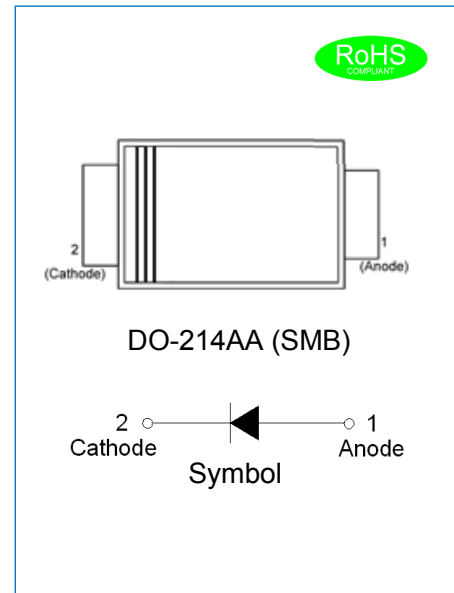


**JSPG540A~JSPG5200A****5A Schottky Barrier Rectifier**

Rev.1.1

DESCRIPTION

- ✧ Plastic package has underwriters laboratories flammability classification 94V-0
- ✧ Exceeds environmental standards of MIL-S-19500/228
- ✧ For surface mounted applications in order to optimize board space
- ✧ Lead free in compliance with EU RoHS 2011/65/EU directive
- ✧ Ultra low forward voltage drop
- ✧ Low power losses, high efficiency operation
- ✧ High current capability and surge capability
- ✧ Low thermal resistance package

**MECHANICAL DATA**

- ✧ Case: JEDEC SMB molded plastic
- ✧ Terminals: Solder plated, solderable per MIL-STD-750, method 2026
- ✧ Polarity: Color band denotes cathode end

ABSOLUTE MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

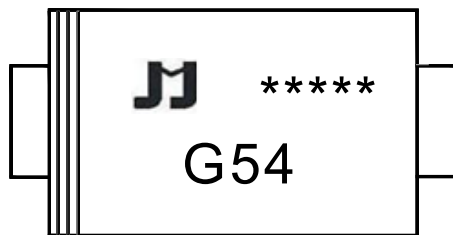
(Rating at 25°C ambient temperature unless otherwise specified.)

| Parameter | | Symbol | JSPG 540A | JSPG 560A | JSPG 5100A | JSPG 5150A | JSPG 5200A | Unit |
|--|----------------------|--------------------|--------------|--------------|---------------|---------------|---------------|------|
| Maximum repetitive peak reverse voltage | | V _{RRM} | 40 | 60 | 100 | 150 | 200 | V |
| Maximum RMS voltage | | V _{RMS} | 28 | 42 | 70 | 105 | 140 | V |
| Maximum DC blocking voltage | | V _{DC} | 40 | 60 | 100 | 150 | 200 | V |
| Maximum average forward current | | I _{F(AV)} | 5.0 | | | | | A |
| Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load | | I _{FSM} | 120 | | | | | A |
| Maximum forward voltage @ I _F =5A | | V _F | 0.55 | 0.7 | 0.85 | 0.9 | | V |
| Maximum DC reverse current at rated DC blocking voltage | T _A =25℃ | I _R | 0.1 | | | | | mA |
| | T _A =100℃ | | 15 | | | | | |
| Typical junction capacitance V _R =4.0V, f=1MHz | | C _J | 350 | | 150 | | | pF |
| Operating junction temperature range | | T _j | -55 to +125 | -55 to +150 | | | | ℃ |
| Storage temperature range | | T _{stg} | -55 to +150 | | | | | ℃ |

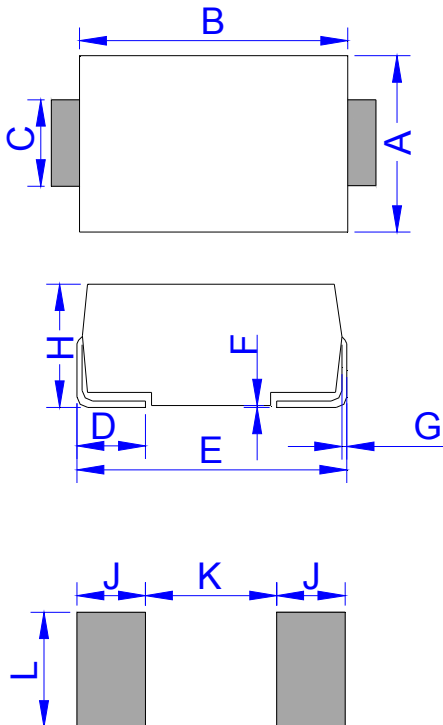
**THERMAL RESISTANCES**

| Symbol | Parameter | JSPG 540A | JSPG 560A | JSPG 5100A | JSPG 5150A | JSPG 5200A | Unit |
|---------------|-----------------------------|--------------|--------------|---------------|---------------|---------------|------|
| $R_{th(j-a)}$ | Junction to ambient (note1) | 55 | | | | | °C/W |

