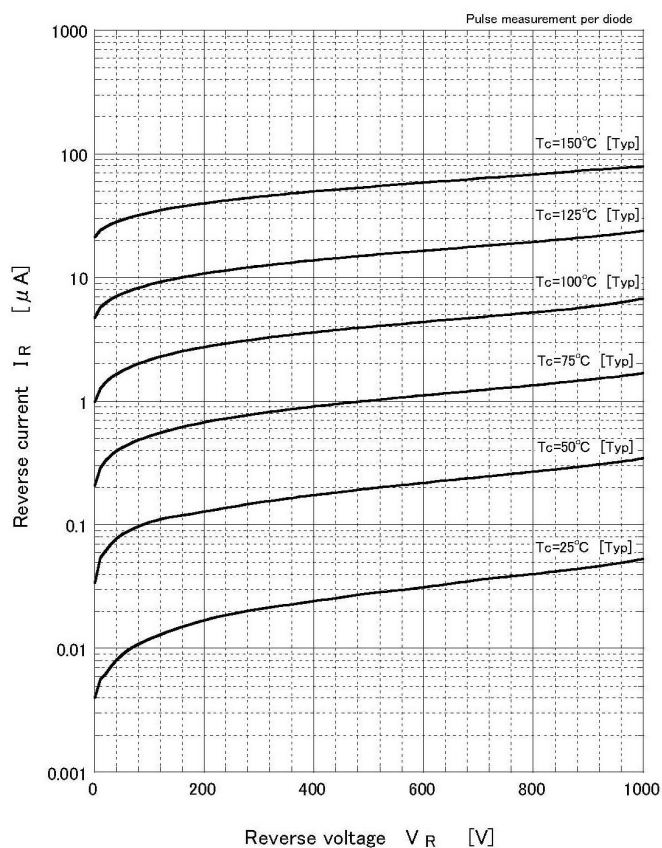
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

