

GSDB520 Series

Surface Mount Schottky Barrier Rectifiers

Product Description

Reverse Voltage 20V TO 60V Forward Current
5.0A

Features

- For Surface Mount Application
- Metal-Semiconductor Junction With Guarding
- Epitaxial Construction
- Very Low Forward Voltage Drop
- High Current Capability
- Plastic Material Has UL Flammability Classification 94V-0
- For Use In Low, And Polarity Protection Applications
- Lead(Pb)-Free

Mechanical Data

- Case : Molded Plastic
- Polarity : Indicated by cathode band
- Weight : 0.007 Ounce, 0.21 grams

Packages



SMC (DO-214AB)

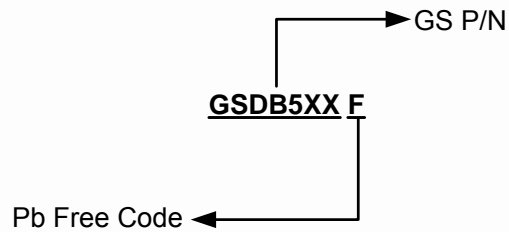
Marking Information

| P/N | Package | Part Marking |
|----------|---------------|-----------------|
| GSDB520F | SMC(DO-214AB) | WTYYWW B520. |
| GSDB530F | SMC(DO-214AB) | WTYYWW B530. |
| GSDB540F | SMC(DO-214AB) | WTYYWW B540. |
| GSDB550F | SMC(DO-214AB) | WTYYWW B550. |
| GSDB560F | SMC(DO-214AB) | WTYYWW B560. |

※ "WT" GS Code & "YYWW" Date Code

※ "B5XX" GS P/N & "." Halogen Free

Ordering Information



| Part Number | Package | Quantity |
|-----------------|---------------|----------|
| GSDB520F Series | SMC(DO-214AB) | 3000 PCS |

Electrical Characteristics

(Rating 25°C Ambient Temperature Unless Otherwise Specified. Single Phase Half Wave, 60Hz, Resistive or Inductive Load. For Capacitive Load, Derate Current by 20%.)

| Symbol | Conditions | B520 | B530 | B540 | B550 | B560 | Unit |
|-----------------|---|-------------------------|------|------|------|------|--------------------|
| V_{RRM} | Maximum Recurrent Peak Reverse Voltage | 20 | 30 | 40 | 50 | 60 | V |
| V_{RMS} | Maximum RMS Voltage | 14 | 21 | 28 | 35 | 42 | V |
| V_{DC} | Maximum DC Blocking Voltage | 20 | 30 | 40 | 50 | 60 | V |
| V_F | Maximum Instantaneous At 5.0A DC | 0.55 | | 0.70 | | | V |
| I_R | Maximum DC Reverse Current At Rated DC Blocking Voltage | $T_J=25^\circ\text{C}$ | 0.5 | | | | mA |
| | | $T_J=100^\circ\text{C}$ | 20 | | | | |
| C_J | Typical Junction Capacitance (Note 1) | 300 | | | | | pF |
| $I_{F(AV)}$ | Maximum Average Forward Rectified Current @ $T_C=80^\circ\text{C}$ | 5.0 | | | | | A |
| I_{FSM} | Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | 110 | | | | | A |
| $R_{\theta JL}$ | Typical Thermal Resistance (Note 2) | 10 | | | | | $^\circ\text{C/W}$ |
| T_J | Junction Temperature Range | -50 to +125 | | | | | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature Range | -55 to +150 | | | | | $^\circ\text{C}$ |

Notes: 1. Measured at 1.0MHz applied reverse voltage of 4.0V DC
2. Thermal Resistance Junction to case

