

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

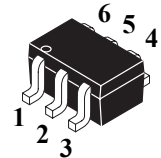
Mechanical Data:

- * 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

500m AMPERES

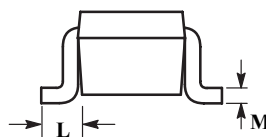
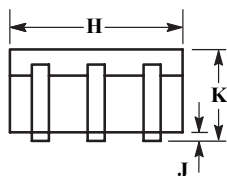
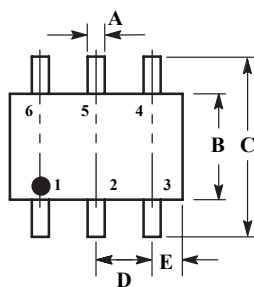
100 VOLTS



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	80	V
RMS Reverse Voltage	$V_{R(RMS)}$	57	V
Forward Continuous Current (Note 1)	I_{FM}	500	mA
Average Rectified Output Current (Note 1)	I_O	250	mA
Non-Repetitive Peak Forward Surge Current@ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$	I_{FSM}	4.0 2.0	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}	-65 to +150	$^\circ\text{C}$

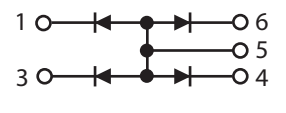
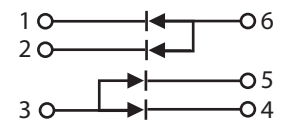
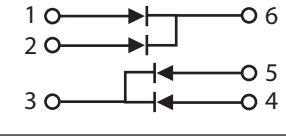
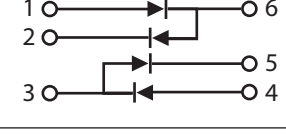
Notes:1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch

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

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage (Note 2) $I_R = 100\mu\text{A}$	$V_{(BR)R}$	80	-	V
Forward Voltage (Note 2) $I_F = 5.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 100\text{mA}$ $I_F = 150\text{mA}$	V_F	0.62 - - -	0.72 0.855 1.0 1.25	V
Reverse Current (Note 2) $V_R = 70\text{V}$ $V_R = 75\text{V}, T_j = 150^\circ\text{C}$ $V_R = 25\text{V}, T_j = 150^\circ\text{C}$ $V_R = 20\text{V}$	I_R	-	100 50 30 25	nA μA μA nA
Total Capacitance $V_R = 6\text{V}, f = 1.0\text{MHz}$	C_T	-	3.5	pF
Reverse Recovery Time $V_R = 6\text{V}, I_F = 5\text{mA}$	T_{rr}	-	4.0	ns

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

Device Marking

Item	Marking	Equivalent Circuit diagram
MMBD4448HAQW	KA5	
MMBD4448HADW	KA6	
MMBD4448HCDW	KA7	
MMBD4448HSDW	KAB	
MMBD4448HTW	KAA	

Typical Characteristics

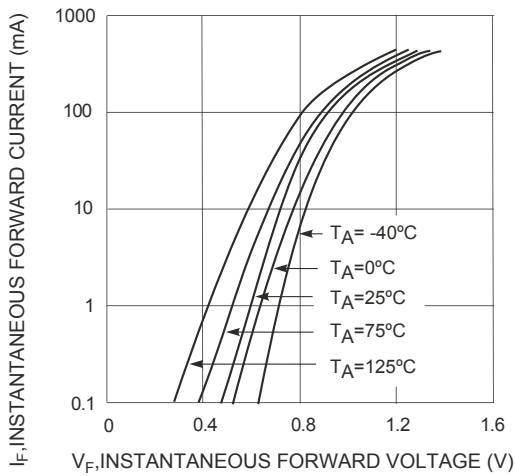


Fig.1 Typical Forward Characteristics

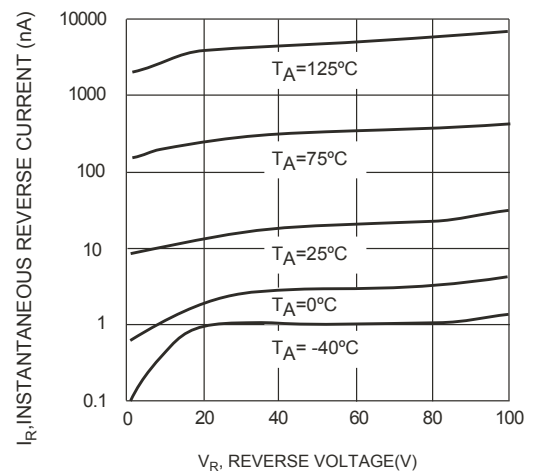


Fig.2 Typical Reverse Characteristics

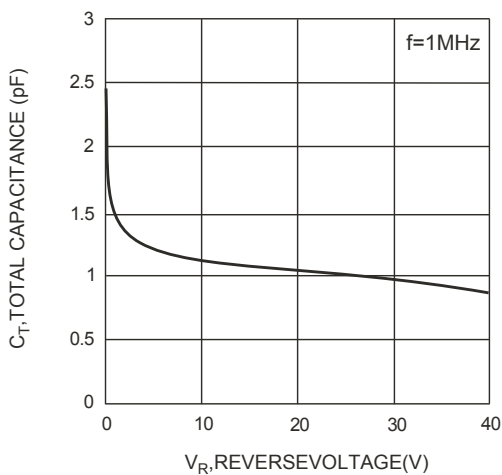


Fig.3 Typical Capacitance vs. Reverse Voltage

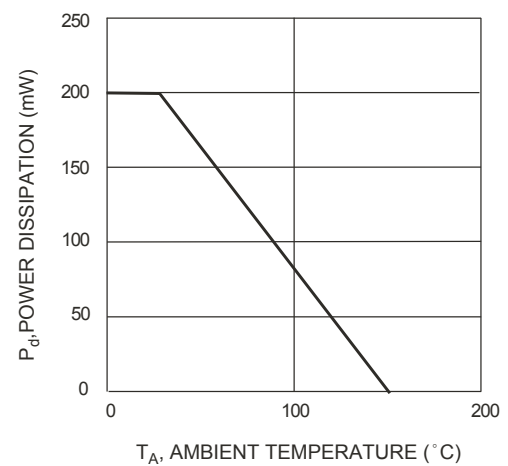


Fig.4 Power Derating Curve, Total Package

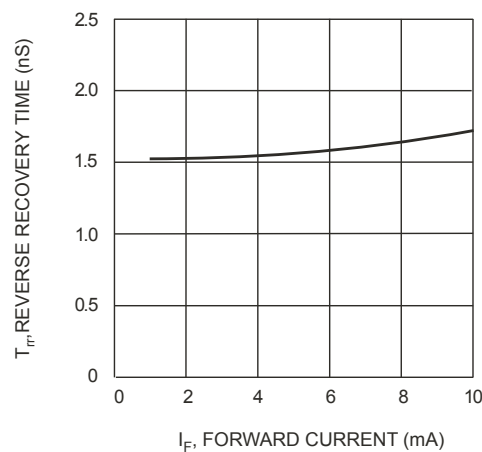


Fig.5 Reverse Recovery Time vs Forward Current