



CHENMKO ENTERPRISE CO.,LTD

BAT54SPT

SURFACE MOUNT SCHOTTKY DIODE

VOLTAGE 30 Volts CURRENT 0.2 Ampere

Lead free devices

APPLICATION

- * Ultra high speed switching

FEATURE

- * Small surface mounting type. (SOT-23)
- * High speed. ($T_{RR}=2.5\text{nSec}$ Typ.)
- * Suitable for high packing density.
- * Maximum total power dissipation is 230mW.
- * Peak forward current is 300mA.

CONSTRUCTION

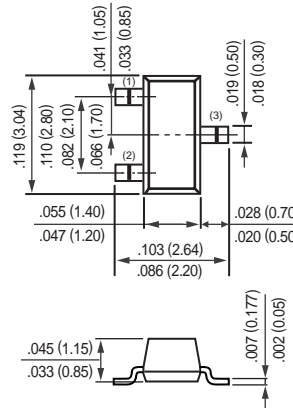
- * Silicon epitaxial planar

MARKING

- * LD3



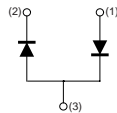
SOT-23



Dimensions in inches and (millimeters)

SOT-23

CIRCUIT



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

RATINGS	SYMBOL	BAT54S	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	Volts
Maximum RMS Voltage	V_{RMS}	21	Volts
Maximum DC Blocking Voltage	V_{DC}	30	Volts
Maximum Average Forward Rectified Current	I_o	0.2	Amps
Peak Forward Surge Current at 1Sec.	I_{FSM}	0.6	Amps
Typical Junction Capacitance between Terminal (Note 1)	C_J	10	pF
Maximum Reverse Recovery Time (Note 2)	T_{RR}	5.0	nSec
Maximum Operating Temperature Range	T_J	+150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$
Thermal Resistance, Junction to Ambient Air (Note 3)	$R_{\theta JA}$	500	$^\circ\text{C/W}$

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

CHARACTERISTICS	SYMBOL	BAT54S	UNITS
Maximum Instantaneous Forward Voltage at $I_F = 100\text{mA}$	V_F	1.0	Volts
Maximum Average Reverse Current at $V_R = 25\text{V}$	I_R	2.0	μAmps

- NOTES :
1. Measured at 1.0 MHz and applied reverse voltage of 1.0 volts.
 2. Measured at applied forward current of 10mA and reverse current of 10mA.
 3. Part mounted on FR-4 board with recommended pad layout.
 4. ESD sensitive product handling required.

2003-4

RATING CHARACTERISTIC CURVES (BAT54SPT)

FIG. 1 - FORWARD CHARACTERISTICS

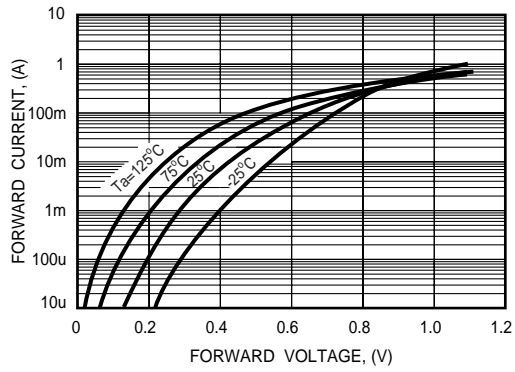


FIG. 2 - REVERSE CHARACTERISTICS

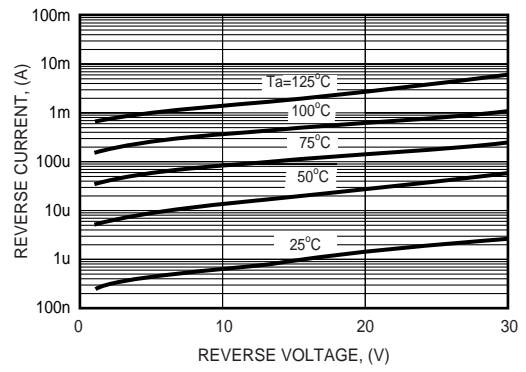


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

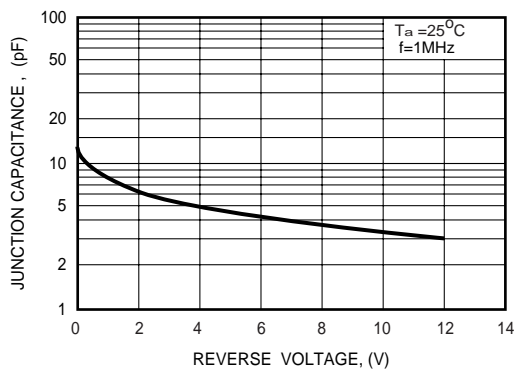


FIG. 4 - TYPICAL FORWARD CURRENT DERATING CURVE

