



## JSPG540A

### 5A Schottky Barrier Rectifier

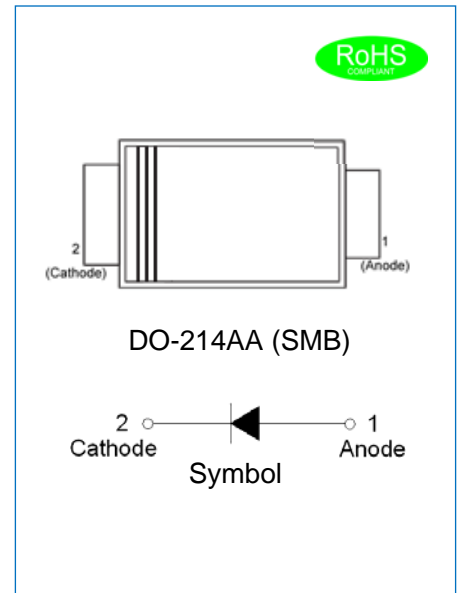
Rev.1.2

#### DESCRIPTION

- ✧ Plastic package has underwriters laboratories flammability classification 94V-0
- ✧ 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: SMB molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Polarity: Color band denotes cathode end



#### ABSOLUTE MAXIMUM RATING (Rating at 25°C ambient temperature unless otherwise specified.)

| Parameter  | Symbol      | JSPG540A    | Unit |
|--|-------------|-------------|------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$   | 40          | V    |
| Maximum RMS voltage  | $V_{RMS}$   | 28          | V    |
| Maximum DC blocking voltage  | $V_{DC}$    | 40          | 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    |
| Operating junction temperature range   | $T_j$       | -55 to +125 | °C   |
| Storage temperature range  | $T_{stg}$   | -55 to +150 | °C   |

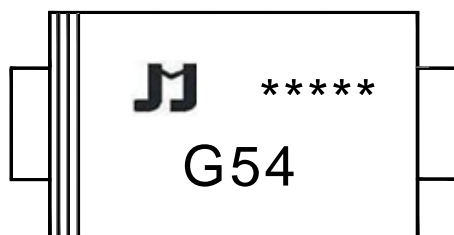
#### ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified.)

| Parameter                                    | Symbol             | Min | Typ | Max  | Unit |
|--|--------------------|-----|-----|------|------|
| Forward voltage                              | $I_F=5A$           |     |     | 0.55 | V    |
| Reverse current at rated DC blocking voltage | $T_A=25^\circ C$   |     |     | 0.1  | mA   |
|  | $T_A=100^\circ C$  |     |     | 15   |      |
| Junction capacitance                         | $V_R=4.0V, f=1MHz$ |     | 350 |      | pF   |

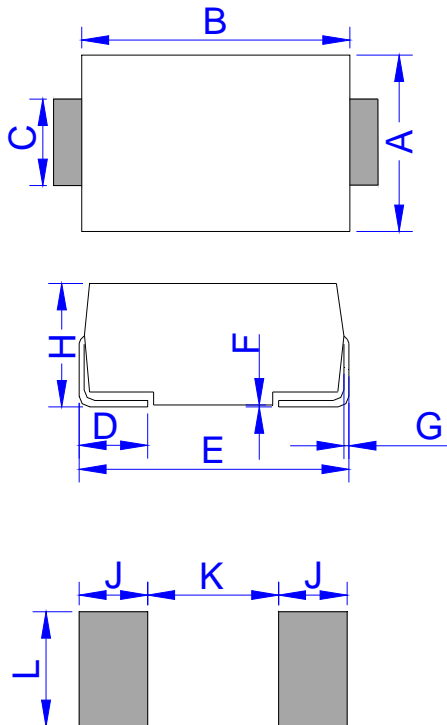
**THERMAL RESISTANCES**

| Symbol        | Parameter   | JSPG540A | Unit |
|---------------|---|----------|------|
| $R_{th(j-a)}$ | Thermal resistance from junction to ambient (note1) | 55       | °C/W |

