

## SURFACE MOUNT FAST SWITCHING DIODE ARRAY

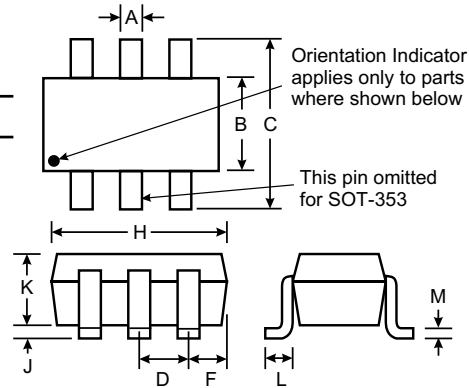
NEW PRODUCT

### Features

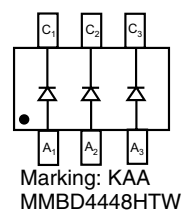
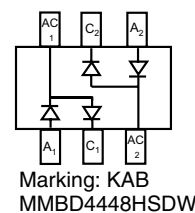
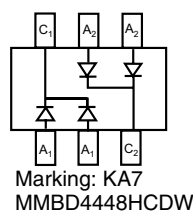
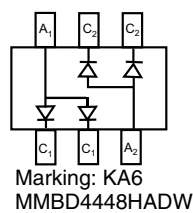
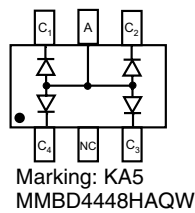
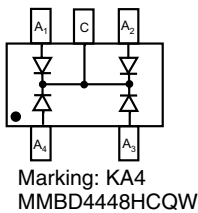
- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance

### Mechanical Data

- Case: SOT-353 and SOT-363, Molded Plastic
- Case Material - UL Flammability Rating Classification 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208
- Orientation: See Diagram
- Marking: See Diagram
- Weight: 0.006 grams (approx.)



SOT-363/SOT-353		
Dim	Min	Max
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
F	0.30	0.40
H	1.80	2.20
J	—	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.25
All Dimensions in mm		



### Maximum Ratings @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	80	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	57	V
Forward Continuous Current	I <sub>FM</sub>	500	mA
Average Rectified Output Current	I <sub>O</sub>	250	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 1.0s	I <sub>FSM</sub>	4.0 2.0	A
Power Dissipation (Note 1)	P <sub>d</sub>	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R <sub>θJA</sub>	625	°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150	°C

Notes: 1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.

## Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V <sub>BR(R)</sub>	80	—	V	I <sub>R</sub> = 100μA
Maximum Forward Voltage (Note 2)	V <sub>FM</sub>	0.62 — — —	0.72 0.855 1.0 1.25	V	I <sub>F</sub> = 5.0mA I <sub>F</sub> = 10mA I <sub>F</sub> = 100mA I <sub>F</sub> = 150mA
Maximum Peak Reverse Current (Note 2)	I <sub>RM</sub>	—	100 50 30 25	nA μA μA nA	V <sub>R</sub> = 70V V <sub>R</sub> = 75V, T <sub>j</sub> = 150°C V <sub>R</sub> = 25V, T <sub>j</sub> = 150°C V <sub>R</sub> = 20V
Junction Capacitance	C <sub>j</sub>	—	3.5	pF	V <sub>R</sub> = 6, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	—	4.0	ns	V <sub>R</sub> = 6V, I <sub>F</sub> = 5mA

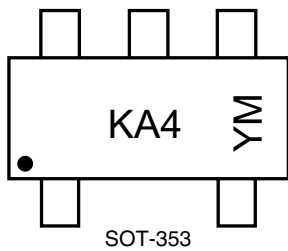
Notes: 2. Short duration pulse test used to minimize self-heating effect.

## Ordering Information (Note 3)

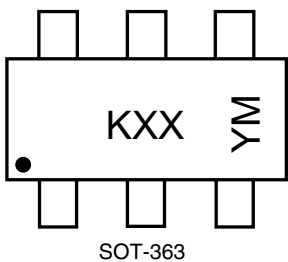
Device	Packaging	Shipping
MMBD4448HADW-7 MMBD4448HAQW-7 MMBD4448HCDW-7 MMBD4448HCQW-7 MMBD4448HSDW-7 MMBD4448HTW-7	SOT-363 SOT-363 SOT-363 SOT-353 SOT-363 SOT-363	3000/Tape & Reel

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

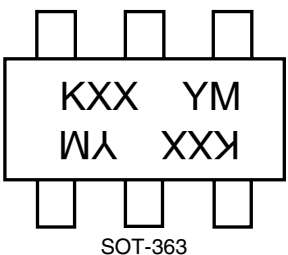
## Marking Information



KA4 = Product Type Marking Code, KA4 = MMBD4448HCQW  
YM = Date Code Marking  
Y = Year ex: N = 2002  
M = Month ex: 9 = September



KXX = Product Type Marking Code, ex. KA5 = MMBD4448HAQW  
KAA = MMBD4448HTW  
YM = Date Code Marking  
Y = Year ex: N = 2002  
M = Month ex: 9 = September



KXX = Product Type Marking Code, ex. KA6 = MMBD4448HADW  
KA7 = MMBD4448CDW  
KA8 = MMBD4448HSDW  
YM = Date Code Marking  
Y = Year ex: N = 2002  
M = Month ex: 9 = September

### Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004
Code	J	K	L	M	N	O	P

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

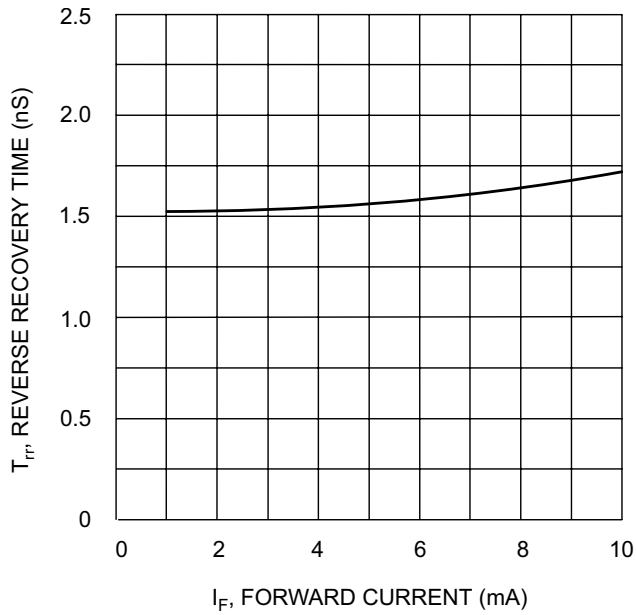


Fig. 1. Reverse Recovery Time vs. Forward Current

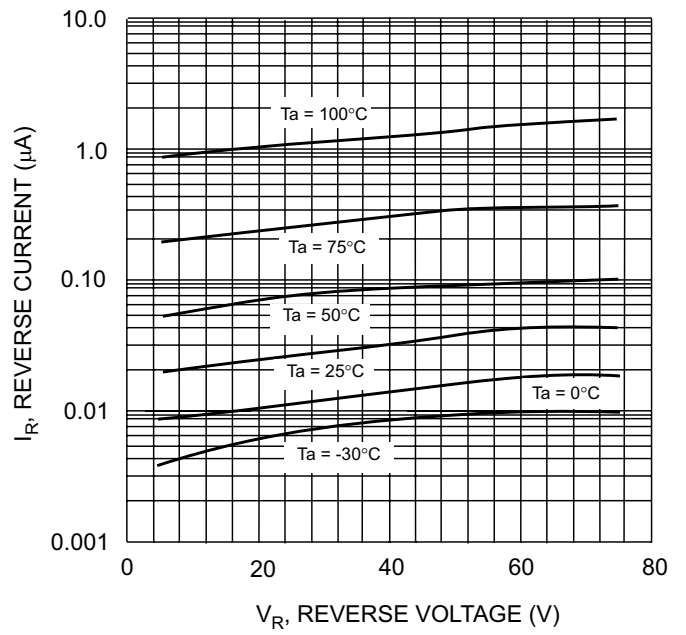


Fig. 2 Reverse Current vs Reverse Voltage

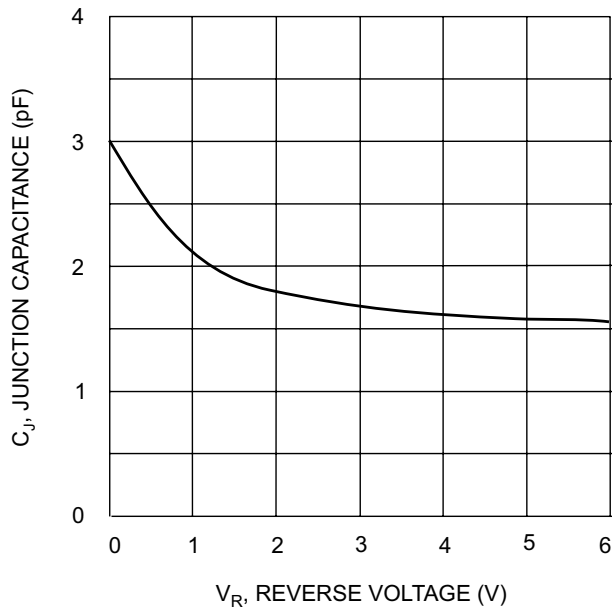


Fig. 3. Typical Junction Capacitance vs. Reverse Voltage

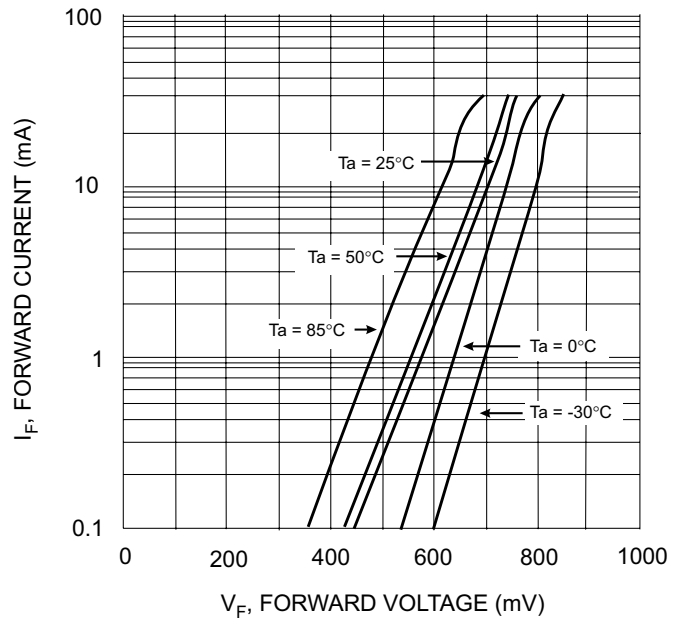


Fig. 4 Forward Current vs. Forward Voltage