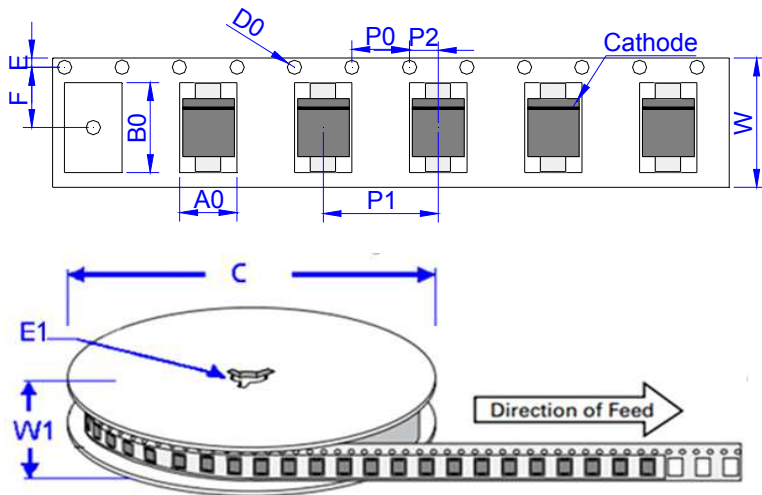
Note1: Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length, P.C.B mounted

MARKING

| | |
|----------------|---------------------------|
| The first ‘*’ | Month code |
| The second ‘*’ | Year code |
| The third ‘*’ | Batch number code |
| The fourth ‘*’ | Chip code |
| The fifth ‘*’ | Package manufacturer code |
| G | Package: SMB |
| 5 | $I_{F(AV)}$:5A |
| 4 | V_{RRM} :40V |

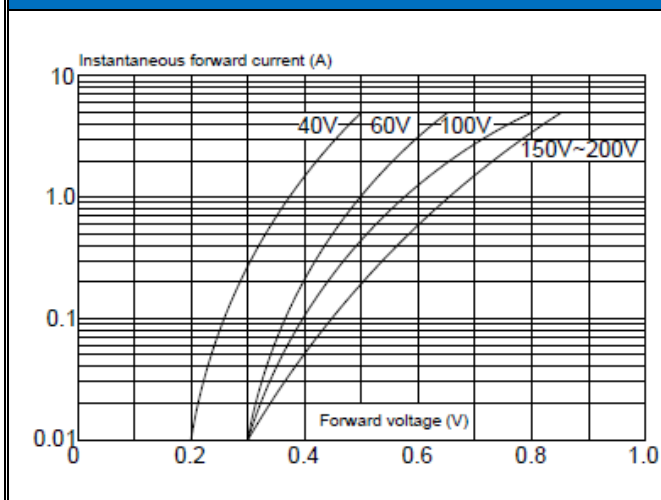
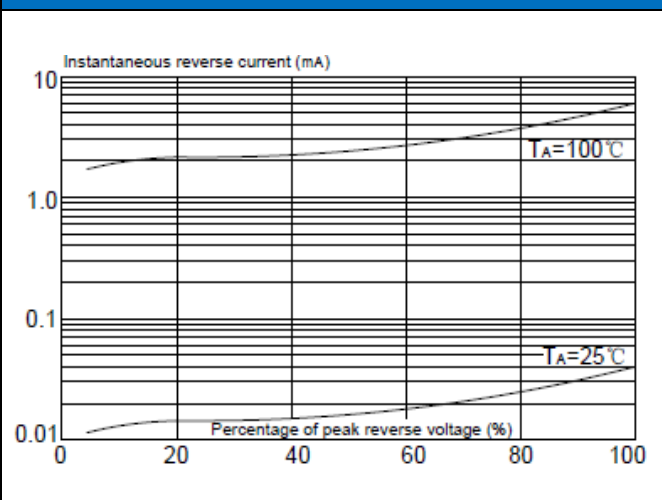
PACKAGE MECHANICAL DATA**DO-214AA (SMB)**

| Ref. | Dimensions | | | |
|------|-------------|-------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 3.30 | 3.94 | 0.130 | 0.155 |
| B | 4.30 | 4.80 | 0.169 | 0.189 |
| C | 1.90 | 2.20 | 0.075 | 0.087 |
| D | 0.95 | 1.52 | 0.037 | 0.060 |
| E | 5.20 | 5.60 | 0.205 | 0.220 |
| F | 0.051 | 0.203 | 0.002 | 0.008 |
| G | 0.15 | 0.31 | 0.006 | 0.012 |
| H | 2.10 | 2.40 | 0.083 | 0.094 |
| J | 2.20 | | 0.087 | |
| K | | 2.60 | | 0.102 |
| L | 2.30 | | 0.091 | |

