

SCHOTTKY BARRIER DIODE

SOD-323

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FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version

MARKING: B0520WS: SD

B0530WS: SE

B0540WS: SF

Maximum Ratings @T_A=25°C

| Parameter | Symbol | B0520WS | B0530WS | B0540WS | Unit |
|--|---------------------|----------|---------|---------|------|
| Peak Repetitive Peak reverse voltage | V _{RRM} | | | | |
| Working Peak Reverse Voltage | V _{RWM} | 20 | 30 | 40 | V |
| DC Blocking Voltage | V _R | | | | |
| RMS Reverse Voltage Reverse voltage (DC) | V _{R(RMS)} | 14 | 21 | 28 | V |
| Average rectified output Current | I _o | 0.5 | | | A |
| Forward current surge peak | I _{FSM} | 5.5 | | | A |
| Power dissipation | P _D | 200 | | | mW |
| Thermal Resistance Junction to Ambient | R _{θJA} | 625 | | | °C/W |
| Junction temperature | T _j | 150 | | | °C |
| Storage temperature | T _{STG} | -65~+150 | | | °C |
| Voltage Rate of Change | dv/dt | 1000 | | | V/μS |

Electrical Characteristics @T_A=25°C

| Parameter | Symbol | B0520WS | B0530WS | B0540WS | Unit | Conditions |
|-----------------------------------|--------------------|---------|---------|---------|------|---------------------------|
| Minimum Reverse Breakdown Voltage | V _{(BR)R} | 20 | -- | -- | V | I _R =250 μ A |
| | | -- | 30 | -- | | I _R =500 μ A |
| | | -- | -- | 40 | | I _R =20 μ A |
| Forward voltage | V _{F1} | 0.3 | 0.36 | -- | V | I _F =0.1A |
| | V _{F2} | 0.385 | 0.45 | 0.510 | | I _F =0.5A |
| | V _{F3} | -- | -- | 0.62 | | I _F =1A |
| Reverse current | I _{R1} | 75 | -- | -- | μA | V _R =10V |
| | I _{R2} | -- | 80 | -- | | V _R =15V |
| Reverse current | I _{R3} | 250 | 100 | 10 | μA | V _R =20V |
| | I _{R4} | -- | 500 | -- | | V _R =30V |
| | I _{R5} | -- | -- | 20 | | V _R =40V |
| Capacitance between terminals | C _T | 170 | 170 | 170 | pF | V _R =0, f=1MHz |

Typical Characteristics

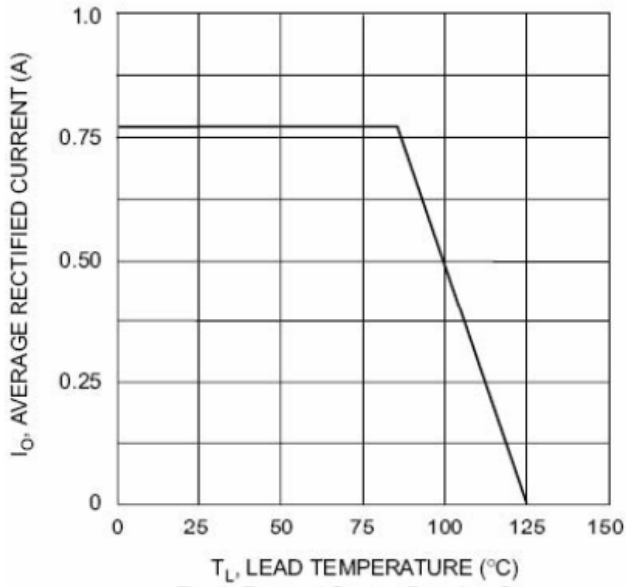


Fig. 1 Forward Current Derating Curve

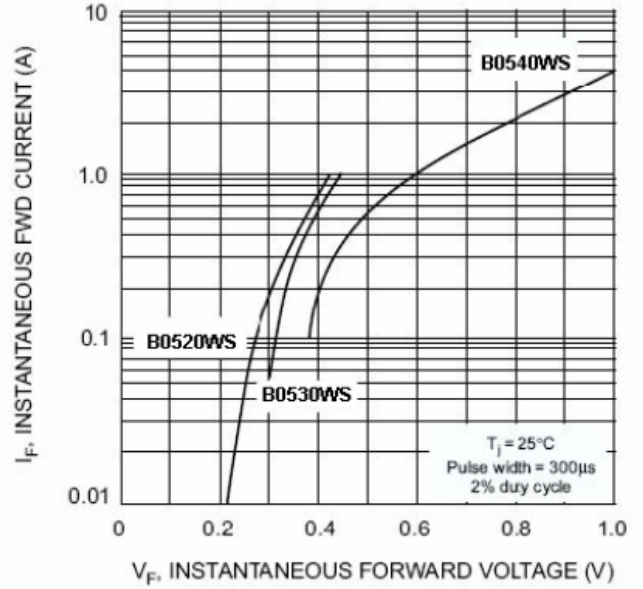


Fig. 2 Typical Forward Characteristics

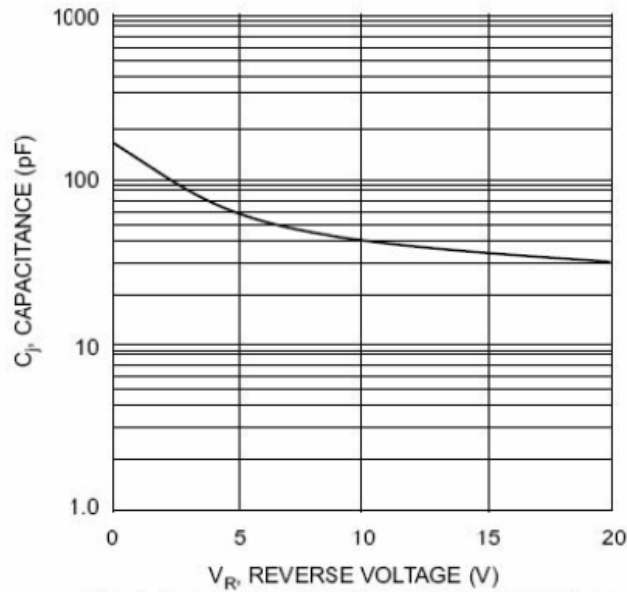


Fig. 3 Typ. Junction Capacitance vs Reverse Voltage