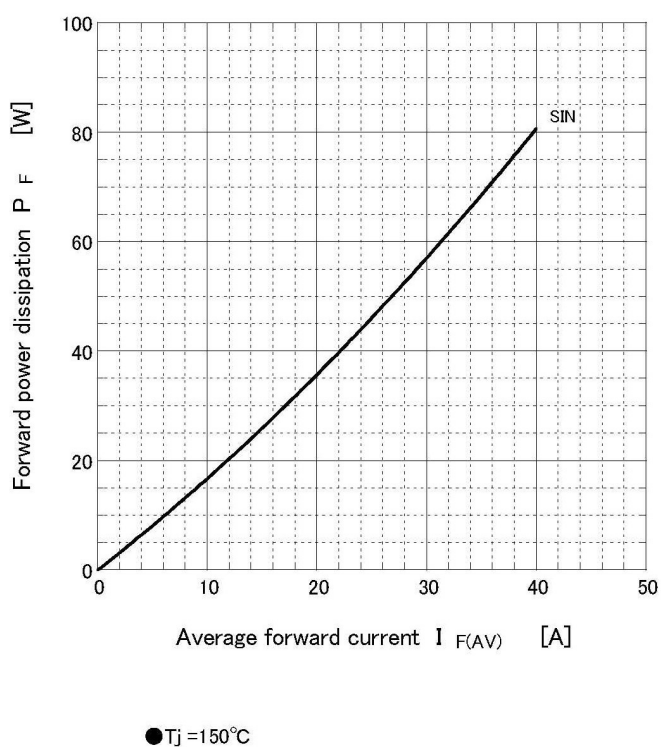
Forward voltage



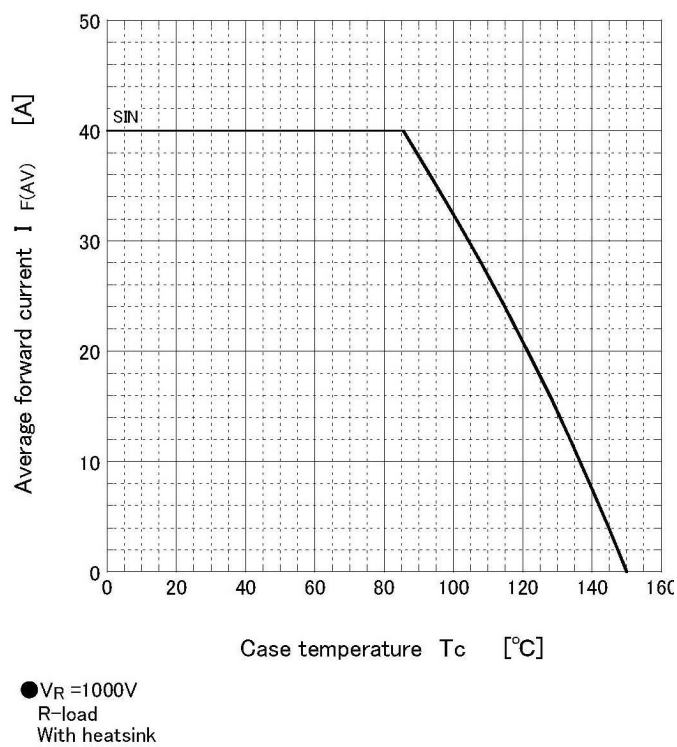
Reverse current



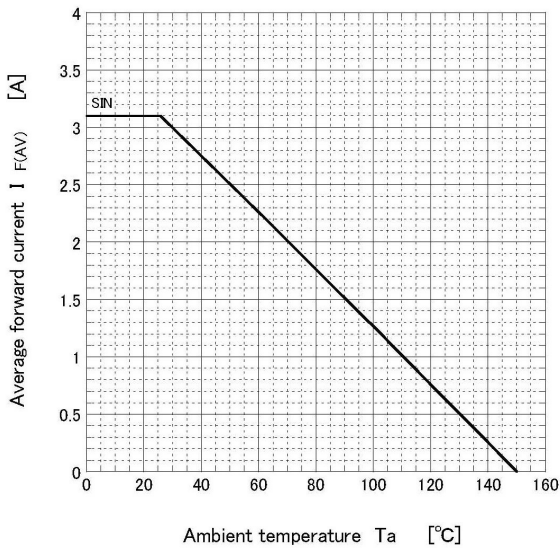
Forward power dissipation



Derating curve



