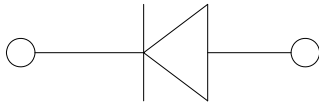
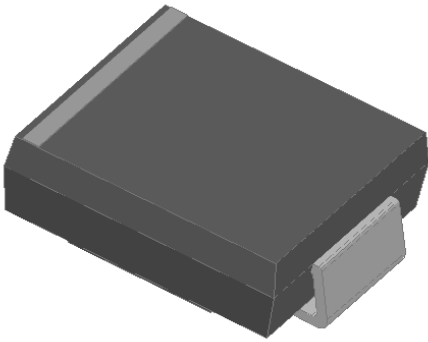


Surface Mount High Efficient Rectifier



Features

- High current capability
- High Reliability
- High forward surge current capability
- Solder dip 260 °C max. 10 s, per JESD 22-B106

Mechanical Data

- **Package:** DO-214AB (SMC)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes cathode end

■Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | HS5A | HS5B | HS5D | HS5F | HS5G | HS5J | HS5K | HS5M |
|--|-----------|------|-----------|------|------|------|------|------|------|------|
| Device marking code | | | HS5A | HS5B | HS5D | HS5F | HS5G | HS5J | HS5K | HS5M |
| Repetitive Peak Reverse Voltage | V_{RRM} | V | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 |
| Average Rectified Output Current @60Hz sine wave, Resistance load, TL (FIG.1) | I_o | A | 5.0 | | | | | | | |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Ta=25°C | I_{FSM} | A | 150 | | | | | | | |
| Storage Temperature | T_{stg} | °C | -55 ~+150 | | | | | | | |
| Junction Temperature | T_j | °C | -55 ~+150 | | | | | | | |

■Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | HS5A | HS5B | HS5D | HS5F | HS5G | HS5J | HS5K | HS5M |
|---|----------|---------|--|------|------|------|------|------|------|------|------|
| Maximum instantaneous forward voltage drop per diode | V_F | V | $I_{FM}=5.0A$ | 1.0 | | | 1.3 | | 1.7 | | |
| Maximum reverse recovery time | T_{RR} | ns | $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$ | 50 | | | | | 75 | | |
| Maximum DC reverse current at rated DC blocking voltage per diode | I_R | μA | Ta=25°C | 5 | | | | | | | |
| | | | Ta=125°C | 100 | | | | | | | |
| Typical junction capacitance | C_j | pF | Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C. | 85 | | | | 60 | | | |



HS5A THRU HS5M

■ Thermal Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER | | SYMBOL | UNIT | HS5A | HS5B | HS5D | HS5F | HS5G | HS5J | HS5K | HS5M |
|--------------------|---------------------|------------------|------|-------------------|------|------|------|------|------|------|------|
| Thermal Resistance | Junction to ambient | $R_{\theta J-A}$ | °C/W | 47 ⁽¹⁾ | | | | | | | |
| | Junction to lead | $R_{\theta J-L}$ | | 13 ⁽¹⁾ | | | | | | | |

Note(1)

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

■ Ordering Information (Example)

| PREFERRED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| HS5A~HS5M | F1 | Approximate 0.254 | 3000 | 6000 | 42000 | 13" reel |

■ Characteristics(Typical)

