

**SCHOTTKY BARRIER DIODE**

**FEATURES**

- \* Very low turn-on voltage
- \* Fast switching
- \* For protecting the P/N junction guard ring against excessive voltage, such as electrostatic dis-charges
- \* Surface mounting device

**MECHANICAL DATA**

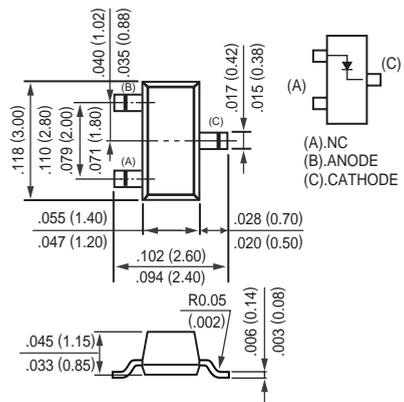
- \* Epoxy : Device has UL flammability classification 94V-0
- \* Weight : approx. 0.008g

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.



**SOT-23**



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

RATINGS	SYMBOL	BAT54	UNITS
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	30	Volts
Forward Continuous Current	I <sub>F</sub>	200	mA
Repetitive Peak Forward Current	I <sub>FRM</sub>	300	mA
Surge Forward Current	I <sub>FSM</sub>	600	mA
Total Power Dissipation	P <sub>D</sub>	230	m W
Junction Temperature	T <sub>J</sub>	125	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to + 150	°C

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

CHARACTERISTICS	SYMBOL	Value	Unit	Testing Condition
Reverse Breakdown Voltage	$V(\text{BR})_R$	30	V	$I_r=10\mu\text{A}$
Forward Voltage	$V_F(1)$	240	mV	$I_f=0.1\text{mA}$
	$V_F(2)$	320	mV	$I_f=1\text{mA}$
	$V_F(3)$	400	mV	$I_f=10\text{mA}$
	$V_F(4)$	500	mV	$I_f=30\text{mA}$
	$V_F(5)$	1000	mV	$I_f=100\text{mA}$
Reverse Current	$I_R$	2.0	$\mu\text{A}$	$V_r=25\text{V}$
Total Capacitance	$C_T$	10	pF	$V_r=1\text{V}, f=1\text{MHz}$
Reverse Recovery Time	$T_{rr}$	5	nS	$I_f=I_r=10\text{mA}, R_L=100\text{ohm}$ , measured at $i_r=1\text{mA}$

## CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT & FORWARD VOLTAGE

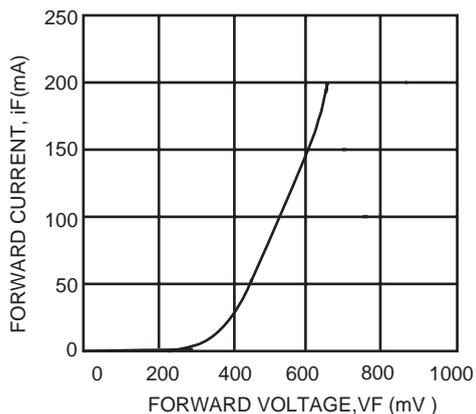


FIG. 2 - DIODE CAPACITANCE

