



CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

**SURFACE MOUNT
SCHOTTKY DIODE**

VOLTAGE 30 Volts CURRENT 200 mAmperes

BAT54TSGP

APPLICATION

- * Ultra high speed switching

FEATURE

- * Small surface mounting type. (SC-75/SOT-416)
- * High speed. ($T_{RR}=2.5\text{nSec}$ Typ.)
- * Suitable for high packing density.
- * Maximum total power dissipation is 150mW.
- * Peak forward current is 300mA.

CONSTRUCTION

- * Silicon epitaxial planar

WEIGHT

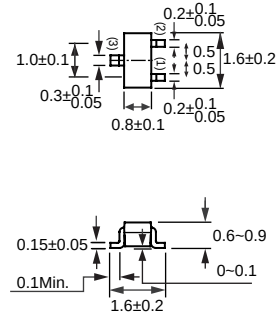
- * 0.002 grams (Approx.)

MARKING

- * TV



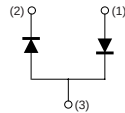
SC-75/SOT-416



Dimensions in millimeters

SC-75/SOT-416

CIRCUIT



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

RATINGS	SYMBOL	BAT54TSGP	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	200	mAmps
Peak Forward Surge Current at 1Sec.	I_{FSM}	600	mAmps
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	$^\circ\text{C}$

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

CHARACTERISTICS	SYMBOL	BAT54TSGP	UNITS
Maximum Instantaneous Forward Voltage @ $I_F = 0.1\text{mA}$ @ $I_F = 1.0\text{mA}$ @ $I_F = 10.0\text{mA}$ @ $I_F = 30.0\text{mA}$ @ $I_F = 100\text{mA}$	V_F	240 320 400 500 1000	mVolts
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. ESD sensitive product handling required.

2003-9

RATING CHARACTERISTIC CURVES (BAT54TSGP)

FIG. 1 - FORWARD CHARACTERISTICS

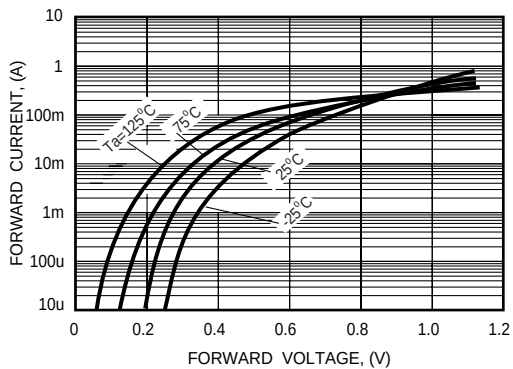


FIG. 2 - REVERSE CHARACTERISTICS

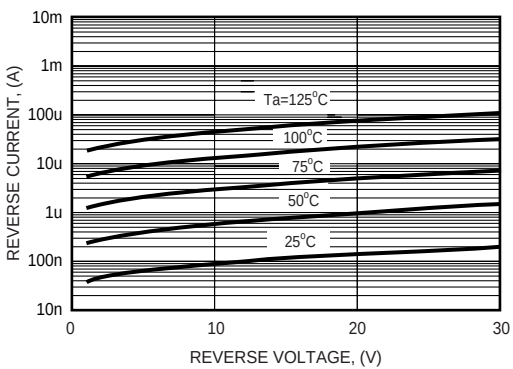


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

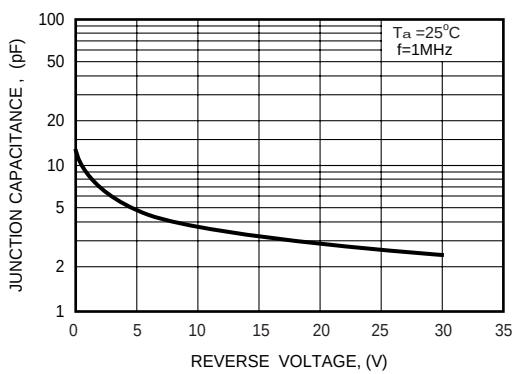


FIG. 4 - TYPICAL FORWARD CURRENT DERATING CURVE

