# CHENMKO ENTERPRISE CO.,LTD

**BAV70DPT**

## SURFACE MOUNT

FAST SWITCHING DIODE ARRAY

VOLTAGE 75 Volts CURRENT 150 mAmpere

Lead free devices

### APPLICATION

* Ultra high speed switching
* For general purpose switching application

### FEATURE

* Small surface mounting type. (SC-88/SOT-363)
* High speed. ($T_{RR}$=1.5nSec Typ.)
* Suitable for high packing density.
* Maximum total power disspation is 200mW.
* Peak forward current is 300mA.

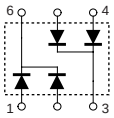
### CONSTRUCTION

* Silicon epitaxial planar

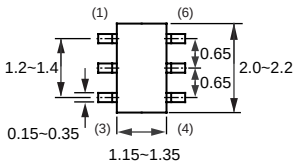
### MARKING

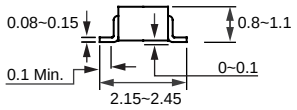
* KJA

### CIRCUIT




SC-88/SOT-363




Dimensions in millimeters

SC-88/SOT-363

**MAXIMUM RATINGES** ( At $T_A$ = 25°C unless otherwise noted )

| RATINGS | | SYMBOL | BAV70DPT | 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=1.0uSec<br>@t=1.0Sec | $I_{FSM}$ | 2.0<br>1.0 | Amps |
| 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 | °C/W |
| Maximum Operating and Storage Temperature Range | | $T_J$,$T_{STG}$ | -65 to +150 | °C |

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

| CHARACTERISTICS | | SYMBOL | BAV70DPT | UNITS |
|---|---|---|---|---|
| Maximum Instantaneous Forward Voltage | @$I_F$=1.0mA<br>@$I_F$=10mA<br>@$I_F$=50mA<br>@$I_F$=150mA | $V_F$ | 0.715<br>0.855<br>1.00<br>1.25 | Volts |
| Maximum Average Reverse Current | @$V_R$=20V<br>@$V_R$=75V<br>@$V_R$=25V, $T_J$=150°C<br>@$V_R$=75V, $T_J$=150°C | $I_R$ | 25<br>2.5<br>30<br>50 | nAmps<br>uAmps<br>uAmps<br>uAmps |

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NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 0 volts.
2. Measured at applied froward 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.

# RATING CHARACTERISTIC CURVES ( BAV70DPT )

FIG. 1 - TYPICAL FORWARD CURRENT DERAING CURVE

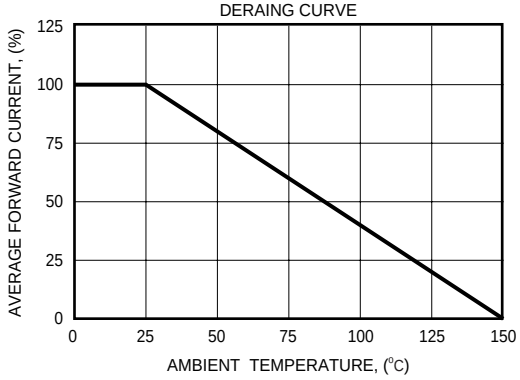


FIG. 2 - FORWARD CHARACTERISTICS

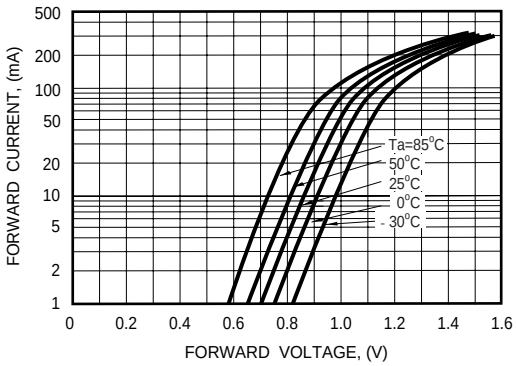


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

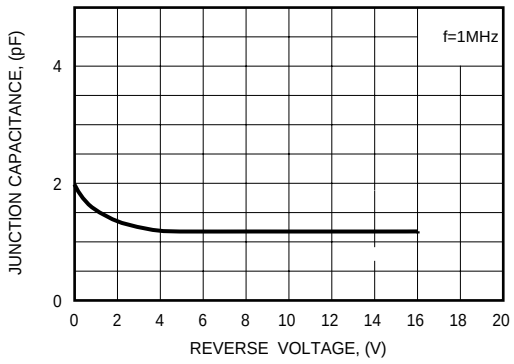


FIG. 4 - REVERSE CHARACTERISTICS

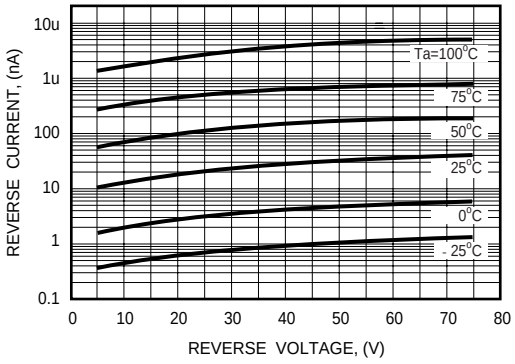


FIG. 5 - REVERSE RECOVERY TIME

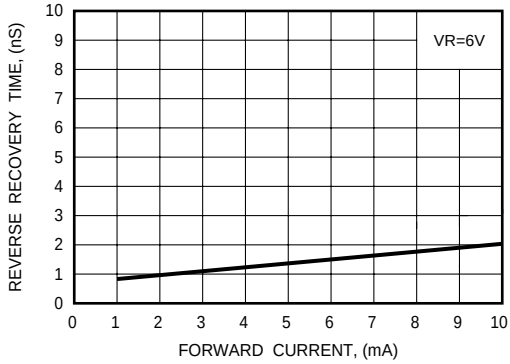


FIG. 6 - REVERSE RECOVERY TIME MEASUREMENT CIRCUIT