

DRS1A thru DRS1M

**Surface Mount
Fast Recovery Rectifiers
Reverse Voltage 50 to 1000V
Forward Current 1.0A**

1. FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * High temperature metallurgically bonded construction
- * Capable of meeting environmental standards of MIL-S-19500
- * Fast switching for high efficiency
- * Diffused junction
- * 1.0 A operation at TA=75°C with no thermal runaway
- * Typical IR less than 1.0μA
- * High temperature soldering guaranteed: 260°C/10 seconds
- * We declare that the material of product compliance with RoHS requirements.

2. Mechanical Data

Case: JEDEC DO-214AC, molded plastic body
Terminals: Solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.003 oz., 0.085 g
Handling precaution: None

3. Electrical Characteristic

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

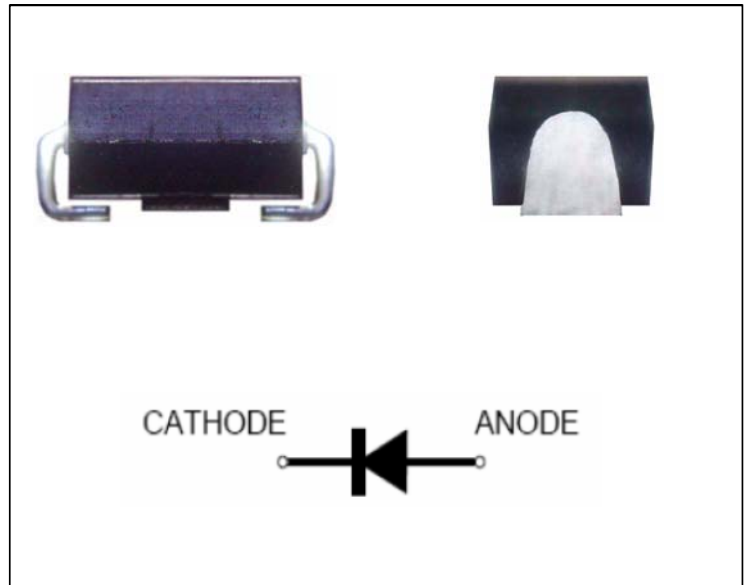
| Parameter Symbol | symbol | DRS1A | DRS1B | DRS1D | DRS1G | DRS1J | DRS1K | DRS1M | Unit | |
|--|-----------------|-------------|-------|-------|-------|-------|-------|-------|------|------|
| Marking | | S1A | S1B | S1D | S1G | S1J | S1K | S1M | | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 75^\circ C$ | $I_{F(AV)}$ | 1.0 | | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 25 | | | | | | | | A |
| Maximum thermal resistance | $R_{\theta JA}$ | 65 | | | | | | | | °C/W |
| Operating junction and storage temperature range | T_J, T_{STG} | -50 to +150 | | | | | | | | °C |

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter Symbol | symbol | DRS1A | DRS1B | DRS1D | DRS1G | DRS1J | DRS1K | DRS1M | Unit | |
|---|--------|------------|-------|-------|-------|-------|-------|-------|------|----|
| Maximum instantaneous forward voltage at 1.0A | V_F | 1.3 | | | | | | | | V |
| Maximum DC reverse current $T_A = 25^\circ C$ at rated DC blocking voltage $T_A = 100^\circ C$ | IR | 5.0 200 | | | | | | | | μA |
| Typical reverse recovery time (Note 1) | trr | 150 | | | | 250 | 500 | | | ns |
| Typical junction capacitance at 4.0V, 1MHz | CJ | 15.0 | | | | | | | | PF |

NOTES:

1. $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$



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4. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