Derating curve

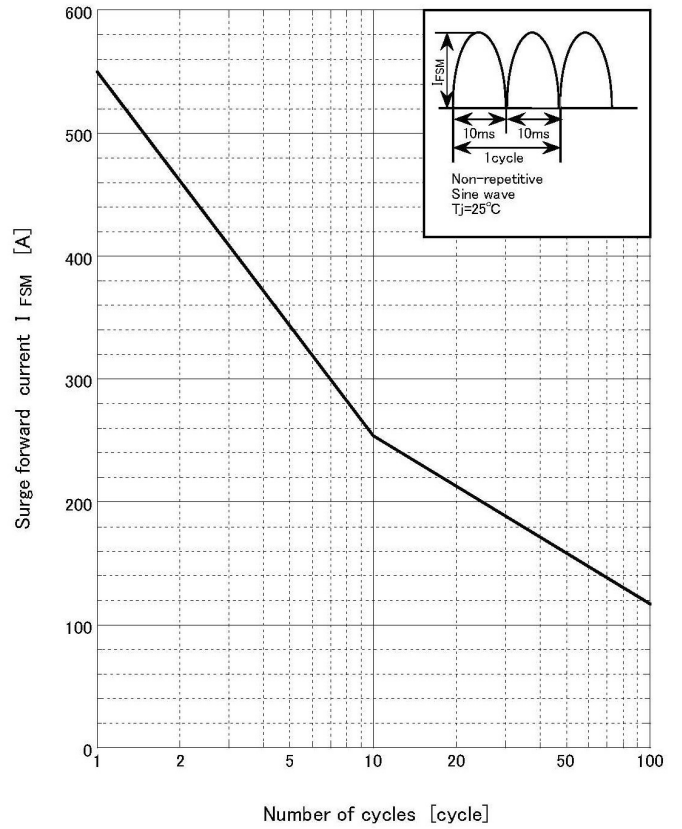


● $V_R = 1000V$
R-load
Free in air

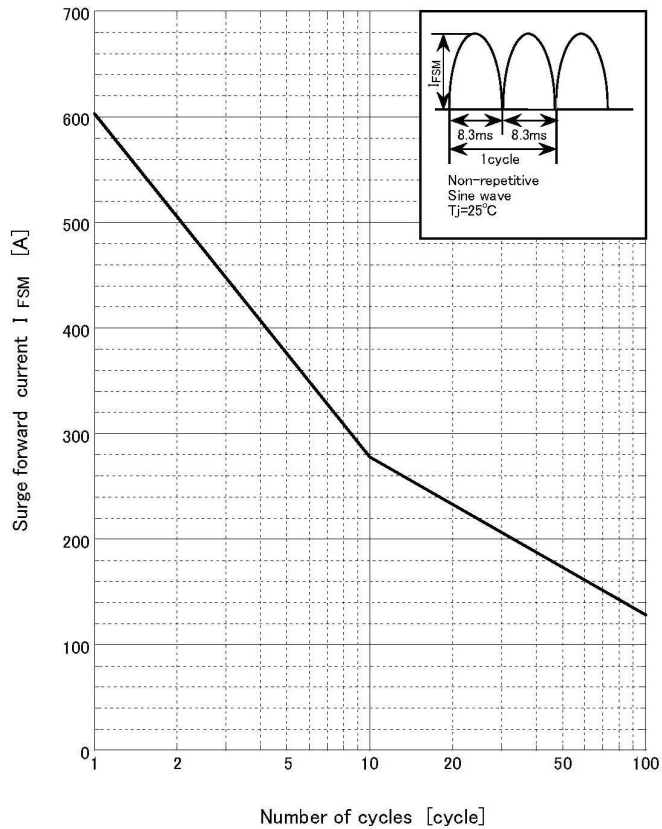
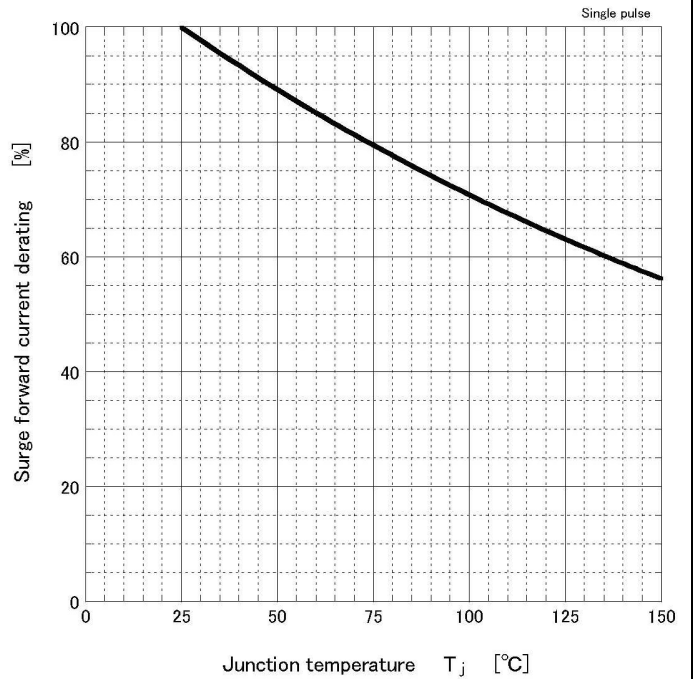
● Substrate detail