TAPE AND REEL SPECIFICATION-SMB


| Ref. | Dimensions | |
|------|-------------|----------------|
| | Millimeters | Inches |
| A0 | 3.76 ± 0.3 | 0.148 ± 0.012 |
| B0 | 5.69 ± 0.3 | 0.224 ± 0.012 |
| C | 330.0 | 13.0 |
| D0 | 1.55 ± 0.1 | 0.061 ± 0.004 |
| E | 1.75 ± 0.2 | 0.069 ± 0.008 |
| E1 | 13.3 ± 0.3 | 0.524 ± 0.012 |
| F | 5.5 ± 0.2 | 0.217 ± 0.008 |
| P0 | 4.00 ± 0.2 | 0.157 ± 0.008 |
| P1 | 8.00 ± 0.2 | 0.3145 ± 0.008 |
| P2 | 2.00 ± 0.2 | 0.079 ± 0.008 |
| W | 12.0 ± 0.2 | 0.472 ± 0.008 |
| W1 | 15.7 ± 2.0 | 0.618 ± 0.079 |

| OUTLINE | UNIT WEIGHT (g/PCS) typ. | REEL (PCS) | PER CARTON (PCS) | REEL DIAMETERS (mm) |
|---------|-----------------------------|---------------|---------------------|---------------------------|
| TAPING | 0.1 | 3,000 | 48,000 | 330 |

CHARACTERISTICS CURVE
FIG.1: Typical forward characteristics (25°C)

FIG.2: Typical reverse characteristics




CHARACTERISTICS CURVE

FIG.3: Maximum non-repetitive peak forward surge current

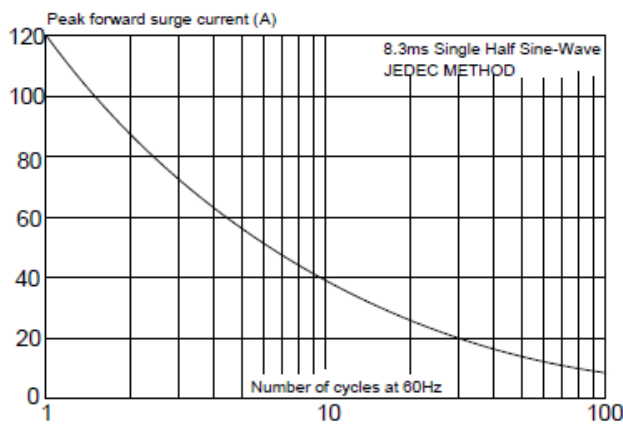


FIG.4: Forward current derating curve

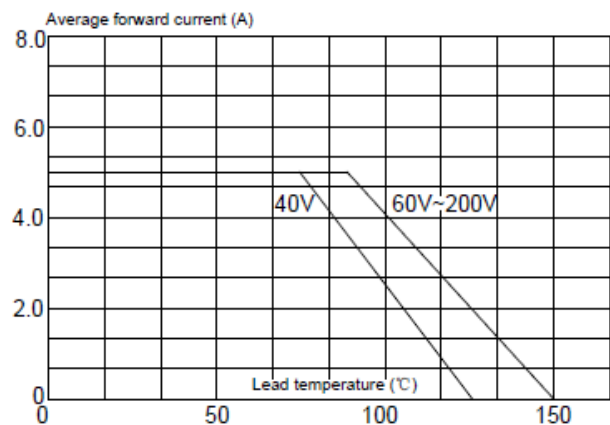


FIG.5: Maximum transient thermal impedance

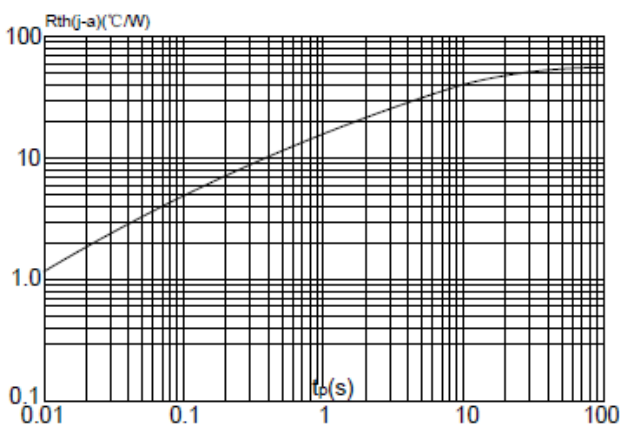
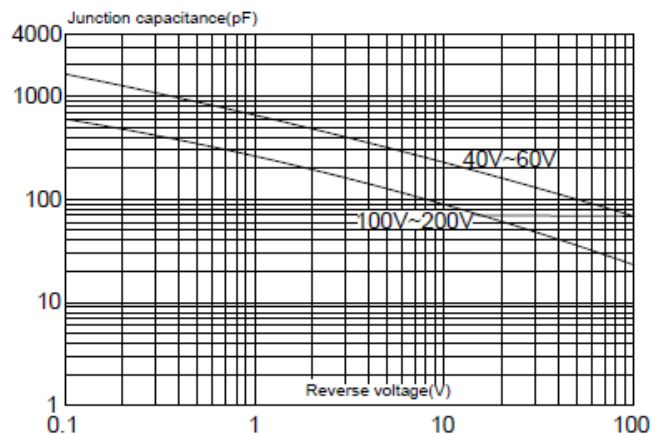


FIG.6: Typical junction capacitance



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