

## Surface Mount Switching Multi-Chip Diode Array

**(Pb)** Lead(Pb)-Free

### Features:

- \* For General Purpose Switching Applications
- \* Fast Switching Speed
- \* High Conductance
- \* Easily Connected As Full Wave Bridge

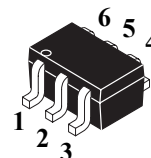
### Mechanical Data:

- \* Case : SOT-363
- \* Case Material : Molded Plastic. UL Flammability Classification Rating 94V-0
- \* Moisture Sensitivity : Level 1 per J-STD-020C
- \* Terminals : Solderable per MIL-STD-202, Method 208
- \* Polarity : See Diagram
- \* Weight : 0.006 grams(appro)

**MULTI-CHIP DIODES**

**150m AMPERES**

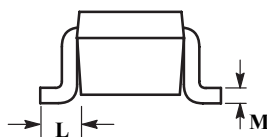
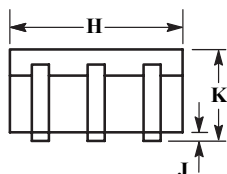
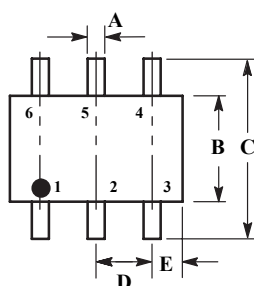
**75 VOLTS**



**SOT-363**

## SOT-363 Outline Dimensions

Unit:mm



**SOT-363**

| Dim | Min      | Max  |
|-----|----------|------|
| A   | 0.10     | 0.30 |
| B   | 1.15     | 1.35 |
| C   | 2.00     | 2.20 |
| D   | 0.65 REF |      |
| E   | 0.30     | 0.40 |
| H   | 1.80     | 2.20 |
| J   | -        | 0.10 |
| K   | 0.80     | 1.10 |
| L   | 0.25     | 0.40 |
| M   | 0.10     | 0.25 |

## Maximum Ratings (T<sub>A</sub>=25°C Unless otherwise noted)

| Characteristic                                                                         | Symbol                                                | Value       | Unit |
|----------------------------------------------------------------------------------------|-------------------------------------------------------|-------------|------|
| Non-Repetitive Peak Reverse Voltage                                                    | V <sub>RM</sub>                                       | 100         | V    |
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | V <sub>RRM</sub><br>V <sub>RM</sub><br>V <sub>R</sub> | 75          | V    |
| RMS Reverse Voltage                                                                    | V <sub>R(RSM)</sub>                                   | 53          | V    |
| Average Rectified Output Current <sup>(1,3)</sup>                                      | I <sub>O</sub>                                        | 150         | mA   |
| Non-Repetitive Forward Current<br>@t=1.0μs<br>@t=1.0s                                  | I <sub>FSM</sub>                                      | 2.0<br>1.0  | A    |
| Power Dissipation <sup>(1,3)</sup>                                                     | P <sub>D</sub>                                        | 200         | mW   |
| Thermal Resistance, Junction to Ambient Air <sup>(1,3)</sup>                           | R <sub>θJA</sub>                                      | 625         | °C/W |
| Junction & Storage Temperature Range                                                   | T <sub>j</sub> ,T <sub>stg</sub>                      | -65 to +150 | °C   |

## Electrical Characteristics (T<sub>A</sub>=25°C Unless otherwise noted)

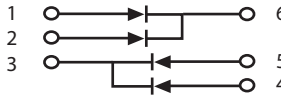
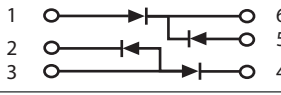
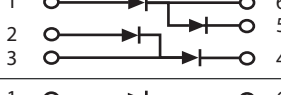
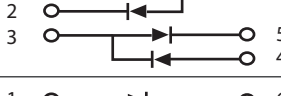
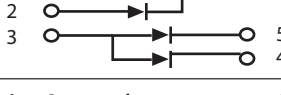
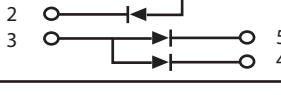
| Characteristic                                                                                                                 | Symbol             | Min | Typ | Max                        | Unit     |
|--------------------------------------------------------------------------------------------------------------------------------|--------------------|-----|-----|----------------------------|----------|
| Reverse Breakdown Voltage <sup>(2)</sup><br>I <sub>R</sub> =2.5μA                                                              | V <sub>(BR)R</sub> | 75  | -   | -                          | A        |
| Reverse Current <sup>(2)</sup><br>V <sub>R</sub> =75V<br>V <sub>R</sub> =20V                                                   | I <sub>R</sub>     | -   | -   | 2.5<br>25                  | μA<br>nA |
| Forward Voltage <sup>(2)</sup><br>I <sub>F</sub> =1mA<br>I <sub>F</sub> =10mA<br>I <sub>F</sub> =50mA<br>I <sub>F</sub> =150mA | V <sub>F</sub>     | -   | -   | 715<br>855<br>1000<br>1250 | mA       |
| Total Capacitance<br>(V <sub>R</sub> =0V, f=1.0MHz)                                                                            | C <sub>D</sub>     | -   | -   | 2.0                        | pF       |
| Reverse Recover Time<br>I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω | T <sub>rr</sub>    | -   | -   | 4.0                        | nS       |

Notes: 1. Device mounted on FR-4 PC board with recommended pad layout.