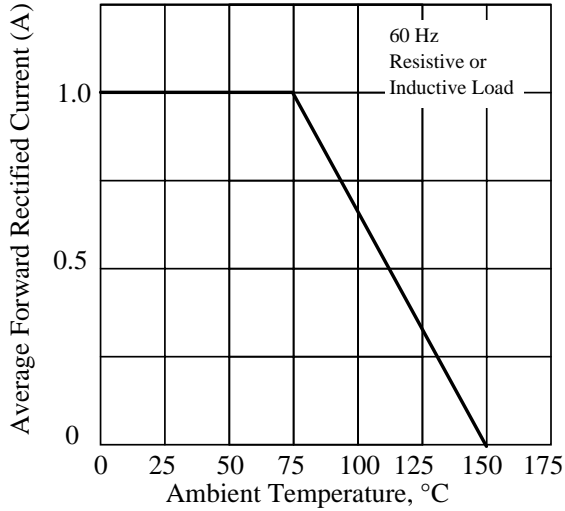


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

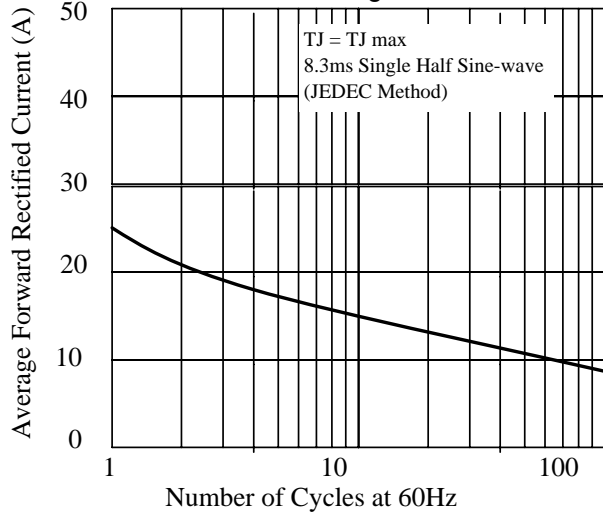


Fig 3. – Typical Instantaneous Forward Characteristics

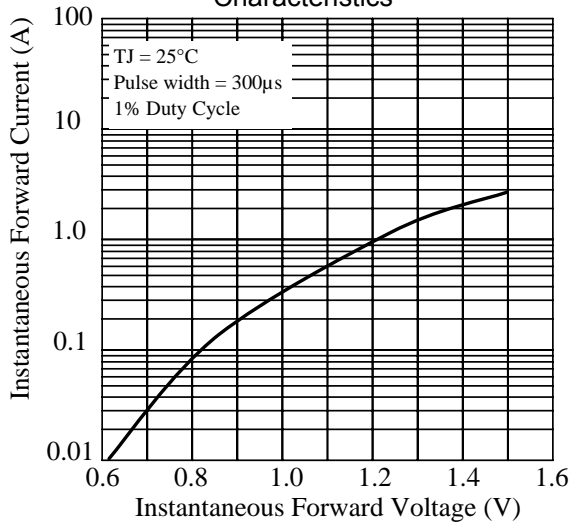


