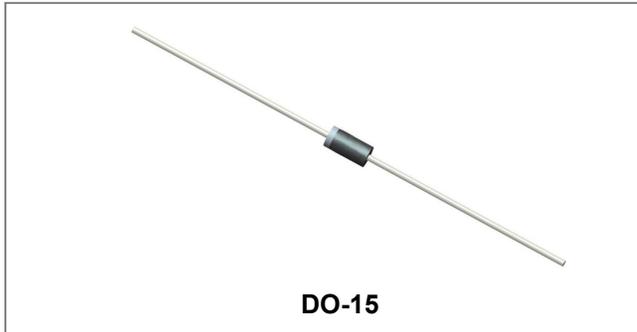


SF204G-SF208G SUPER FAST RECTIFIER



Features

- Super fast switching for high efficiency
- Low leakage current
- High forward surge capability
- Solder dip 260° C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: JEDEC DO-15 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.014 ounce, 0.40 grams

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

| Characteristic | Symbol | SF204G | SF206G | SF208G | Units |
|---|-------------------|-------------|--------|--------|-------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 200 | 400 | 600 | V |
| Maximum RMS voltage | V _{RMS} | 140 | 280 | 420 | V |
| Maximum DC blocking voltage | V _{DC} | 200 | 400 | 600 | V |
| Maximum average forward rectified current 0.375"(9.5mm) lead length at T _A =55°C | I _(AV) | 2.0 | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 75 | | | A |
| Maximum instantaneous forward voltage at 2.0A | V _F | 0.95 | 1.25 | 1.7 | V |
| Maximum DC reverse current T _A =25 °C at rated DC blocking voltage T _A =100 °C | I _R | 5.0 50.0 | | | µA |
| Maximum Reverse Recovery Time (Note 1) | T _{rr} | 35 | | | ns |
| Typical Junction Capacitance (Note 2) | C _J | 50.0 | 30.0 | | pF |
| Typical Thermal Resistance (Note 3) | R _{θJA} | 40.0 | | | °C/W |
| Junction Temperature | T _J | -55 to +150 | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | | | °C |

Note: 1. Reverse recovery condition I_F=0.5A, I_R=1.0A. I_{rr}=0.25A

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Ratings and Characteristics Curves