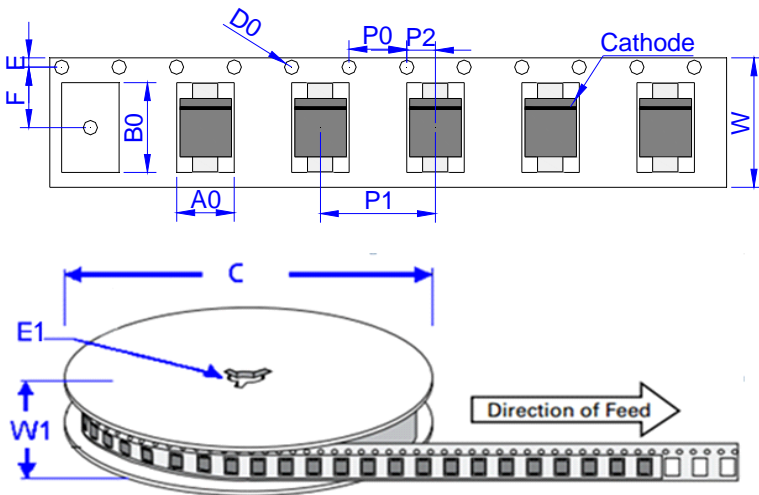
Note1: Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length, P.C.B mounted

**MARKING**


|                |                 |
|----------------|-----------------|
| The first '*'  | Date code       |
| The second '*' |                 |
| The third '*'  | Batch code      |
| The fourth '*' |                 |
| The fifth '*'  |                 |
| G              | Package: SMB    |
| 5              | $I_{F(AV)}$ :5A |
| 4              | $V_{RRM}$ :40V  |

