

Surface Mount Switching Multi-Chip Diode Array

(Pb) Lead(Pb)-Free

Features:

- * Fast Switching Speed
- * Ultra-Small Surface Mount Package
- * For General Purpose Switching Applications
- * High Conductance Power Dissipation

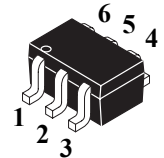
Mechanical Data:

- * 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

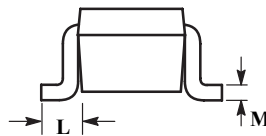
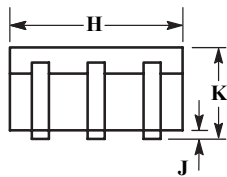
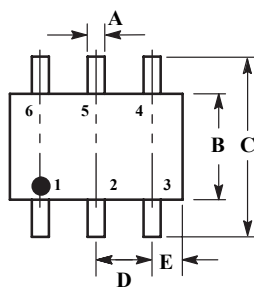
75 VOLTS



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@ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|--|---------------------------------|-------------|--------------------|
| Non-Repetitive Peak Reverse Voltage | V_{RM} | 100 | V |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 75 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 53 | V |
| Forward Continuous Current (Note 1) | I_{FM} | 300 | mA |
| Average Rectified Output Current (Note 1) | I_O | 150 | mA |
| Non-Repetitive Peak Forward Surge Current@ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$ | I_{FSM} | 2.0 1.0 | A |
| Power Dissipation (Note 1) | P_D | 200 | mW |
| Thermal Resistant Junction to Ambient Air (Note 1) | $R_{\theta JA}$ | 625 | $^\circ\text{C/W}$ |
| Operating Temperature Range | T_j | +150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | $^\circ\text{C}$ |

Notes:1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

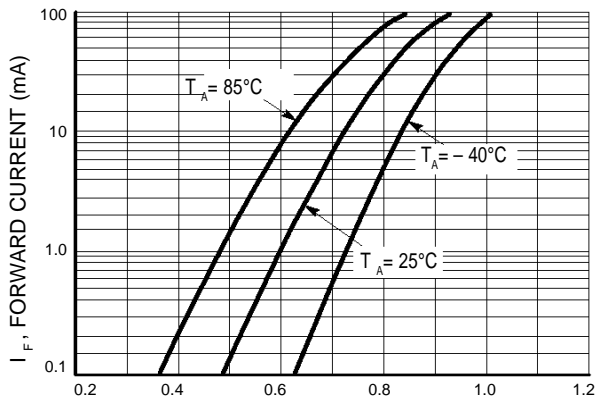
| Characteristic | Symbol | Min | Max | Unit |
|--|-------------|------------------|-------------------------------|---|
| Reverse Breakdown Voltage (Note 2) $I_R = 100\mu\text{A}$ | $V_{(BR)R}$ | 75 | - | V |
| Forward Voltage (Note 2) $I_F = 1.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 150\text{mA}$ | V_F | - - - - | 0.715 0.855 1.0 1.25 | V |
| Reverse Current (Note 2) $V_R = 75\text{V}$ $V_R = 75\text{V}, T_j = 150^\circ\text{C}$ $V_R = 25\text{V}, T_j = 150^\circ\text{C}$ $V_R = 20\text{V}$ | I_R | - | 1.0 50 30 25 | μA μA μA nA |
| Total Capacitance $V_R = 0\text{V}, f = 1.0\text{MHz}$ | C_T | - | 2.0 | pF |
| Reverse Recovery Time $I_F = I_R = 10\text{mA}, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$ | T_{rr} | - | 4.0 | ns |

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

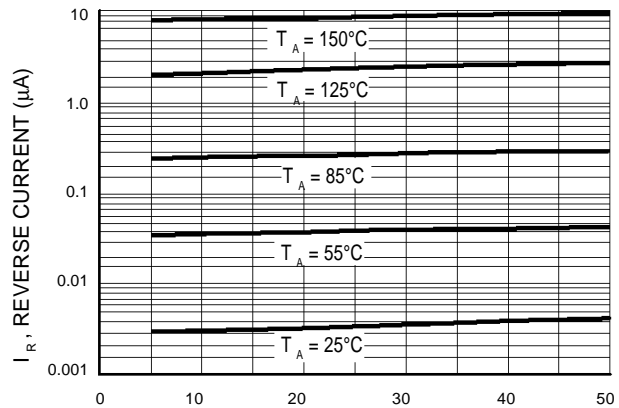
Device Marking

| Item | Marking | Equivalent Circuit diagram |
|----------|---------|----------------------------|
| BAS16TDW | KA2 | |

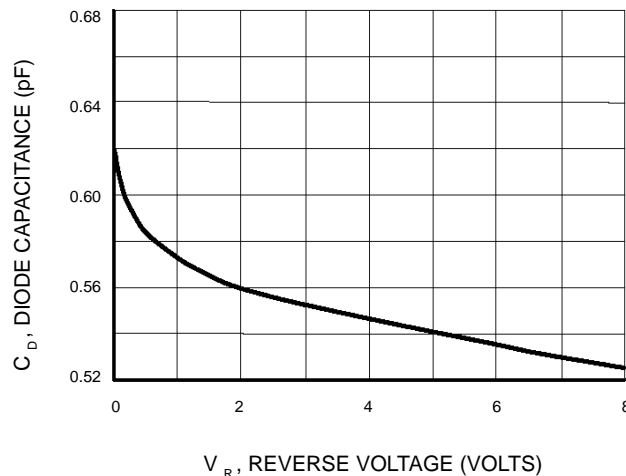
Typical Characteristics



V_F , FORWARD VOLTAGE (VOLTS)
Figure 2. Forward Voltage



V_R , REVERSE VOLTAGE (VOLTS)
Figure 3. Leakage Current



V_R , REVERSE VOLTAGE (VOLTS)
Figure 4. Capacitance