

High speed switching Chip Diodes

Features

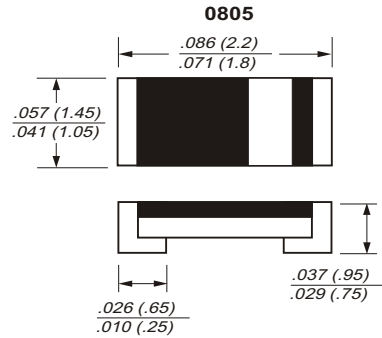
- Silicon Epitaxial Planar Diode
- Small surface mounting type(0805)
- High Speed($t_{rr}=1.2\text{nS Typ.}$)
- High reliability with high surge current handling capability

Mechanical Data

Case: 0805

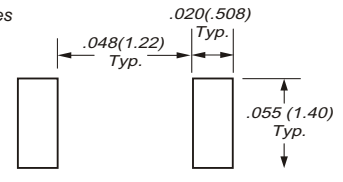
Weight: approx. 6 mg

Marking: Cathode band



Mounting Pad Layout

Dimensions in inches and (millimeters)



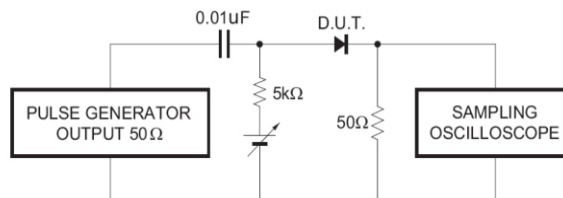
Absolute Maximum Ratings $T_{amb} = 25^\circ\text{C}$, unless otherwise specified

| Parameter | Symbol | Value | Unit |
|-------------------------|-------------|---------------|------------------|
| DC reverse voltage | V_R | 80 | V |
| Peak reverse voltage | V_{RM} | 90 | V |
| Peak forward current | I_{FM} | 225 | mA |
| Mean rectifying current | I_O | 100 | mA |
| Surge current (1s) | I_{surge} | 500 | mA |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | - 65 to + 175 | $^\circ\text{C}$ |

Electrical characteristics $T_{amb} = 25^\circ\text{C}$, unless otherwise specified

| Parameter | Symbol | Max. | Unit |
|---|----------|------|---------------|
| Forward voltage $I_F=100\text{mA}$ | V_F | 1.2 | V |
| Reverse current $V_R=80\text{V}$ | I_R | 0.1 | μA |
| Capacitance between terminals $V_R=0.5\text{V}, f=1\text{MHz}$ | C_T | 3.0 | pF |
| Reverse recovery time $V_R=6\text{V}, I_F=10\text{mA}, R_L=100\Omega$ | t_{rr} | 4 | ns |

Reverse recovery time (t_{rr}) measurement circuit





Typical Characteristics ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Fig.1 Forward Characteristics

