

TOSHIBA SEMICONDUCTOR TECHNICAL DATA

TOSHIBA DIODE 1N914, 1N914A, 1N914B SILICON EPITAXIAL PLANAR

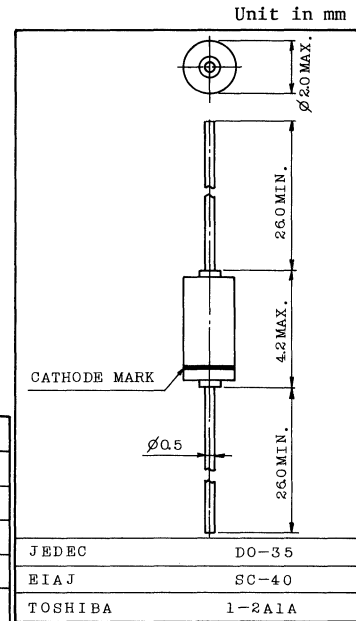
COMMUNICATION AND INDUSTRIAL APPLICATIONS.
HIGH VOLTAGE, ULTRA HIGH SPEED SWITCHING APPLICATIONS.

FEATURES:

- . Low Forward Voltage : $V_F=1.0V$ (Max.)
- . Small Total Capacitance : $C_T=4pF$ (Max.)
- . Fast Reverse Recovery Time : $t_{rr}=4ns$ (Max.)
- . Hermetically Sealed Miniature Glass Package.

MAXIMUM RATINGS ($T_a=25^\circ C$)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|--------------------------------|-----------|-----------|------------|
| Maximum (Peak) Reverse Voltage | V_{RM} | 100 | V |
| Reverse Voltage | V_R | 75 | V |
| Maximum (Peak) Forward Current | I_{FM} | 450 | mA |
| Average Forward Current | I_O | 150 | mA |
| Surge Current (1 μs) | I_{FSM} | 2 | A |
| Power Dissipation | P | 500 | mW |
| Junction Temperature | T_j | 200 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -65 ~ 200 | $^\circ C$ |



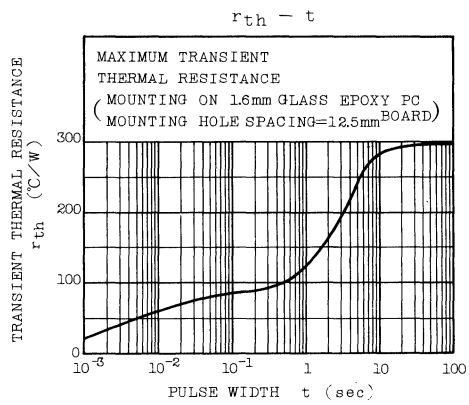
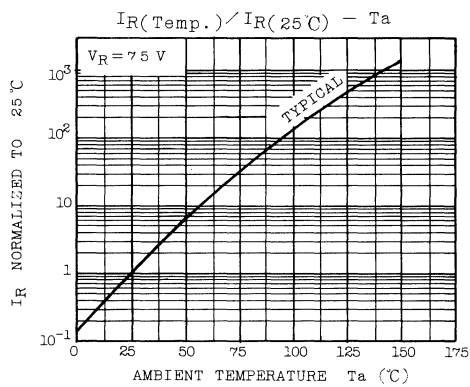
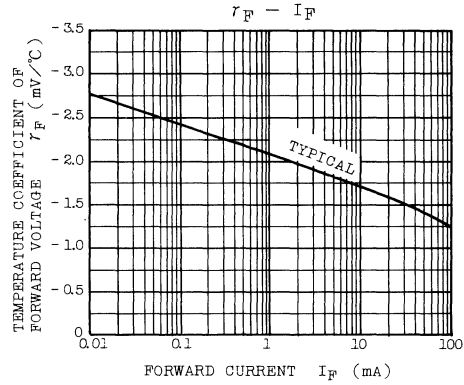
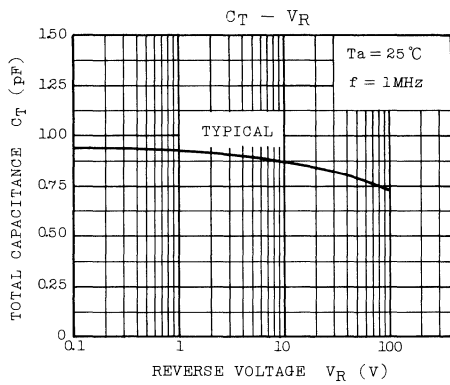
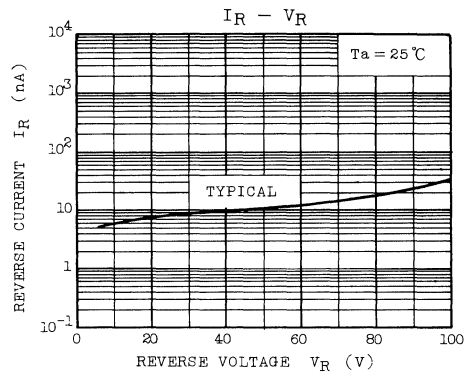
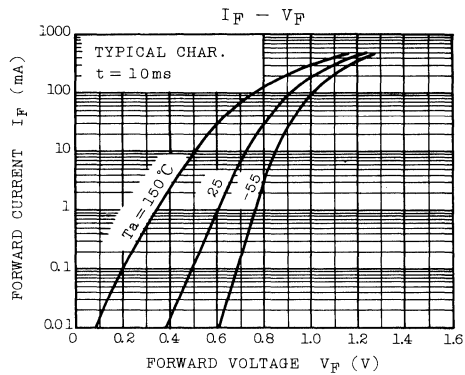
Weight : 0.14g

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|-----------------------|----------|---|------|------|------|---------|
| Forward Voltage | 1N914 | $V_F(1)$ $I_F=10mA$ | - | 0.75 | 1.0 | V |
| | 1N914A | $V_F(2)$ $I_F=20mA$ | - | 0.79 | 1.0 | V |
| | 1N914B | $V_F(3)$ $I_F=5mA$ | 0.62 | 0.67 | 0.72 | V |
| | | $V_F(4)$ $I_F=100mA, t=10ms$ | - | 0.9 | 1.0 | V |
| Reverse Current | $I_R(1)$ | $V_R=20V$ | - | - | 25 | nA |
| | $I_R(2)$ | $V_R=20V, T_a=150^\circ C$ | - | - | 50 | μA |
| | $I_R(3)$ | $V_R=75V$ | - | - | 5 | μA |
| Total Capacitance | C_T | $V_R=0, f=1MHz$ | - | 0.9 | 4.0 | pF |
| Reverse Recovery Time | t_{rr} | $I_F=10mA, V_R=6V$ $R_L=100\Omega, I_{rr}=1mA$ | - | 2.0 | 4.0 | ns |

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