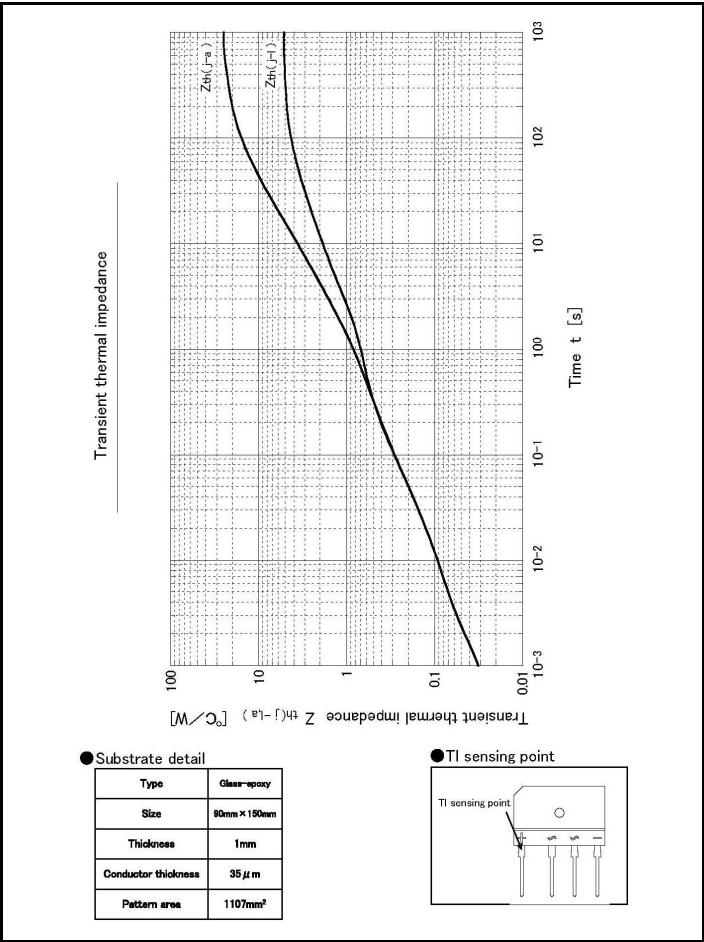
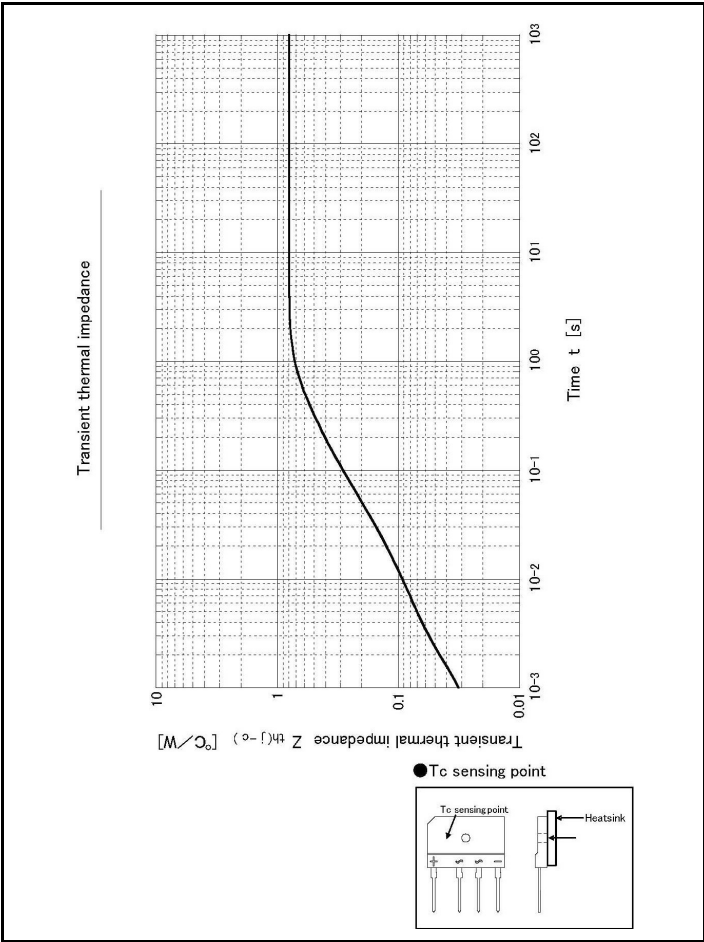
| | |
|---------------------|---------------------|
| Type | Glass-epoxy |
| Size | 90mm × 150mm |
| Thickness | 1mm |
| Conductor thickness | 35 μm |
| Pattern area | 1107mm ² |