Typical Characteristics

FIG.1 FORDWARD CURRENT DERATING CURVE

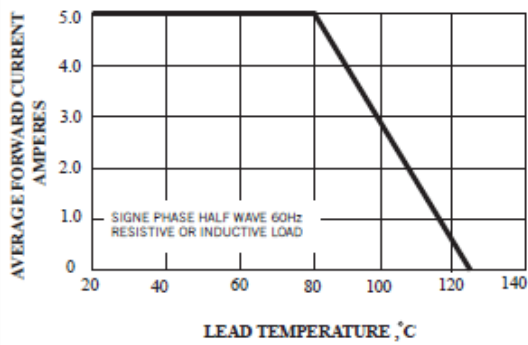


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

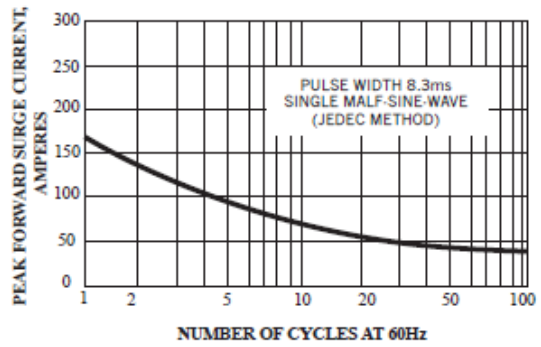


FIG.3 TYPICAL FORWARD CHARACTERISTICS

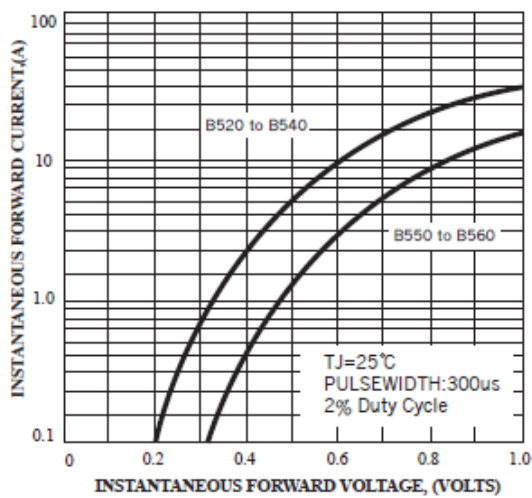


FIG.4 TYPICAL JUNCTION CAPACITANCE

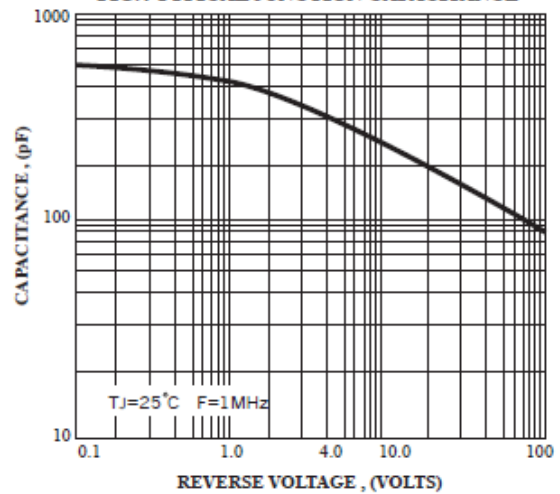
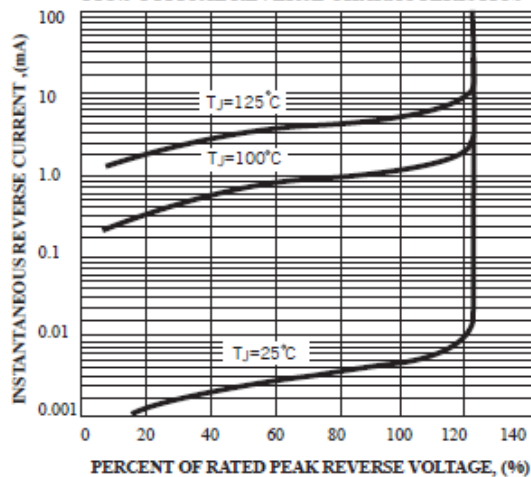
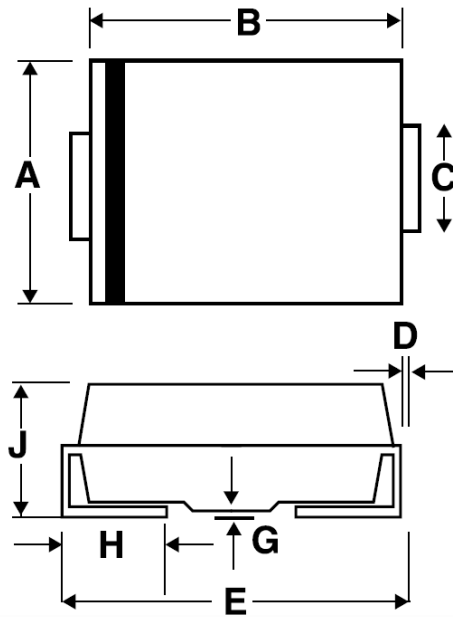


FIG.5 TYPICAL REVERSE CHARACTERISTICS



Package Dimension

SMC (DO-214AB)





| Dimensions | | | | |
|------------|-------------|------|--------|-------|
| Symbol | Millimeters | | Inches | |
| | Min | Max | Min | Max |
| A | 5.59 | 6.22 | 0.220 | 0.244 |
| B | 6.60 | 7.11 | 0.259 | 0.279 |
| C | 2.75 | 3.18 | 0.108 | 0.125 |
| D | 0.15 | 0.31 | 0.005 | 0.012 |
| E | 7.75 | 8.13 | 0.305 | 0.320 |
| G | 0.10 | 0.20 | 0.003 | 0.007 |
| H | 0.76 | 1.52 | 0.029 | 0.059 |
| J | 2.00 | 2.62 | 0.078 | 0.103 |

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