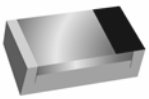
TAIWAN SEMICONDUCTOR

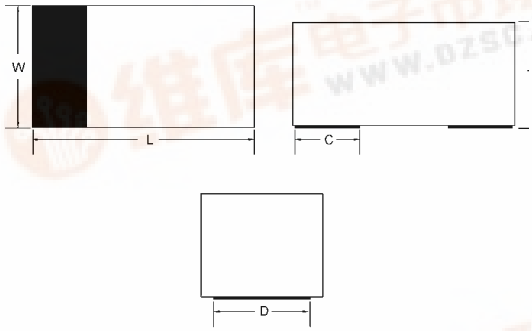
RoHS COMPLIANCE

# TSS40L

0.2Amp Surface Mount Schottky Barrier Diode

**1005**






## Features

- ✧ Designed for mounting on small surface
- ✧ Extremely thin/leadless package
- ✧ Low capacitance
- ✧ Low forward voltage drop
- ✧ High temperature soldering: 260°C/10 seconds at terminals
- ✧ Chip version in 1005

## Mechanical Data

- ✧ Case: 1005 Standard package, molded plastic
- ✧ Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- ✧ Polarity: Indicated by cathode band
- ✧ Mounting position: Any
- ✧ Package code: RW
- ✧ Weight: 0.006 gram (approximately)

| ITEM | 1005 |
|---|---|
| L | 0.102(2.60)<br>0.095(2.40) |
| W | 0.051(1.30)<br>0.043(1.10) |
| T | 0.035(0.90)<br>0.027(0.70) |
| C | 0.020(0.50)<br>Typical |
| D | 0.040(1.00)<br>Typical |

**Dimensions in inches and (millimeters)**

**Maximum Ratings** $T_A$=25 °C unless otherwise specified

| Type Number | Symbol | 1005 | Units |
|---|---|---|---|
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | 40 | V |
| Reverse Voltage | $V_R$ | 40 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 28 | V |
| Average Forward Current | $I_O$ | 200 | mA |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | $I_{FSM}$ | 600 | mA |
| Power Dissipation | Pd | 200 | mW |
| Forward Voltage IF=1.0mA<br>IF=40mA | $V_F$ | 0.38<br>1.0 | V |
| Reverse Leakage Current VR=30V | $I_R$ | 0.2 | uA |
| Typical capacitance between terminals VR=0V, f =1.0MHz reverse voltage | $C_J$ | 3 | pF |
| Reverse Recovery Time (IF=IR=10mA, Irr=0.1x IR, RL=100Ω) | Trr | 5 | nS |
| Junction Temperature | $T_J$ | -65 to + 125 | °C |
| Storage Temperature | $T_{STG}$ | -65 to + 125 | °C |

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RATINGS AND CHARACTERISTIC CURVES(TSS40L)

Fig. 1 - Forward characteristics

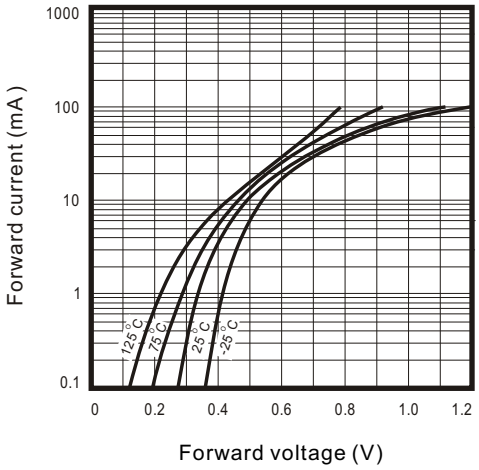


Fig. 2 - Reverse characteristics

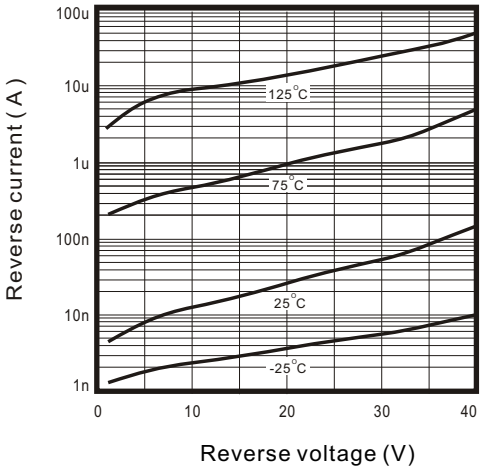


Fig.3 - Capacitance between terminals characteristics

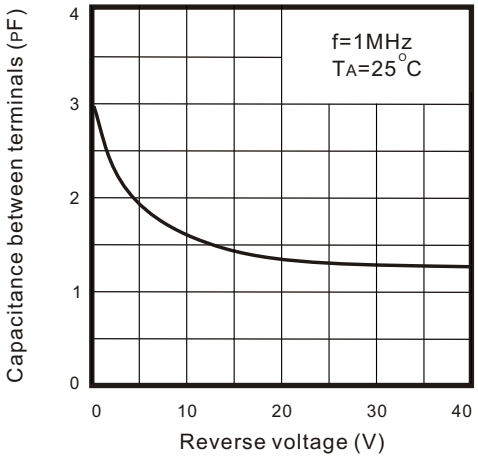


Fig.4 - Current derating curve