



# CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

## SURFACE MOUNT SWITCHING DIODE

VOLTAGE 300 Volts CURRENT 0.2 Ampere

CHBD2004CGP

### APPLICATION

\* Ultra high speed switching

### FEATURE

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

### CONSTRUCTION

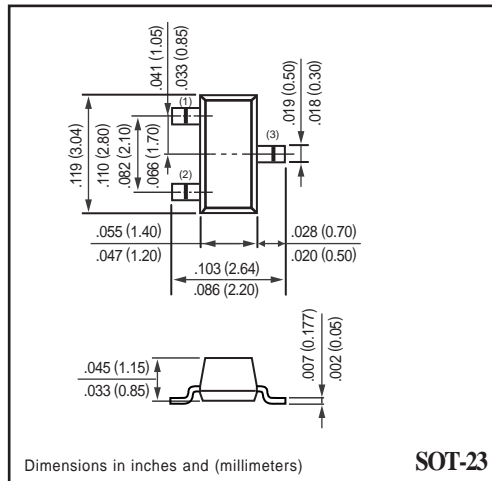
\* Silicon epitaxial planar

### MARKING

\* LK8

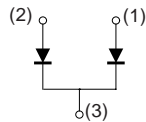


SOT-23



SOT-23

### CIRCUIT



### MAXIMUM RATINGS ( At TA = 25°C unless otherwise noted )

RATINGS		SYMBOL	CHBD2004CGP	UNITS
Maximum Recurrent Peak Reverse Voltage		VRRM	300	Volts
Maximum RMS Voltage		VRMS	210	Volts
Maximum DC Blocking Voltage		VDC	240	Volts
Maximum Average Forward Rectified Current		Io	0.2	Amps
Peak Forward Surge Current at 1mSec.	@TP= 1mSec	IFSM	4.0	Amps
	@TP= 1Sec		1.0	
Typical Junction Capacitance between Terminal (Note 1)		CJ	5.0	pF
Maximum Reverse Recovery Time (Note 2)		TRR	50	nSec
Typical Thermal Resistance		RθJA	357	°C/W
Operation and Storage Temperature Range		TJ,TSTG	-65 to +150	°C

### ELECTRICAL CHARACTERISTICS ( At TA = 25°C unless otherwise noted )

CHARACTERISTICS		SYMBOL	CHBD2004CGP	UNITS
Reverse Breakdown Voltage at IR= 100uA		BVR	300 Min.	Volts
Maximum Instantaneous Forward Voltage at IF= 100mA		VF	1.0	Volts
Maximum Average Reverse Current at VR= 240V	@TA= 25°C	IR	100	nAmps
	@TA= 150°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 ,RL=100 Ω and recovery to IRR=-3mA.  
 3. ESD sensitive product handling required.

## RATING CHARACTERISTIC CURVES ( CHBD2004CGP)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURRENT

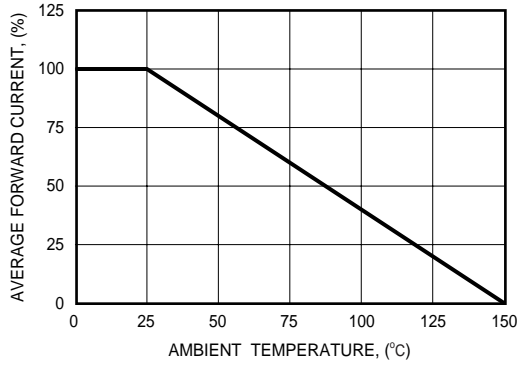


FIG. 2 - FORWARD CHARACTERISTICS

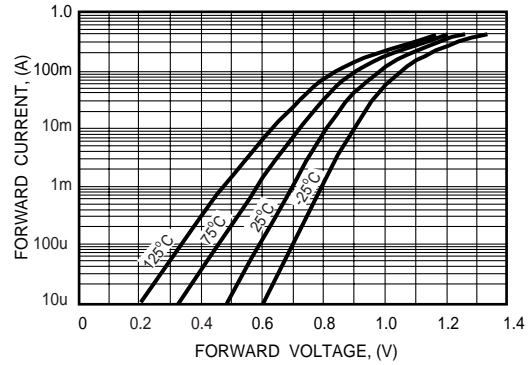


FIG. 3 - REVERSE CHARACTERISTICS

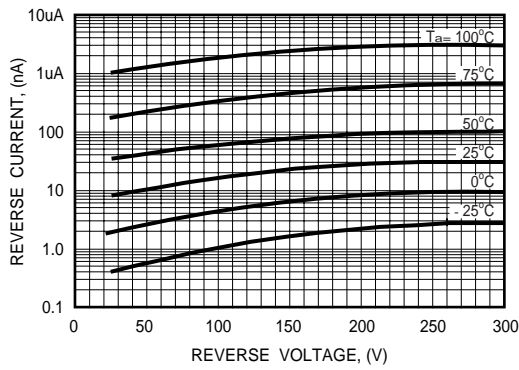


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

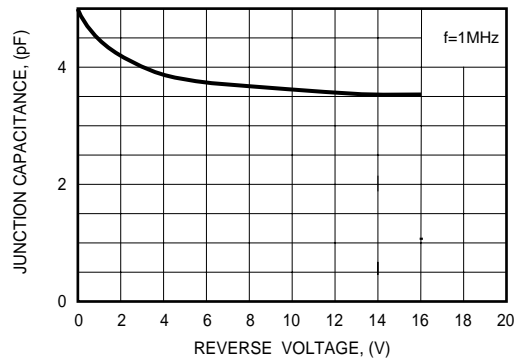


FIG. 5 - REVERSE RECOVERY TIME

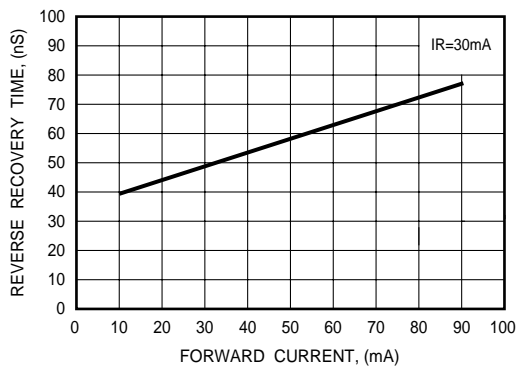


FIG. 6 - REVERSE RECOVERY TIME MEASUREMENT CIRCUIT

