



CHENMKO ENTERPRISE CO.,LTD

SURFACE MOUNT SWITCHING DIODE

VOLTAGE 350 Volts CURRENT 225 mAmpere

CHBD3004PT

Lead free devices

APPLICATION

- * Ultra high speed switching

FEATURE

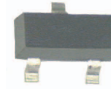
- * Small surface mounting type. (SOT-23)
- * High speed. ($T_{RR}=50$ nSec Typ.)
- * Suitable for high packing density.
- * Maximum total power dissipation is 350mW.
- * Peak forward current is 625mA.
- * High voltage capability.

CONSTRUCTION

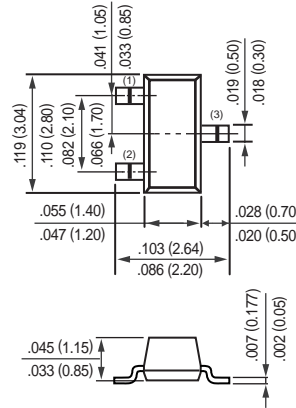
- * Silicon epitaxial planar

MARKING

- * LD6



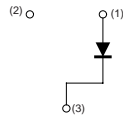
SOT-23



Dimensions in inches and (millimeters)

SOT-23

CIRCUIT



MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

| RATINGS | | SYMBOL | CHBD3004PT | UNITS |
|--|--------------------------|-----------------|-------------|--------------------|
| Maximum Recurrent Peak Reverse Voltage | | V_{RRM} | 350 | Volts |
| Maximum RMS Voltage | | V_{RMS} | 212 | Volts |
| Maximum DC Blocking Voltage | | V_{DC} | 300 | Volts |
| Maximum Average Forward Rectified Current | | I_o | 225 | mAmps |
| Peak Forward Surge Current | @ $T_P = 1\mu\text{Sec}$ | I_{FSM} | 4.0 | Amps |
| | @ $T_P = 1\text{Sec}$ | | 1.0 | |
| Typical Junction Capacitance between Terminal (Note 1) | | C_J | 5.0 | pF |
| Maximum Reverse Recovery Time (Note 2) | | T_{RR} | 50 | nSec |
| Typical Thermal Resistance | | $R_{\theta JA}$ | 357 | $^\circ\text{C/W}$ |
| Operation and Storage Temperature Range | | T_J, T_{STG} | -65 to +150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

| CHARACTERISTICS | | SYMBOL | CHBD3004PT | UNITS |
|---|-----------------------------|--------|------------|-------|
| Reverse Breakdown Voltage at $I_R = 150\mu\text{A}$ | | BV_R | 350 Min. | Volts |
| Maximum Instantaneous Forward Voltage at $I_F = 100\text{mA}$ | | V_F | 1.0 | Volts |
| Maximum Average Reverse Current at $V_R = 240\text{V}$ | @ $T_A = 25^\circ\text{C}$ | I_R | 100 | nAmps |
| | @ $T_A = 150^\circ\text{C}$ | | 100 | uAmps |

- NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 0 volts.
 2. Measured at applied forward current of 30mA ,reverse current of 30mA , $R_L=100 \Omega$ and recovery to $I_{RR}=-3\text{mA}$.
 3. ESD sensitive product handling required.

2004-09

RATING CHARACTERISTIC CURVES (CHBD3004PT)

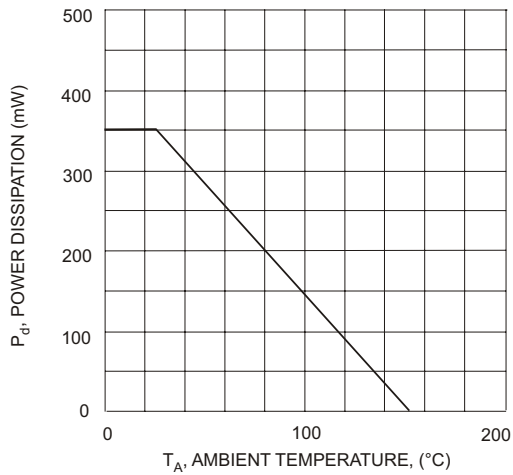


Fig. 1 Power Derating Curve, total package

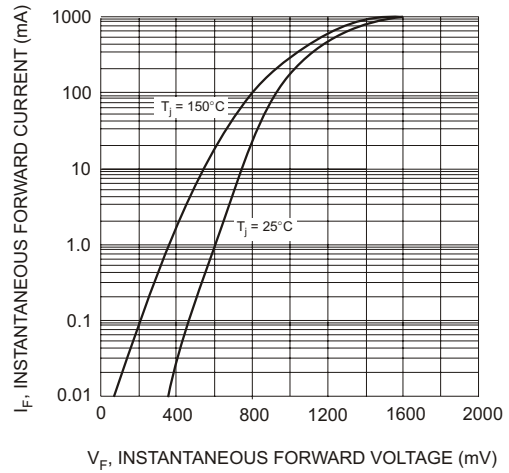


Fig. 2 Typical Forward Characteristics, per element

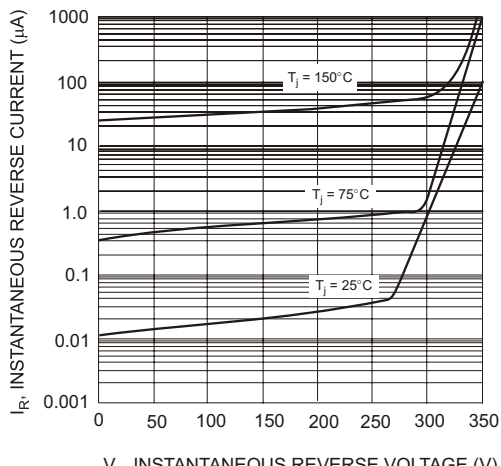


Fig. 3 Typical Reverse Characteristics, per element

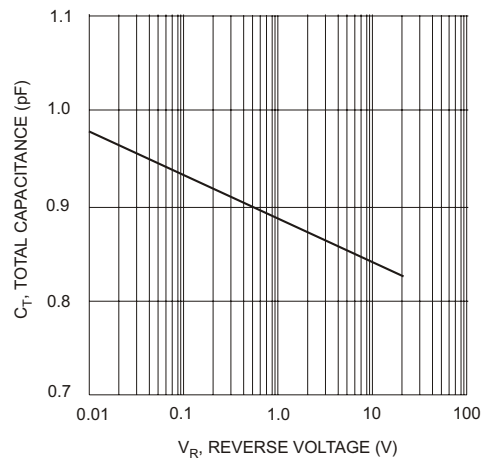


Fig. 4 Typical Total Capacitance vs. Reverse Voltage, per element