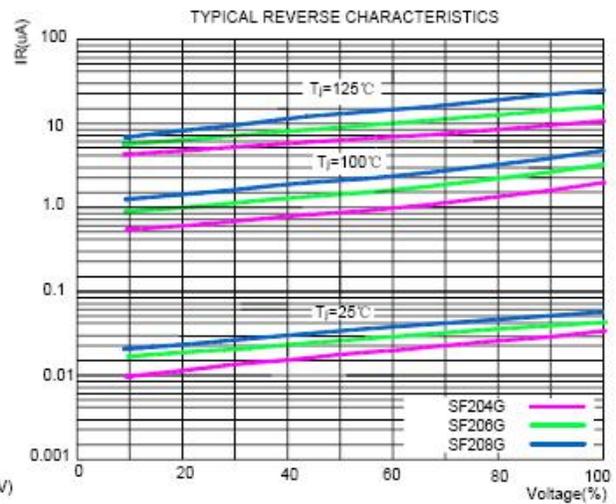
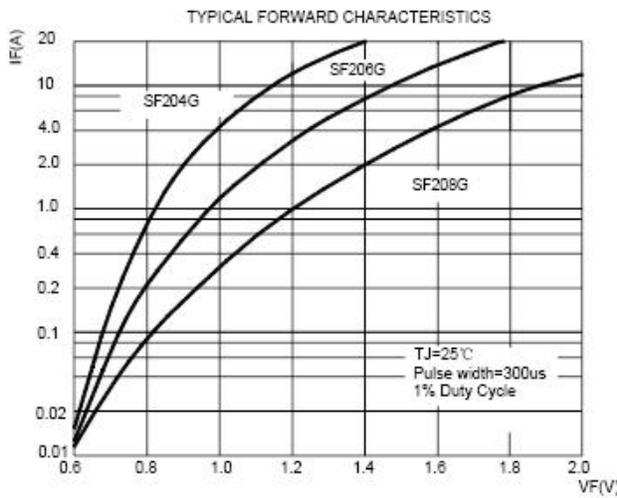
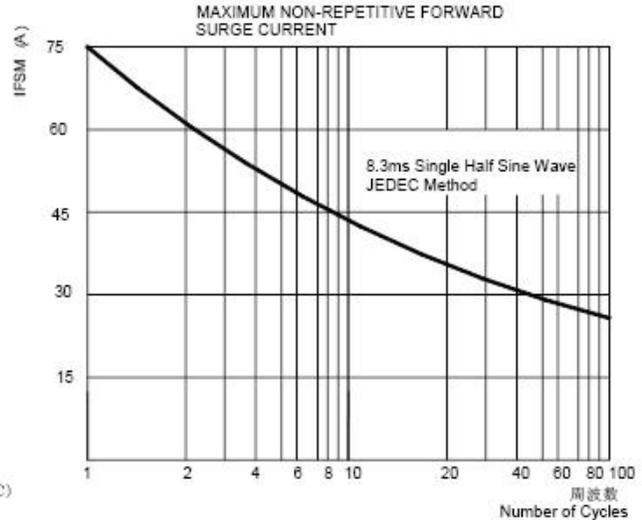
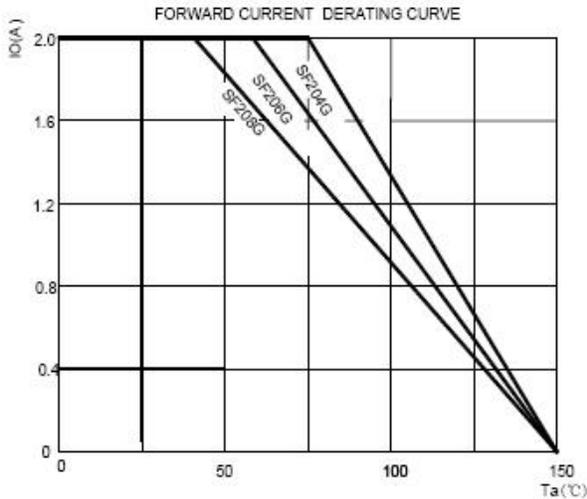
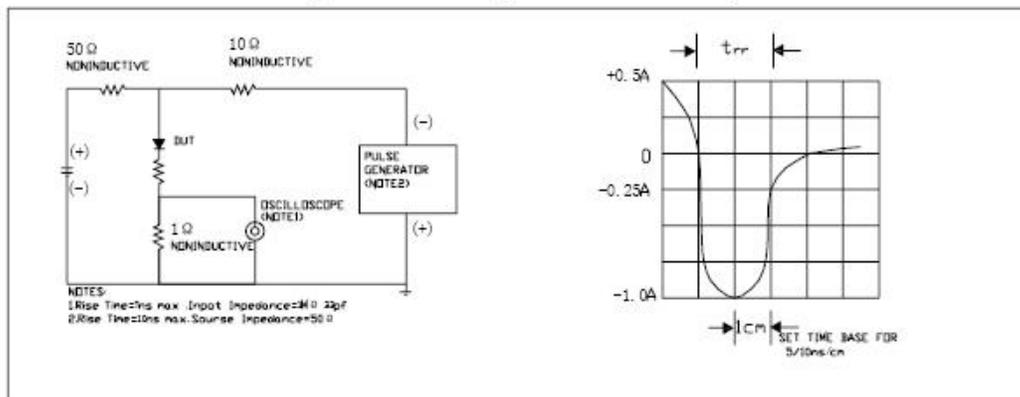
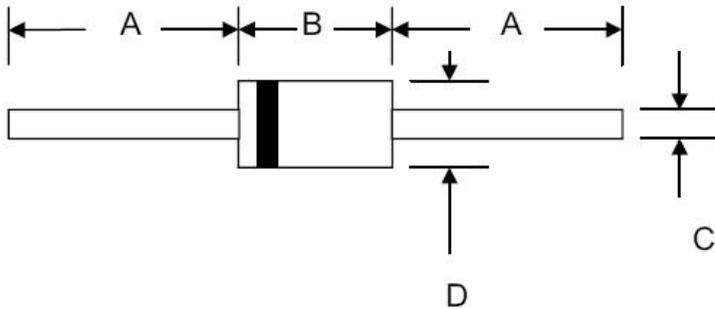


Diagram of circuit and Testing wave form of reverse recovery time



Mechanical Dimensions DO-15



| SYMBOL | Millimeters | | Inches | |
|--------|-------------|------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 25.4 | - | 1.000 | - |
| B | 5.5 | 7.62 | 0.217 | 0.300 |
| C | 0.7 | 0.9 | 0.028 | 0.034 |
| D | 2.6 | 3.6 | 0.104 | 0.140 |

Ordering Information

| Device | Package | Shipping |
|------------------------------|-----------------|---------------|
| SF204G THRU SF208G | DO-15 (Pb-Free) | 3000pcs /tape |
| SF204GTA THRU SF208GTA | DO-15 (Pb-Free) | 3000pcs /tape |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

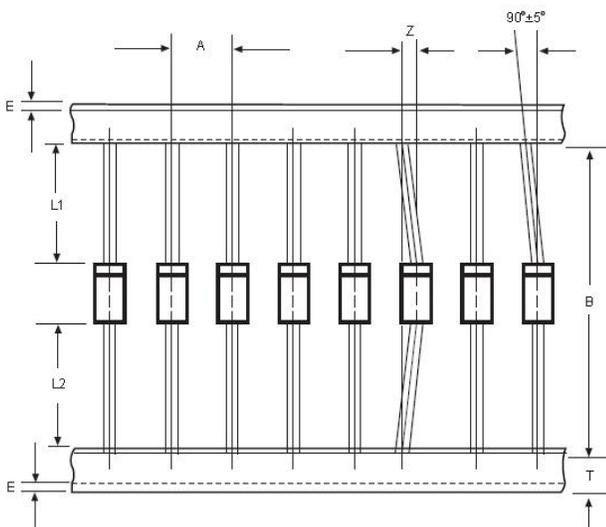


Where XXXXX is YYWWL

SF204G = Part Name
SSG = SSG
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification DO-15



| SYMBOL | Millimeters | |
|---------|-------------|------|
| | Min. | Max. |
| A | 4.50 | 5.50 |
| B | 50.9 | 53.9 |
| Z | - | 1.20 |
| T | 5.60 | 6.40 |
| E | - | 0.80 |
| IL1-L2I | - | 1.0 |

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