



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

SURFACE MOUNT

FAST SWITCHING DIODE ARRAY

VOLTAGE 75 Volts CURRENT 150 mAmpere

BAV16BPT

APPLICATION

- * Ultra high speed switching
- * For general purpose switching application

FEATURE

- * Small surface mounting type. (SOD-123)
- * High speed. ($T_{RR}=1.5nSec$ Typ.)
- * Suitable for high packing density.
- * Maximum total power dissipation is 200mW.
- * Peak forward current is 300mA.
- * Lead free devices

CONSTRUCTION

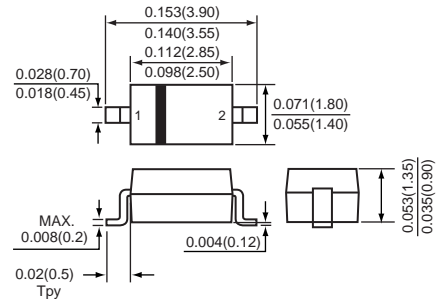
- * Silicon epitaxial planar

MARKING

- * VA



SOD-123



Dimensions in inches and (millimeters)

SOD-123

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%.

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

RATINGS	SYMBOL	BAV16BPT	UNITS
Maximum Non-Repetitive Peak Reverse Voltage	V_{RM}	100	Volts
Maximum RMS Voltage	V_{RMS}	53	Volts
Maximum Repetitive Peak Reverse and DC Blocking Voltage	V_{RRM}, V_{DC}	75	Volts
Maximum Average Forward Rectified Current	I_O	150	mAmps
Non-Repetitive Peak Forward Surge Current	@ $t=1.0\mu Sec$	2.0	Amps
	@ $t=1.0Sec$	1.0	
Typical Junction Capacitance between Terminal (Note 1)	C_J	2.0	pF
Maximum Reverse Recovery Time (Note 2)	T_{RR}	4.0	nSec
Thermal Resistance Junction to Ambient (Note 3)	$R_{\theta JA}$	625	$^\circ C/W$
Maximum Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^\circ C$

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

CHARACTERISTICS	SYMBOL	BAV16BPT	UNITS
Maximum Instantaneous Forward Voltage	@ $I_F=1.0mA$	0.715	Volts
	@ $I_F=10mA$	0.855	
	@ $I_F=50mA$	1.00	
	@ $I_F=150mA$	1.25	
Maximum Average Reverse Current	@ $V_R=20V$	25	nAmps
	@ $V_R=75V$	1.0	uAmps
	@ $V_R=25V, T_J=150^\circ C$	30	uAmps
	@ $V_R=75V, T_J=150^\circ C$	50	uAmps

- NOTES :
1. Measured at 1.0 MHz and applied reverse voltage of 0 volts.
 2. Measured at applied forward current of 10mA and reverse current of 10mA.
 3. Device mounted on FR-4 by 1 inch X 0.85 inch X 0.062 inch
 4. ESD sensitive product handling required.

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RATING CHARACTERISTIC CURVES (BAV16BPT)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

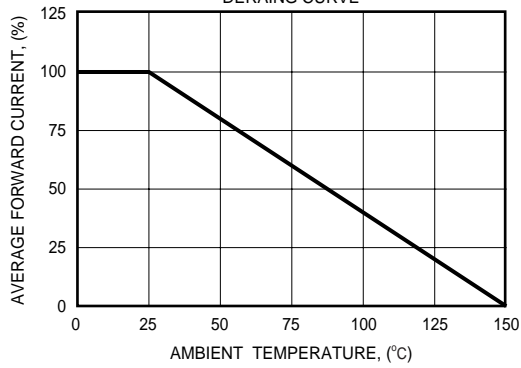


FIG. 2 - FORWARD CHARACTERISTICS

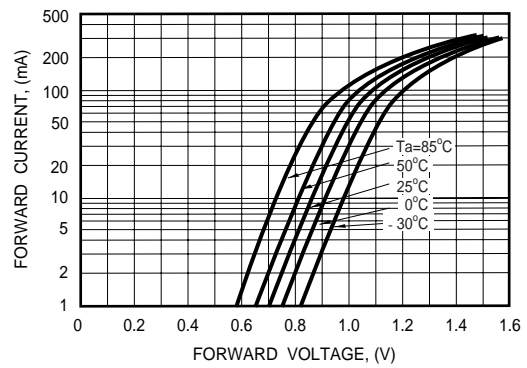


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

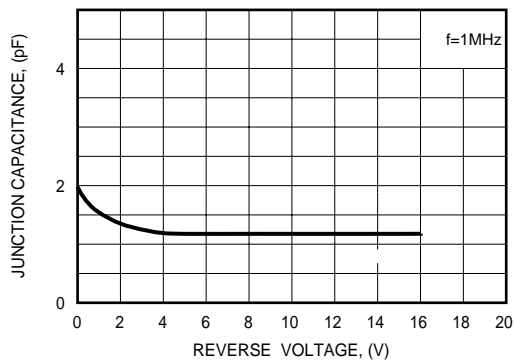


FIG. 4 - REVERSE CHARACTERISTICS

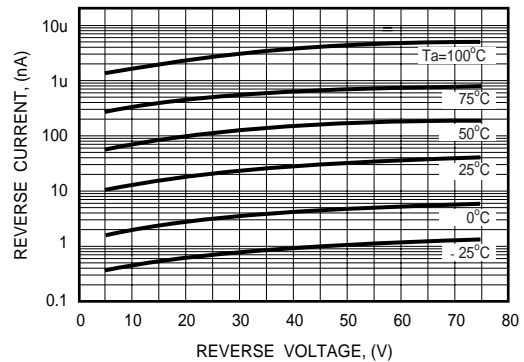


FIG. 5 - REVERSE RECOVERY TIME

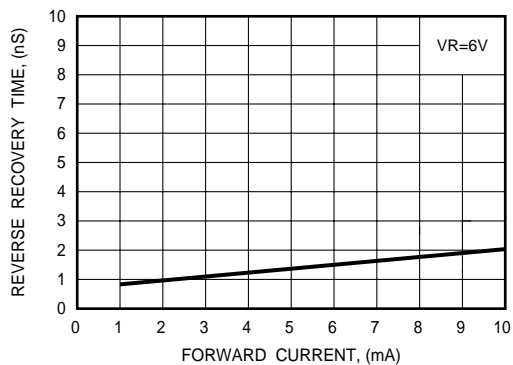


FIG. 6 - REVERSE RECOVERY TIME MEASUREMENT CIRCUIT

