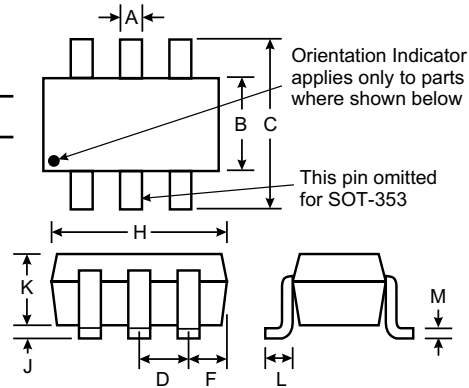


### Features

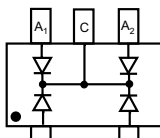
- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance

### Mechanical Data

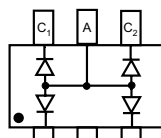
- Case: SOT-353 and SOT-363, Molded Plastic
- Case Material - UL Flammability Rating Classification 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208
- Orientation: See Diagram
- Marking: See Diagram
- Weight: 0.006 grams (approx.)



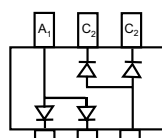
SOT-363/SOT-353		
Dim	Min	Max
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
F	0.30	0.40
H	1.80	2.20
J	—	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.25
All Dimensions in mm		



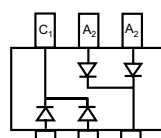
Marking: KA4  
MMBD4448HCQW



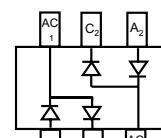
Marking: KA5  
MMBD4448HAQW



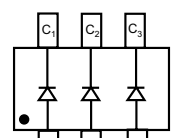
Marking: KA6  
MMBD4448HADW



Marking: KA7  
MMBD4448HCDW



Marking: KAB  
MMBD4448HSDW



Marking: KAA  
MMBD4448HTW

### 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	$I_{FM}$	500	mA
Average Rectified Output Current	$I_O$	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 Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

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

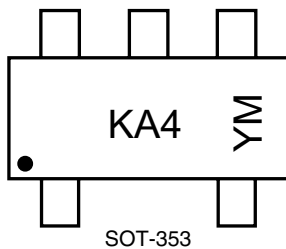
Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V <sub>BR(R)</sub>	80	—	V	I <sub>R</sub> = 100μA
Maximum Forward Voltage (Note 2)	V <sub>FM</sub>	0.62 — — —	0.72 0.855 1.0 1.25	V	I <sub>F</sub> = 5.0mA I <sub>F</sub> = 10mA I <sub>F</sub> = 100mA I <sub>F</sub> = 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)

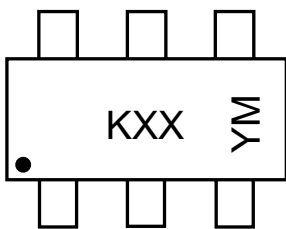
Device	Packaging	Shipping
MMBD4448HADW-7 MMBD4448HAQW-7 MMBD4448HCDW-7 MMBD4448HCQW-7 MMBD4448HSDW-7 MMBD4448HTW-7	SOT-363 SOT-363 SOT-363 SOT-353 SOT-363 SOT-363	3000/Tape & Reel

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

**Marking Information**

SOT-353

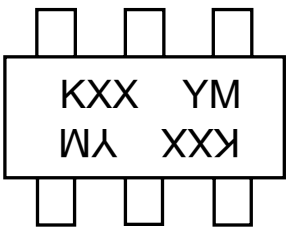
KA4 = Product Type Marking Code, KA4 = MMBD4448HCQW  
YM = Date Code Marking  
Y = Year ex: N = 2002  
M = Month ex: 9 = September



