

## Surface Mount Switching Multi-Chip Diode Array

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

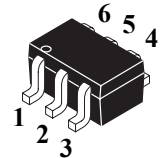
### Features:

- \* 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)

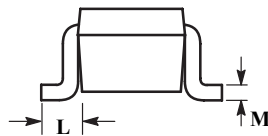
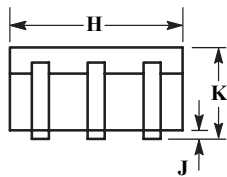
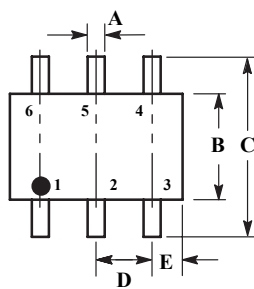
**MULTI-CHIP DIODES  
150m AMPERES  
75 VOLTS**



**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

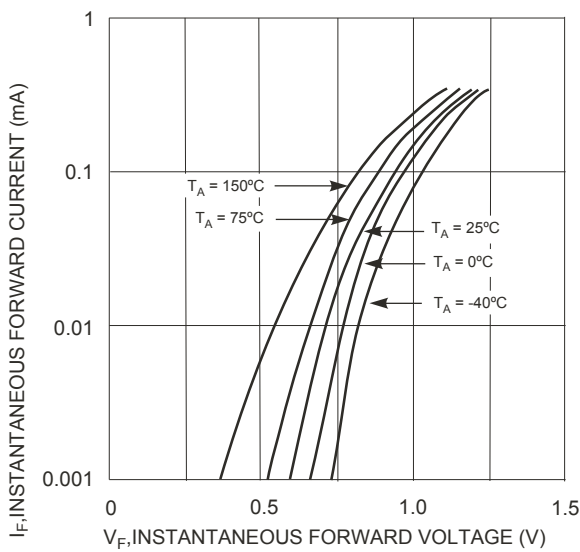
Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage (Note 2) $I_R = 100\mu\text{A}$	$V_{(BR)R}$	75	-	V
Forward Voltage (Note 2) $I_F = 1.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 150\text{mA}$	$V_F$	- - - -	0.715 0.855 1.0 1.25	V
Reverse Current (Note 2) $V_R = 75\text{V}$ $V_R = 75\text{V}, T_j = 150^\circ\text{C}$ $V_R = 25\text{V}, T_j = 150^\circ\text{C}$ $V_R = 20\text{V}$	$I_R$	-	1.0 50 30 25	$\mu\text{A}$ $\mu\text{A}$ $\mu\text{A}$ 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.

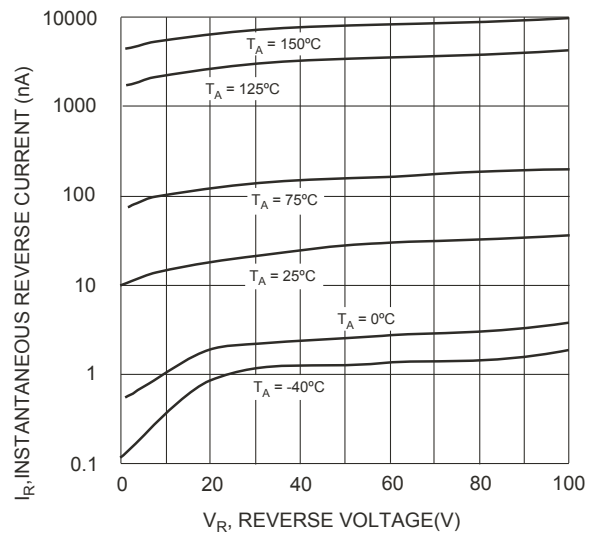
**Device Marking**

Item	Marking	Equivalent Circuit diagram
<b>BAS16TDW</b> <b>MMBD4148TDW</b>	KA2	

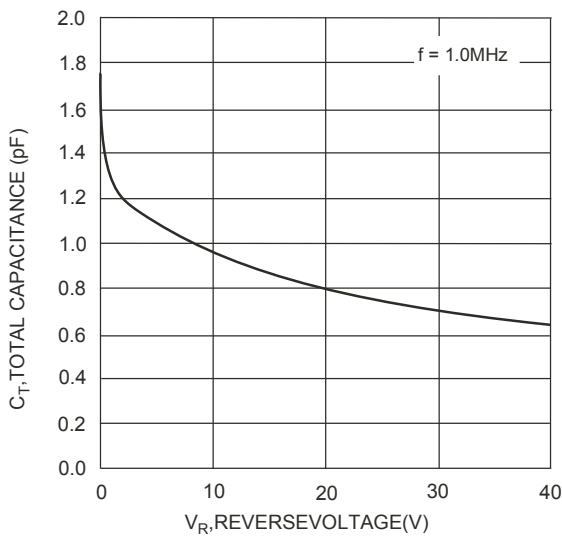
**Typical Characteristics**



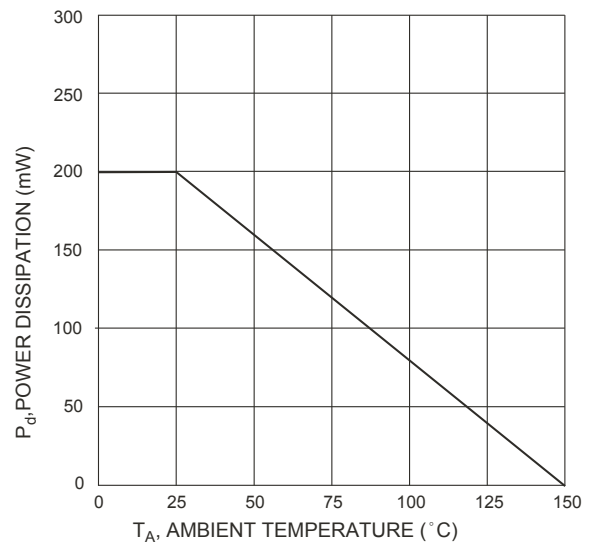
**Fig.1 Typical Forward Characteristics**



**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Capacitance vs. Reverse Voltage**



**Fig.4 Power Derating Curve, Total Package**