Fig 4. – Typical Reverse Characteristics

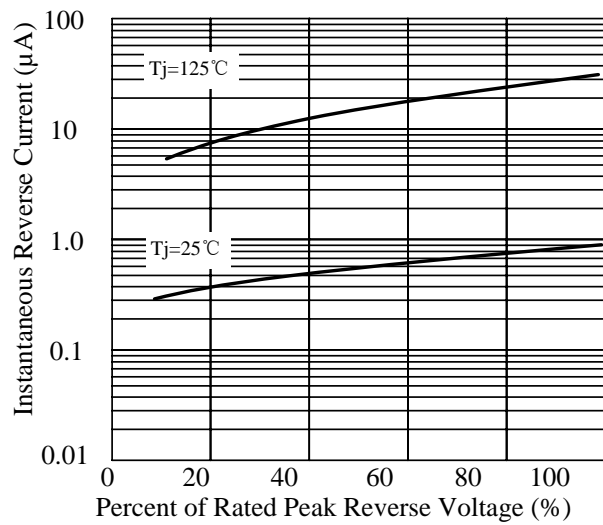


Fig 5. – Typical Junction Capacitance

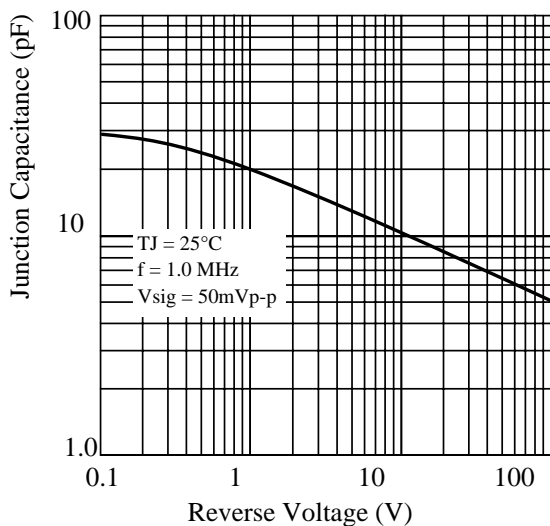
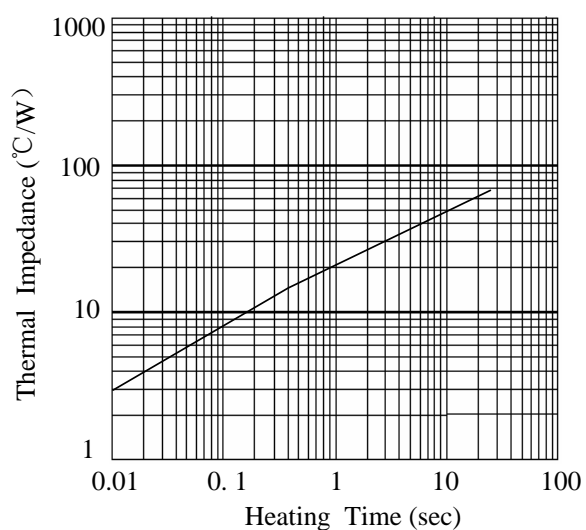
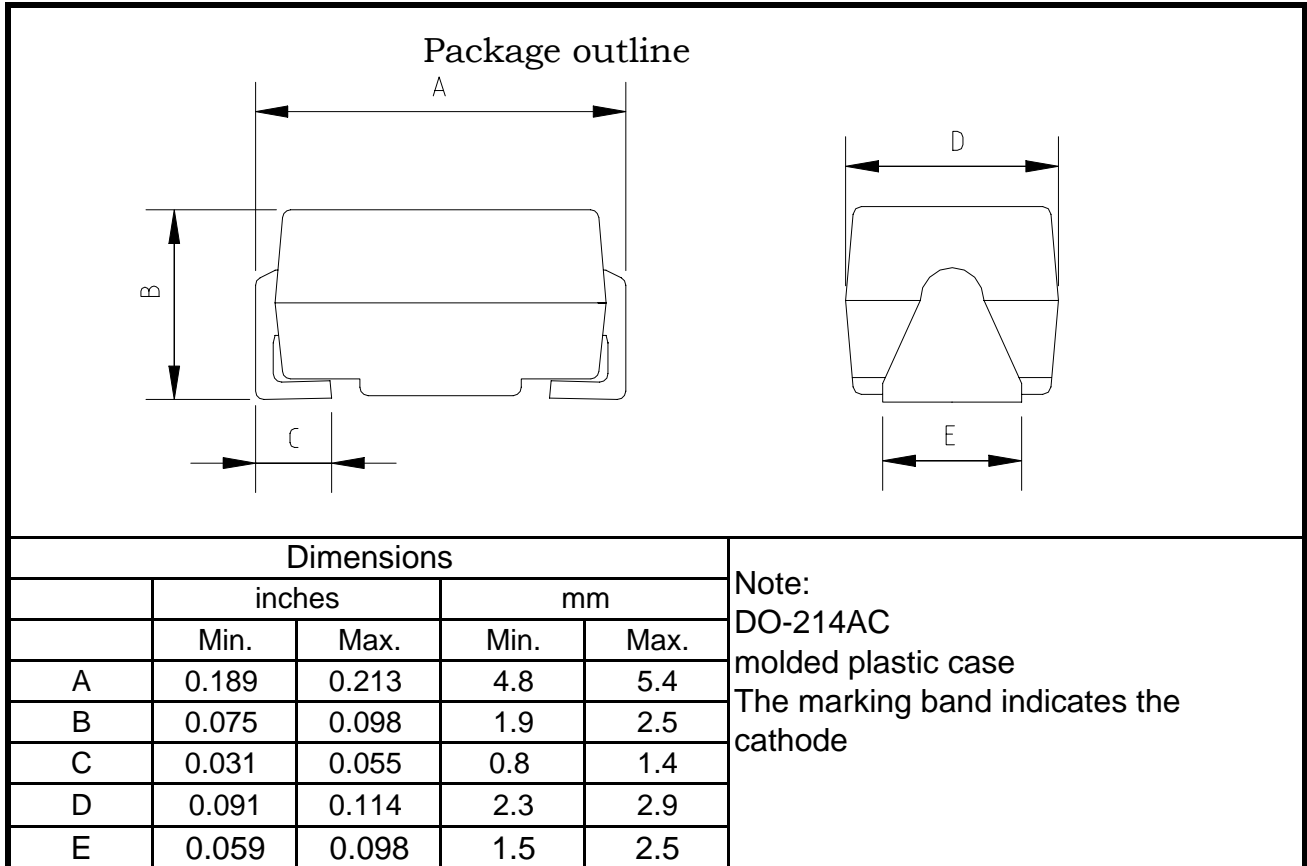