SOT-363

KXX = Product Type Marking Code, ex. KA5 = MMBD4448HAQW  
KAA = MMBD4448HTW

YM = Date Code Marking  
Y = Year ex: N = 2002  
M = Month ex: 9 = September



SOT-363

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

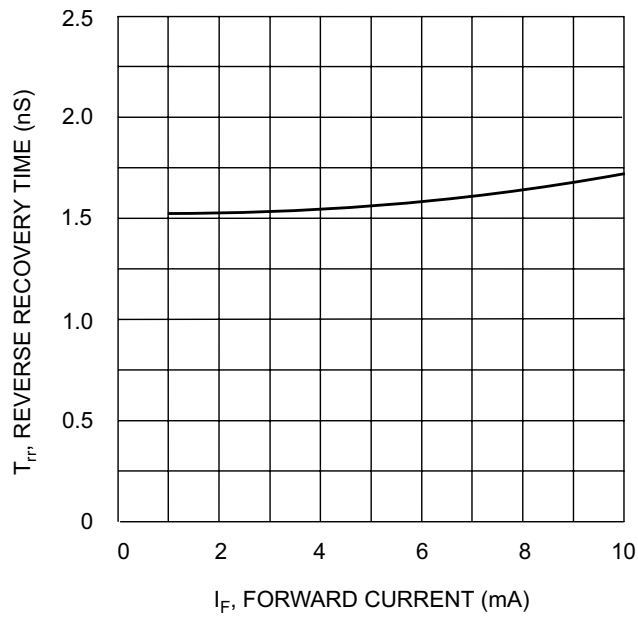


Fig. 1. Reverse Recovery Time vs. Forward Current

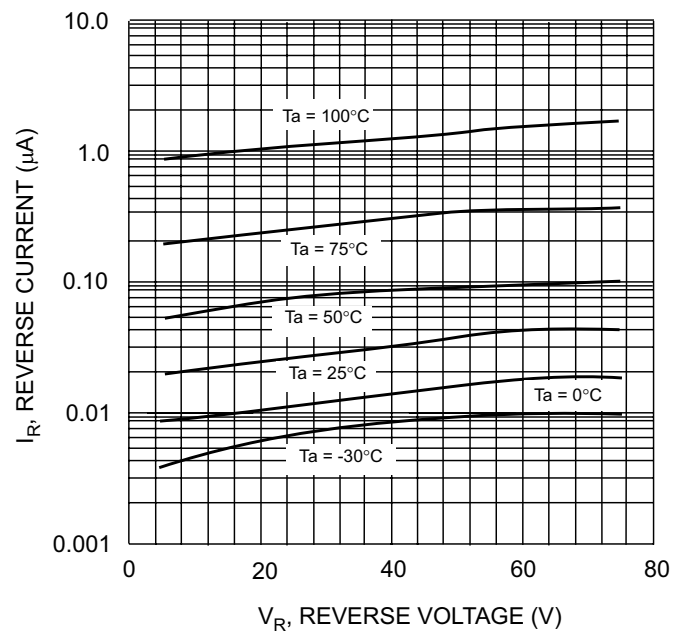


Fig. 2 Reverse Current vs Reverse Voltage

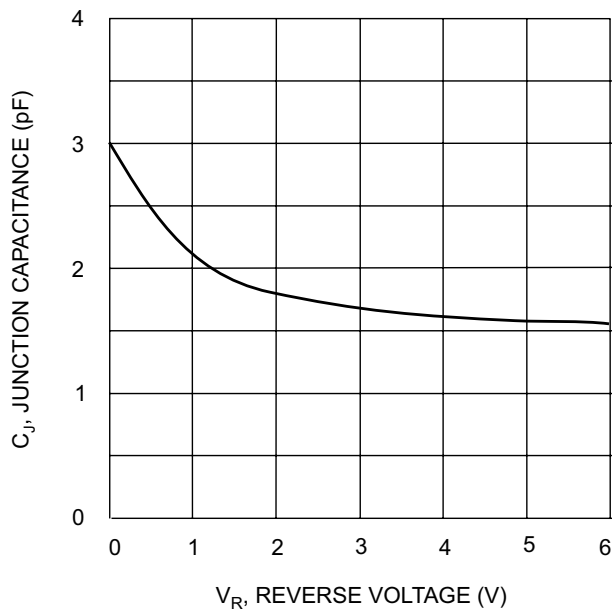


Fig. 3. Typical Junction Capacitance vs. Reverse Voltage

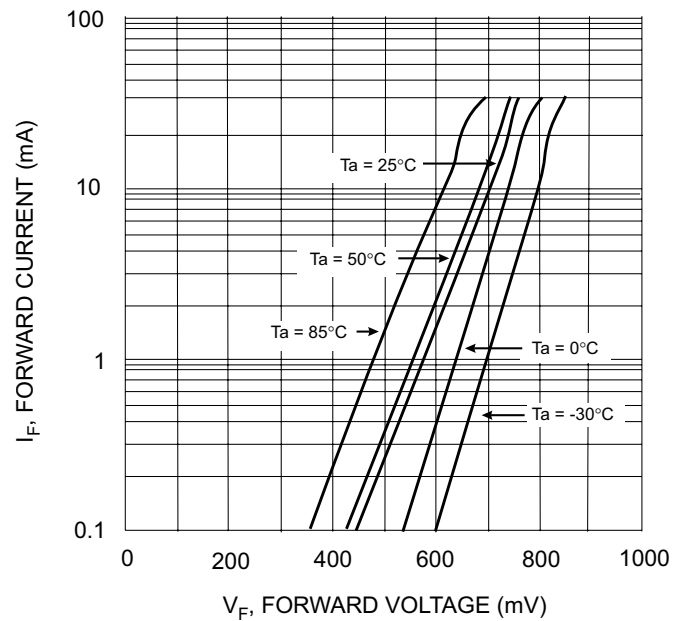


Fig. 4 Forward Current vs. Forward Voltage