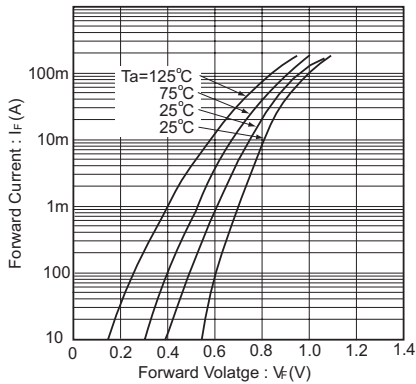


Fig.2 Reverse Characteristics

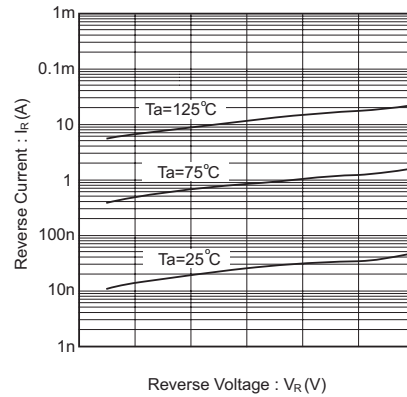


Fig.3 Capacitance Between Terminals Characteristics

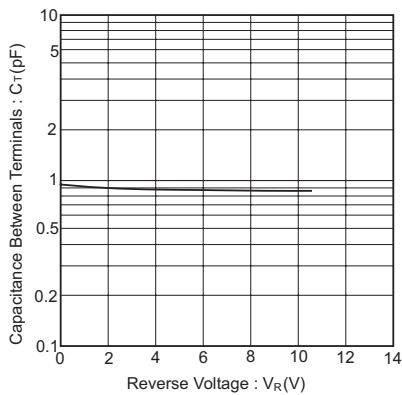


Fig.4 Reverse Recovery Time Characteristics

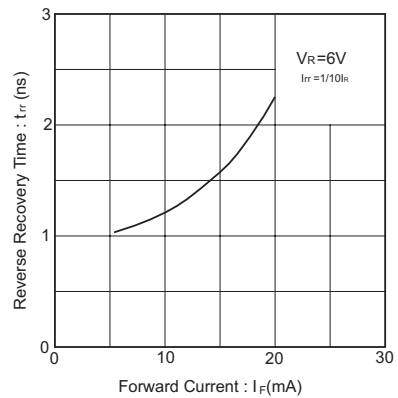
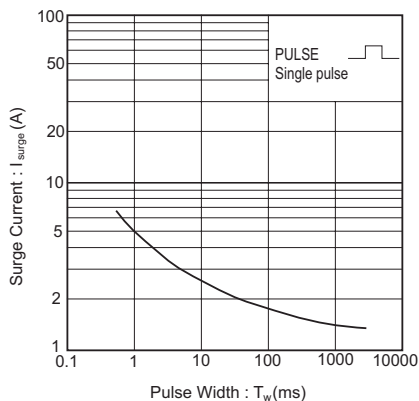


Fig.5 Surge Current Characteristics





Device outlook

Shanghai plant (front side)



Kunshan plant (front side)



Shanghai plant (back side)



Kunshan plant (back side)





Suggested thermal profiles for soldering processes

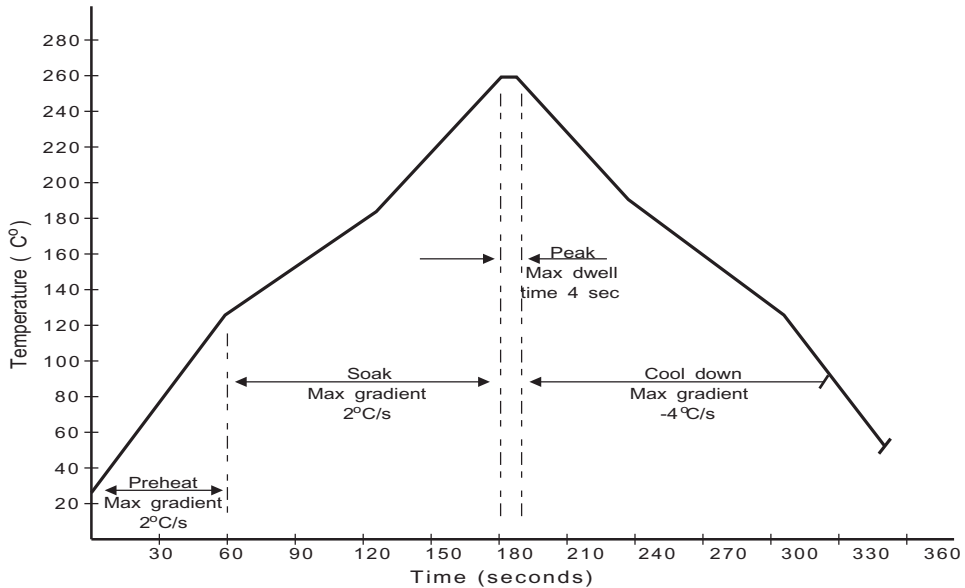


Fig.1 Typical Wave Soldering Thermal Profile

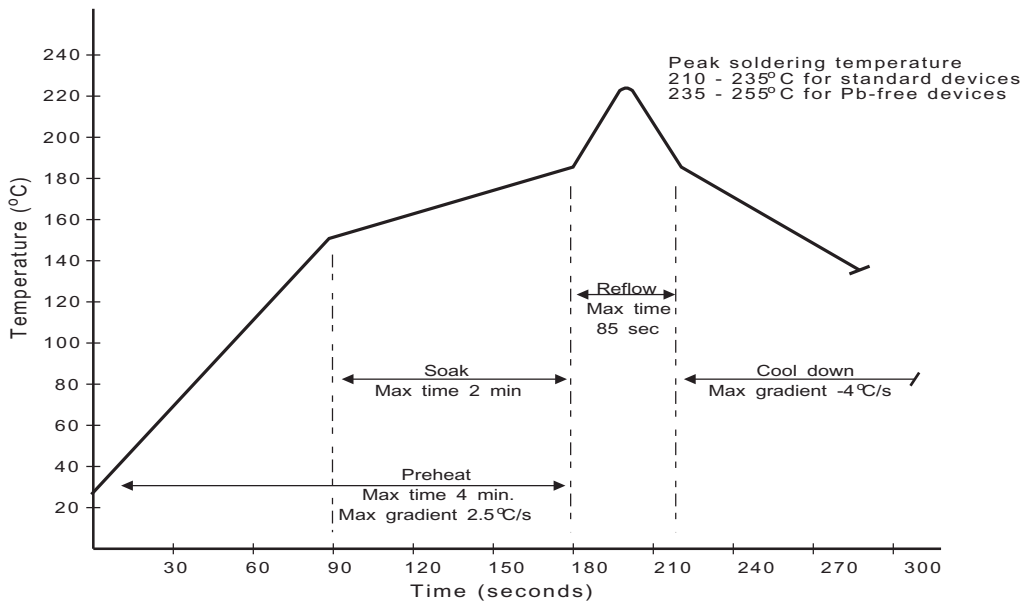


Fig.2 Typical IR Reflow Soldering Thermal Profile