



CHENMKO ENTERPRISE CO.,LTD

SURFACE MOUNT

FAST SWITCHING DIODE ARRAY

VOLTAGE 75 Volts CURRENT 150 mAmpere

BAS16VTWPT

Lead free devices

APPLICATION

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

FEATURE

- * Small surface mounting type. (SOT-563)
- * High speed. ($T_{RR} = 1.5\text{nSec Typ.}$)
- * Suitable for high packing density.
- * Maximum total power dissipation is 200mW.
- * Peak forward current is 300mA.
- * Lead free devices

CONSTRUCTION

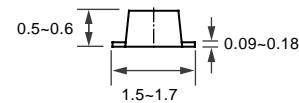
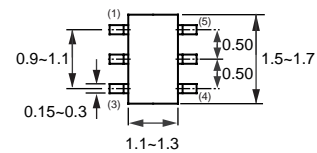
- * Silicon epitaxial planar

MARKING

- * DA



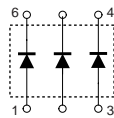
SOT-563



Dimensions in millimeters

SOT-563

CIRCUIT



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

RATINGS	SYMBOL	BAS16VTWPT	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	@ $t = 1.0\mu\text{Sec}$	2.0	Amps
	@ $t = 1.0\text{Sec}$	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	$^\circ\text{C/W}$
Maximum Operating and Storage Temperature Range	$T_{J, T_{STG}}$	-65 to +150	$^\circ\text{C}$

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

CHARACTERISTICS	SYMBOL	BAS16VTWPT	UNITS
Maximum Instantaneous Forward Voltage	@ $I_F = 1.0\text{mA}$	0.715	Volts
	@ $I_F = 10\text{mA}$	0.855	
	@ $I_F = 50\text{mA}$	1.00	
	@ $I_F = 150\text{mA}$	1.25	
Maximum Average Reverse Current	@ $V_R = 20\text{V}$	25	nAmps
	@ $V_R = 75\text{V}$	1.0	uAmps
	@ $V_R = 25\text{V}, T_J = 150^\circ\text{C}$	30	uAmps
	@ $V_R = 75\text{V}, T_J = 150^\circ\text{C}$	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.

2006-12

RATING CHARACTERISTIC CURVES (BAS16VTWPT)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

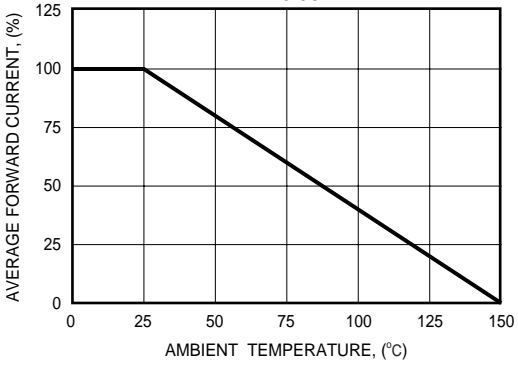


FIG. 2 - FORWARD CHARACTERISTICS

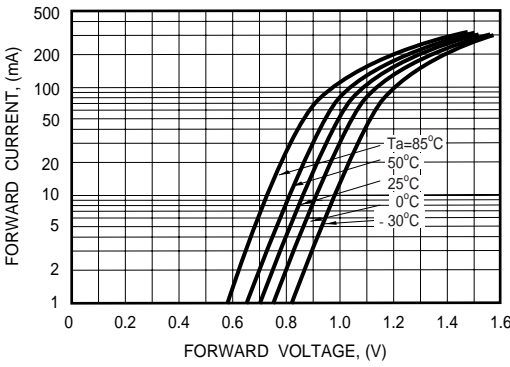


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

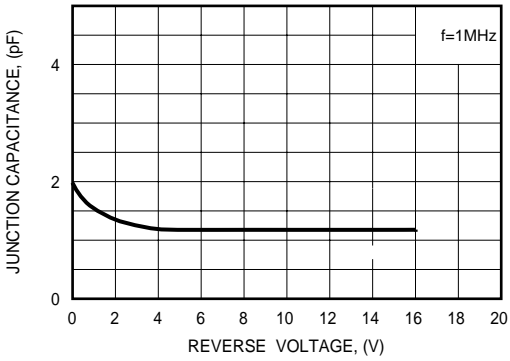


FIG. 4 - REVERSE CHARACTERISTICS

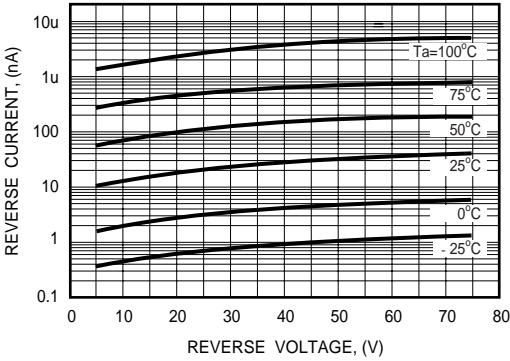


FIG. 5 - REVERSE RECOVERY TIME

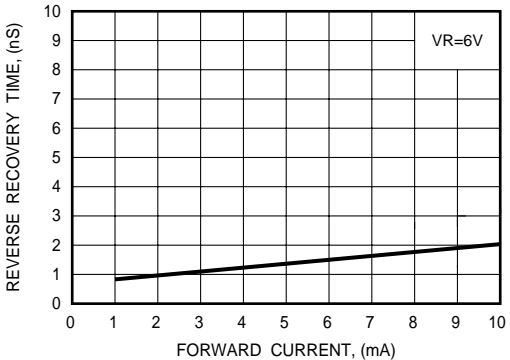


FIG. 6 - REVERSE RECOVERY TIME MEASUREMENT CIRCUIT