FIG.1: Io-TL Curve

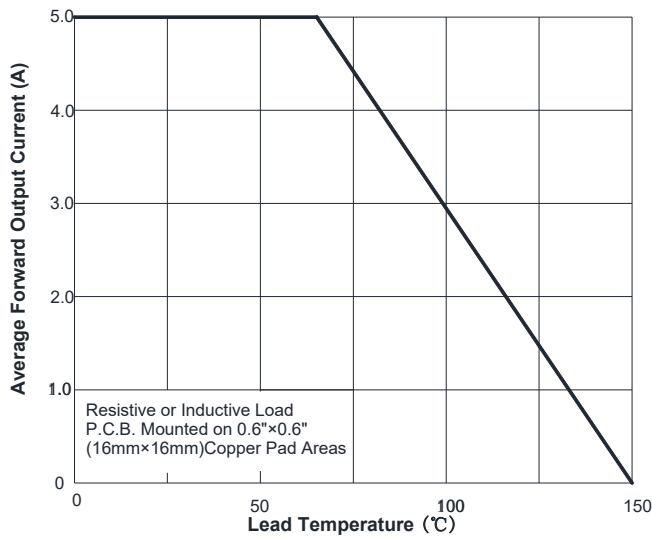


FIG.2: Forward Surge Current Capability

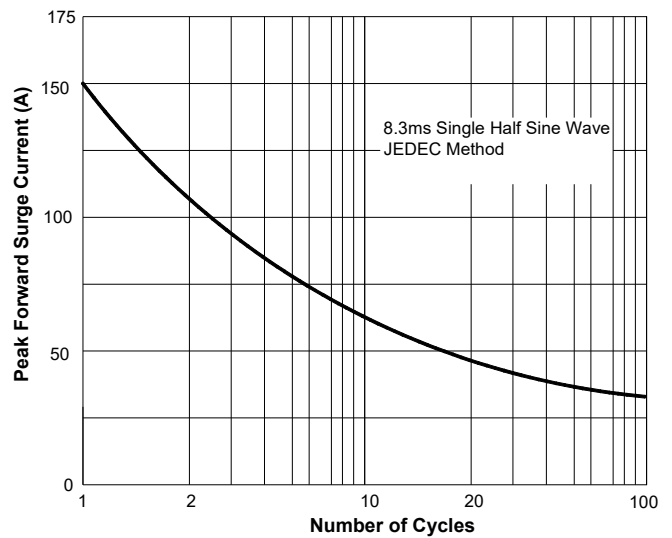


FIG.3: Forward Voltage

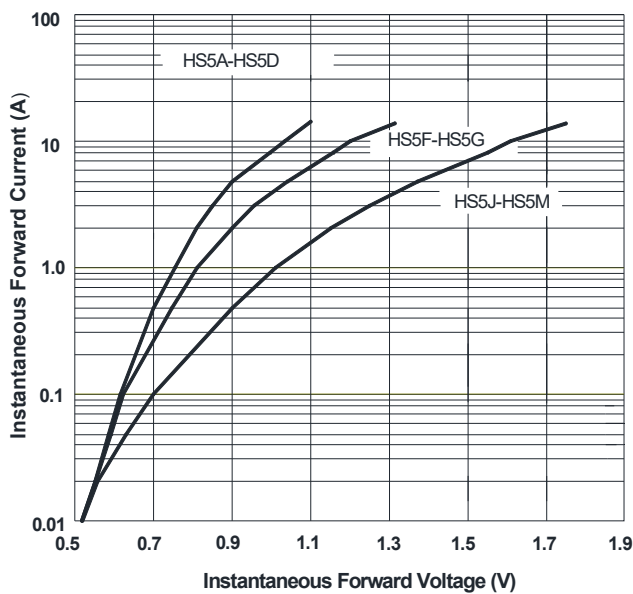


FIG.4: Typical Reverse Characteristics

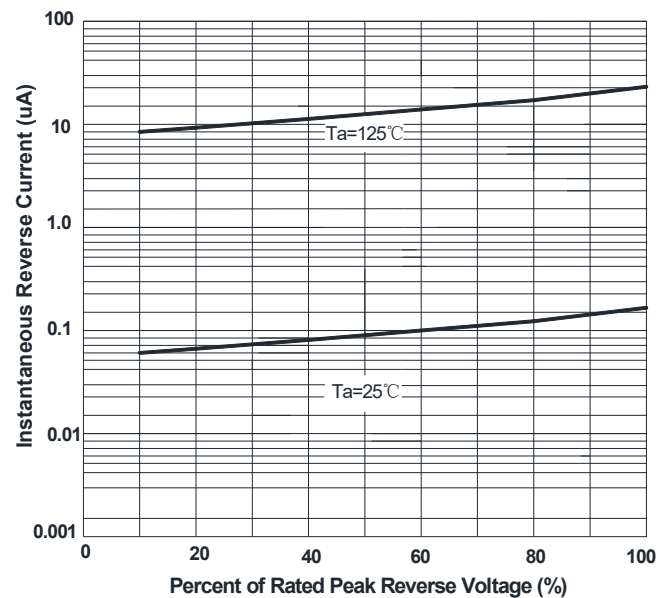
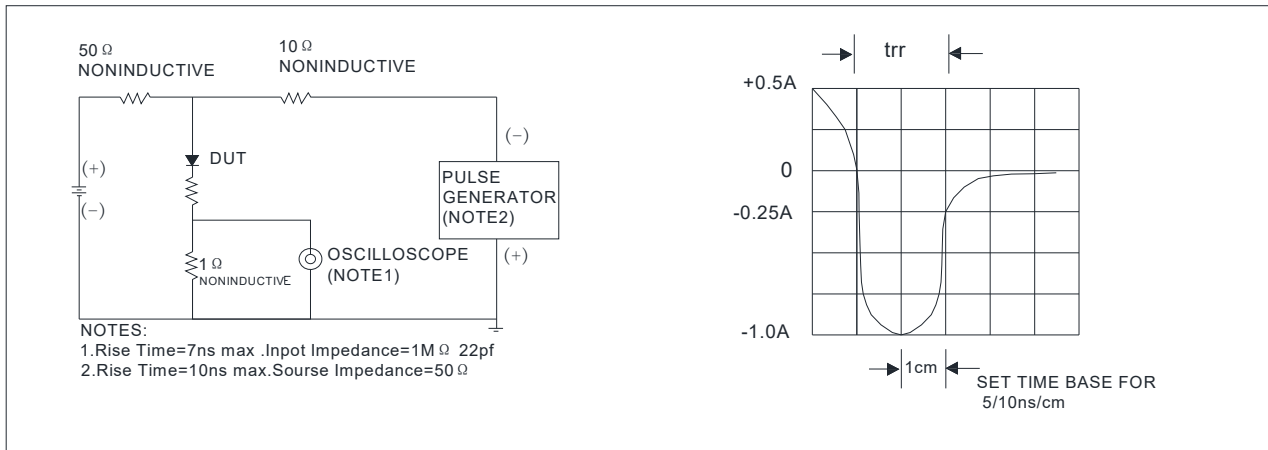
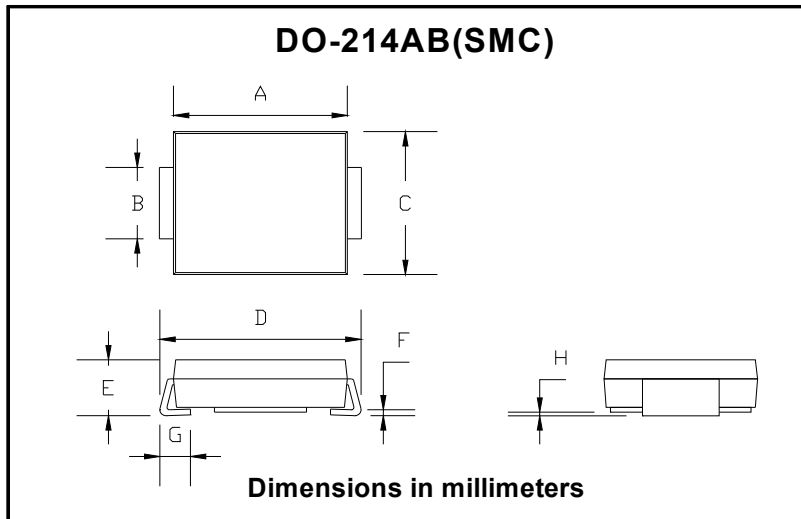


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

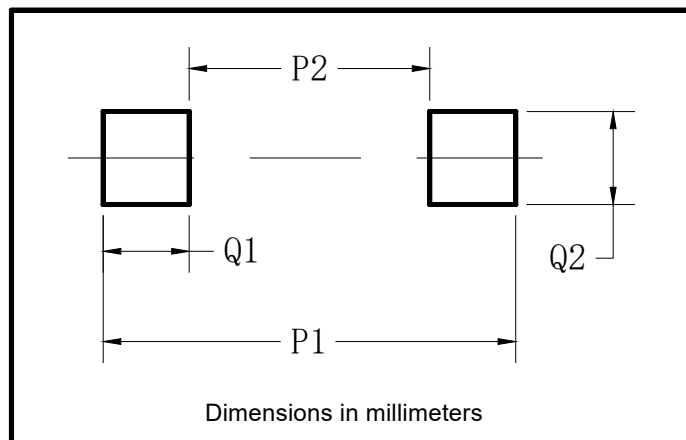


■ Outline Dimensions



| DO-214AB (SMC) | | |
|----------------|------|------|
| Dim | Min | Max |
| A | 6.60 | 7.11 |
| B | 2.85 | 3.27 |
| C | 5.59 | 6.22 |
| D | 7.75 | 8.13 |
| E | 1.99 | 2.61 |
| F | 0.15 | 0.31 |
| G | 0.76 | 1.52 |
| H | 0.10 | 0.20 |

■ Suggested pad layout



| Dim | Typ |
|-----|------|
| P1 | 9.9 |
| P2 | 3.84 |
| Q1 | 3.03 |
| Q2 | 3.82 |



HS5A THRU HS5M

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.