Surge forward current capability



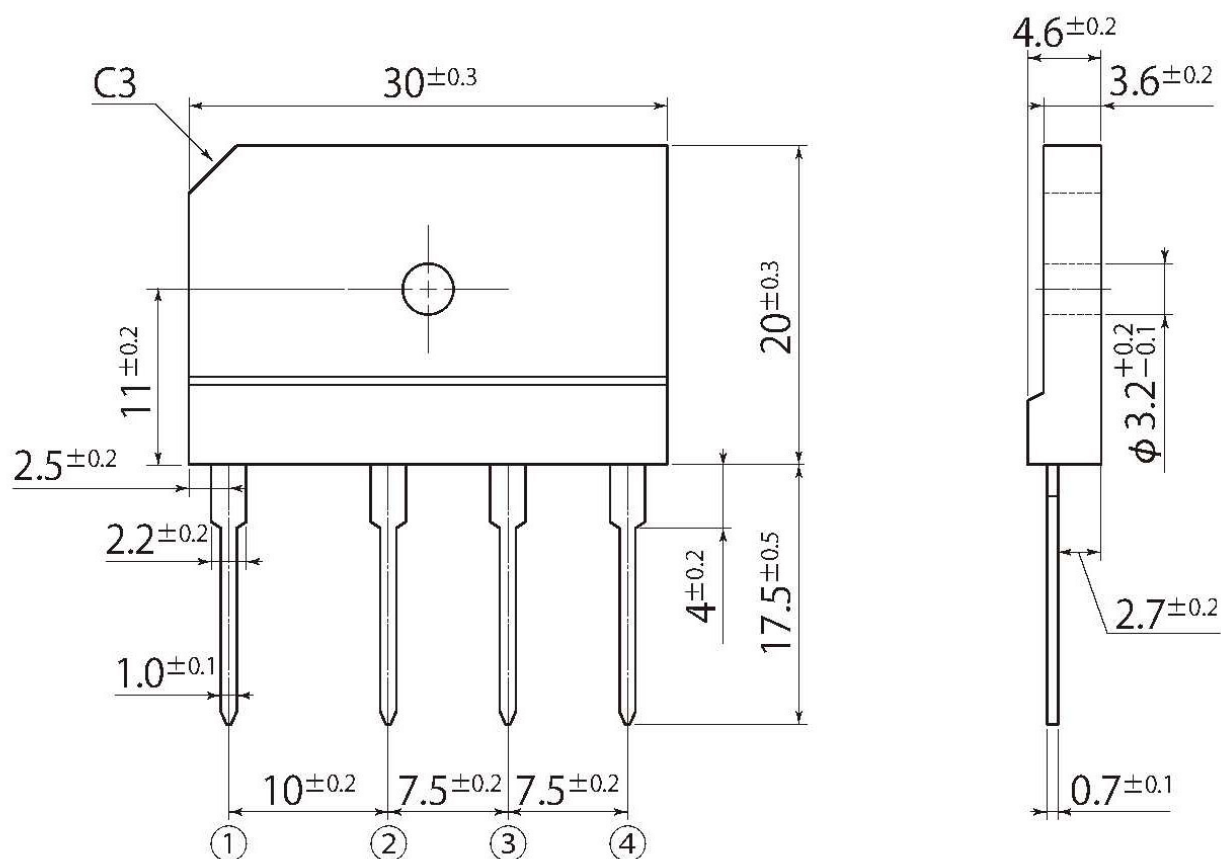
Surge forward current capability

Surge forward current derating
vs Junction temperature



D4

| | |
|------------|----|
| JEDEC Code | — |
| JEITA Code | — |
| House Name | 5S |



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