

**SMALL SIGNAL DIODE**

**FEATURES**

- \* Silicon epitaxial planar diode
- \* Fast switching
- \* Surface mounting device
- \* "A7" Device marking

**MECHANICAL DATA**

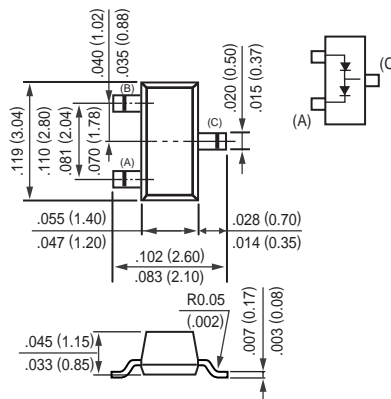
- \* Epoxy : Device has UL flammability classification 94V-0
- \* Weight : approx. 0.008g

**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**



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	BAV99	UNITS
Repetitive Peak Reverse Voltage	$V_{RRM}$	70	Volts
Forward Continuous Current at $T_A=25^\circ\text{C}$	$I_F$	215	mA
Repetitive Peak Forward Current at $T_A=25^\circ\text{C}$	$I_{FRM}$	450	mA
Surge Forward Current at $t_p < 1$ ms, at $T_A=25^\circ\text{C}$	$I_{FSM}$	1000	mA
Total Power Dissipation	$P_D$	250	m W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to + 150	$^\circ\text{C}$

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

CHARACTERISTICS	SYMBOL	Value	Unit	Testing Condition
Reverse Breakdown Voltage	V(BR)R	70	V	I <sub>r</sub> =100μA
Forward Voltage	V <sub>F</sub> (1)	715	mV	I <sub>f</sub> =1mA
	V <sub>F</sub> (2)	855	mV	I <sub>f</sub> =10mA
	V <sub>F</sub> (3)	1000	mV	I <sub>F</sub> =50mA
	V <sub>F</sub> (4)	1250	mV	I <sub>f</sub> =150mA
Reverse Current	I <sub>R</sub>	2.5	μA	V <sub>r</sub> =70V
Total Capacitance	C <sub>T</sub>	1.5	pF	V <sub>r</sub> =0V, F=1MHZ
Reverse Recovery Time	T <sub>rr</sub>	6	nS	I <sub>f</sub> =I <sub>r</sub> =10mA, R <sub>L</sub> =100 ohm, measured at i <sub>r</sub> =1mA

## CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT & FORWARD VOLTAGE

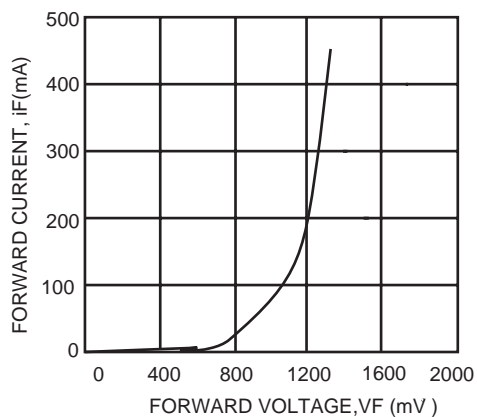
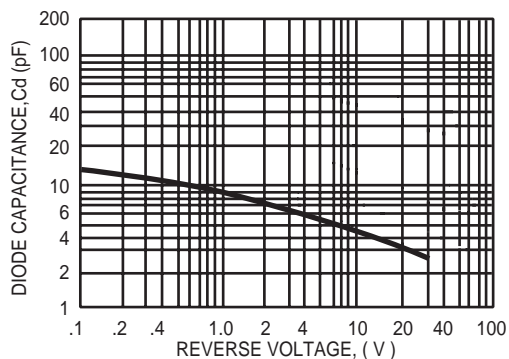


FIG. 2 - DIODE CAPACITANCE



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