



# CHENMKO ENTERPRISE CO.,LTD

## SURFACE MOUNT SWITCHING DIODE

VOLTAGE 350 Volts CURRENT 225 mAmpere

CHBD3004APT

Lead free devices

### APPLICATION

- \* Ultra high speed switching

### FEATURE

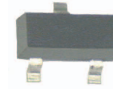
- \* Small surface mounting type. (SOT-23)
- \* High speed. ( $T_{RR}=50$  nSec Typ.)
- \* Suitable for high packing density.
- \* Maximum total power dissipation is 350mW.
- \* Peak forward current is 625mA.
- \* High voltage capability.

### CONSTRUCTION

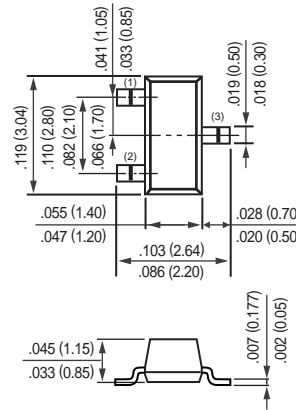
- \* Silicon epitaxial planar

### MARKING

- \* LD7



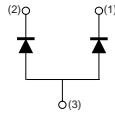
SOT-23



Dimensions in inches and (millimeters)

SOT-23

### CIRCUIT



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

RATINGS		SYMBOL	CHBD3004APT	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	CHBD3004APT	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 ( CHBD3004APT )

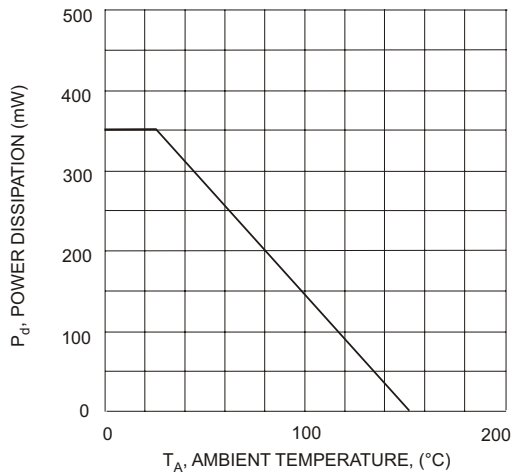


Fig. 1 Power Derating Curve, total package

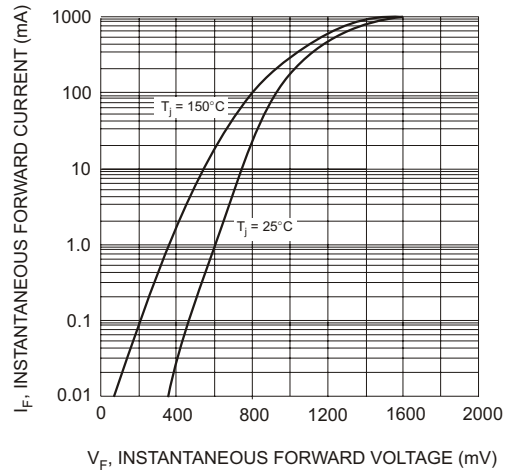


Fig. 2 Typical Forward Characteristics, per element

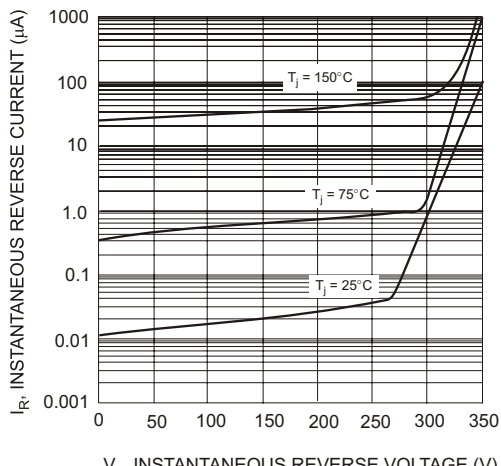


Fig. 3 Typical Reverse Characteristics, per element

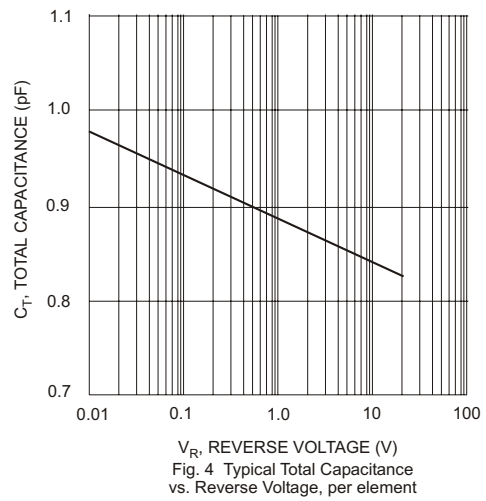


Fig. 4 Typical Total Capacitance vs. Reverse Voltage, per element