2. Short duration test pulse used to minimize self-heating effect.

3. One or more diodes loaded.

## Device Marking

| Item     | Marking | Equivalent Circuit diagram                                                          |
|----------|---------|-------------------------------------------------------------------------------------|
| BAV70DW  | KJA     |  |
| BAV756DW | KCA     |  |
| BAV99BRW | KGJ     |  |
| BAV99DW  | KJG     |  |
| BAW567DW | KAC     |  |
| BAW56DW  | KJC     |  |

## Typical Characteristics

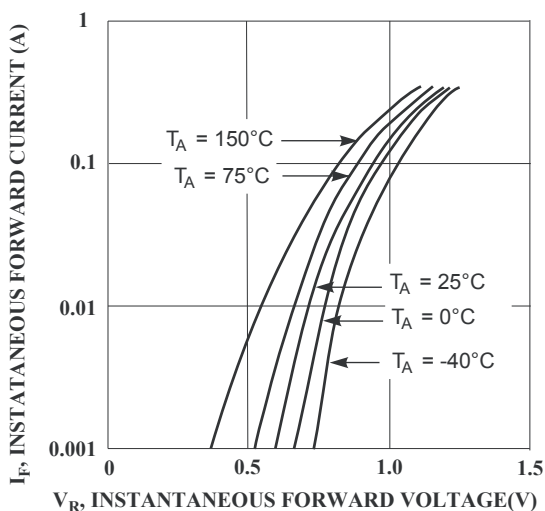


Fig.1 Forward Characteristics

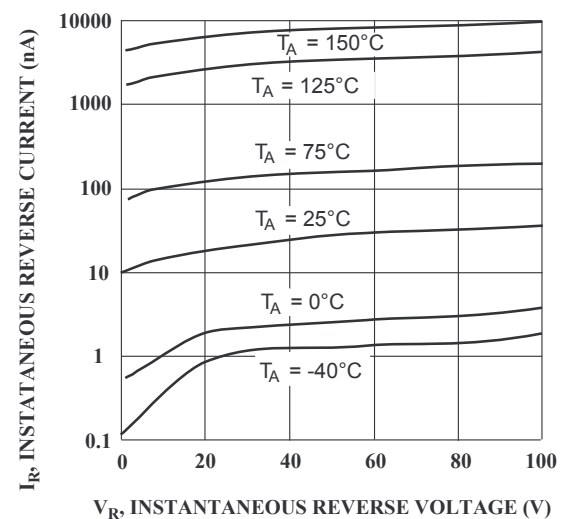


Fig.2 Typical Reverse Characteristics

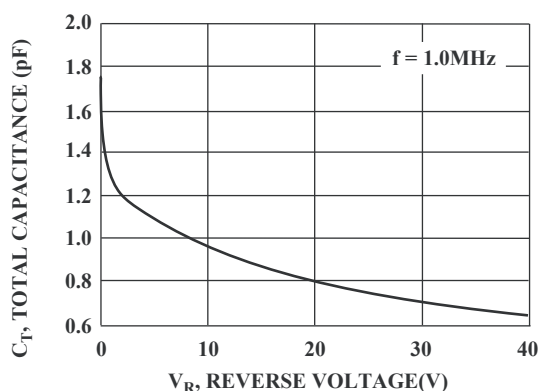


Fig.3 Typical Capacitance vs. Reverse Voltage

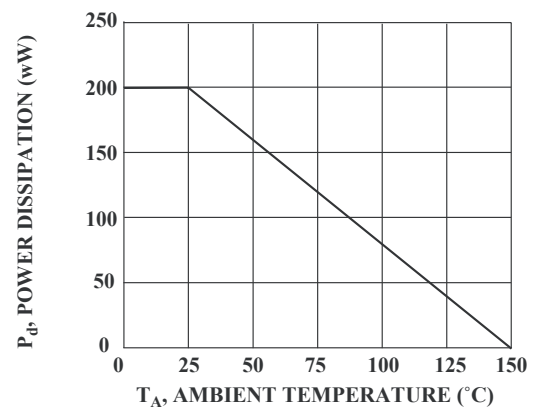


Fig.4 Power Derating Curve