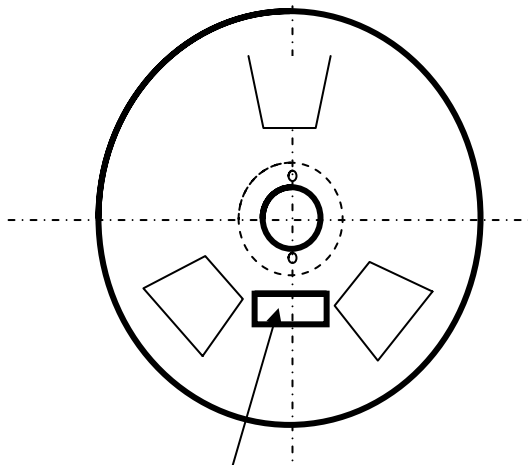
Fig 6. – Transient Thermal Impedance



5.Package Dimensions in inches and (millimeters)


SMA Packing Specification

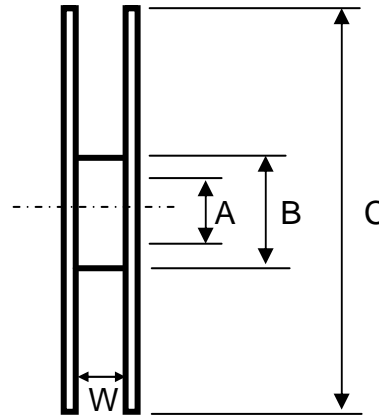
1. 卷盘规格/Reel Packing



Label stike this position

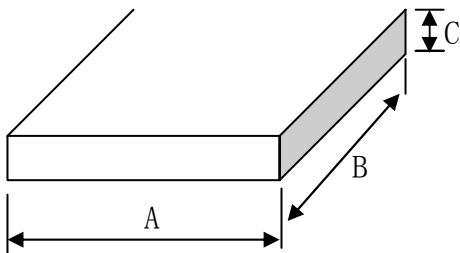
| Item | Q'ty/Taping |
|------|-------------|
| 7" | 2K |
| 13" | 5K |

Unit:mm



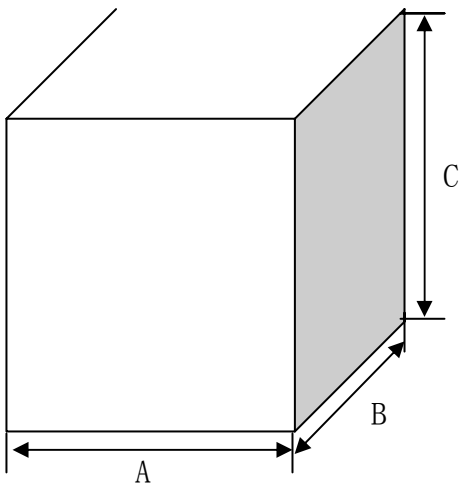
| Item | Symbol | Dimension |
|-------------|--------|-----------|
| 13" Size | A | 13.0±0.2 |
| | B | 75.0±0.5 |
| | C | 330±1.0 |
| | W | 13.2±1.0 |
| 7" Size | A | 13.0±0.2 |
| | B | 54±0.5 |
| | C | 177±1.0 |
| | W | 13.2±1.0 |

2. 内箱规格/ Inside Box Specification



| Item | Symbol | Dimension |
|------|--------|-----------|
| Size | A | 335±2 |
| | B | 335±2 |
| | C | 40±1 |

3. 外箱规格/Outer Box Specification



| Item | Symbol | Dimension |
|------|--------|-----------|
| Size | A | 350±2 |
| | B | 350±2 |
| | C | 345±2 |