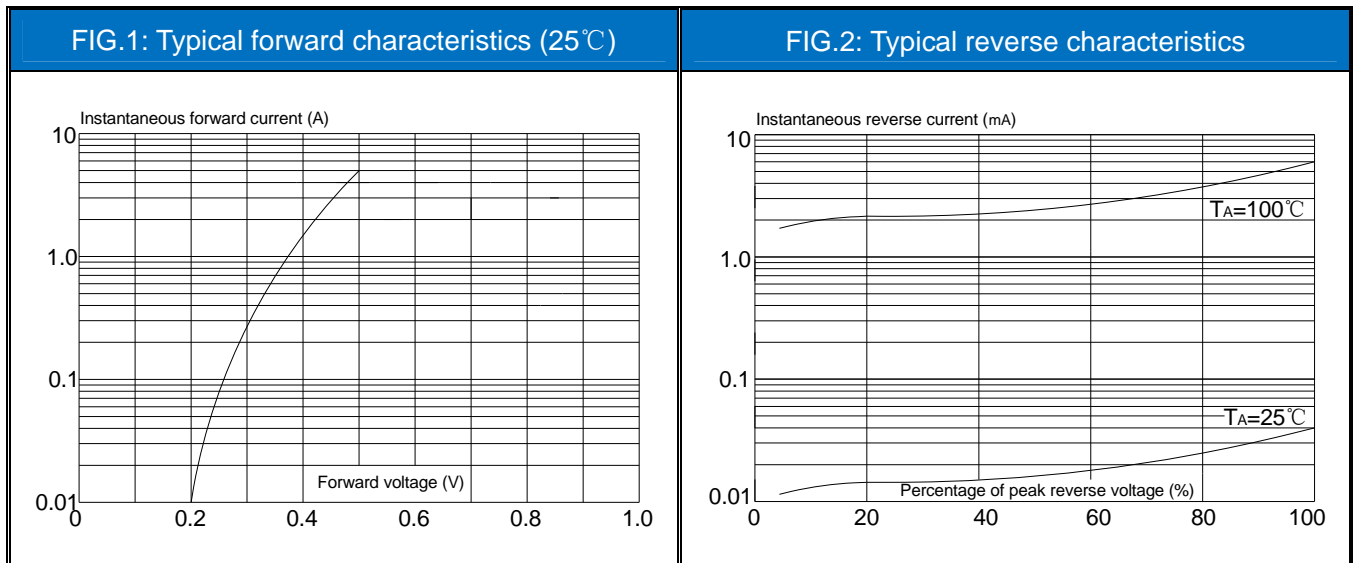
**PACKAGE MECHANICAL DATA**

**DO-214AA (SMB)**

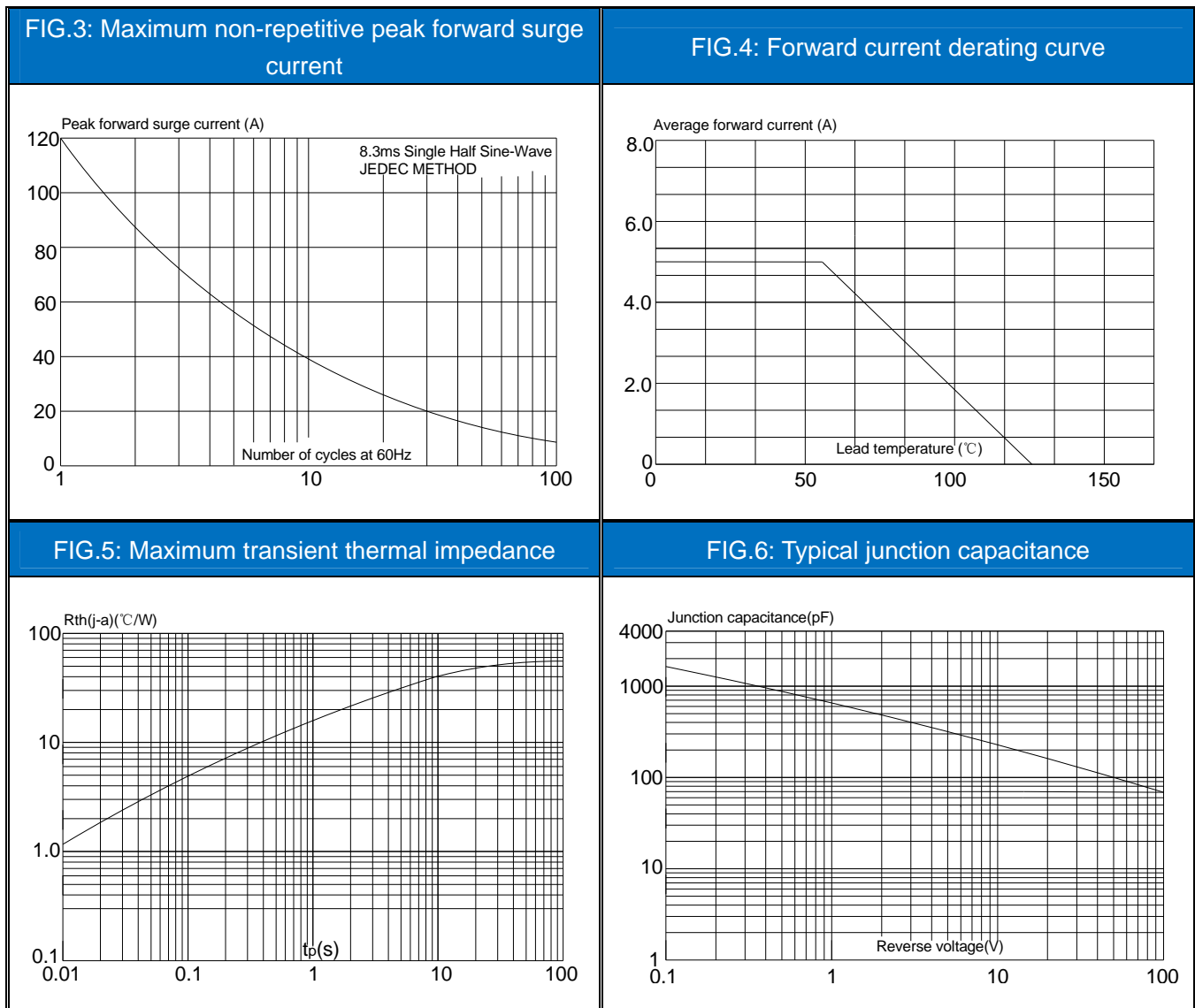
| Ref. | Dimensions  |       |        |       |
|------|-------------|-------|--------|-------|
|      | Millimeters |       | Inches |       |
|      | Min.        | Max.  | Min.   | Max.  |
| A    | 3.30        | 3.94  | 0.130  | 0.155 |
| B    | 4.30        | 4.80  | 0.169  | 0.189 |
| C    | 1.90        | 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**


**CHARACTERISTICS CURVE**


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