



MMBD4448HW

SURFACE MOUNT SWITCHING DIODE

Features

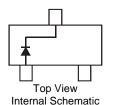
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automated Insertion
- For General Purpose Switching Applications
- High Conductance
- Lead Free/RoHS Compliant (Note 1)
- "Green" Device (Notes 2 and 3)

Mechanical Data

- Case: SOT-323
- Case Material: Molded Plastic, "Green" Molding Compound (Note 3). UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish annealed over Alloy 42 leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.006 grams (approximate)



Top View



Ordering Information (Notes 3 & 4)

Part Number	Case	Packaging
MMBD4448HW-7-F	SOT-323	3000/Tape & Reel

SOT-323

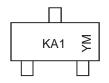
Notes:

- 1. No purposefully added lead.
- 2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com.

 3. Product manufactured with Date Code 0627 (week 27, 2006) and newer are built with Green Molding Compound. Product manufactured prior to Date Code 0627 are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.

 4. For packaging details, go to our website at http://www.diodes.com.

Marking Information



KA1= Product Type Marking Code YM = Date Code Marking Y = Year (ex: N = 2002)M = Month (ex: 9 = September)

Date Code Key

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	L	М	N	Р	R	S	Т	U	V	W	Х	Υ	Z	Α	В	С
Month	Jan	F	eb	Mar	Apr	M	lay	Jun	Jul	A	ug	Sep	Oct	No	ov	Dec
Code	1		2	3	4		5	6	7	8	3	9	0	1	٧	D



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 5)		I _{FM}	500	mA
Average Rectified Output Current (Note 5)		lo	250	mA
Non-Repetitive Peak Forward Surge Current	@ t = 1.0μs @ t = 1.0s	I _{FSM}	4.0 1.0	A

Thermal Characteristics

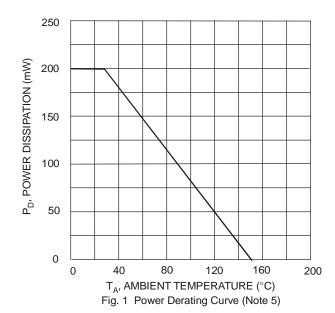
Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P_{D}	200	mW
Thermal Resistance Junction to Ambient Air (Note 5)	$R_{ hetaJA}$	625	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

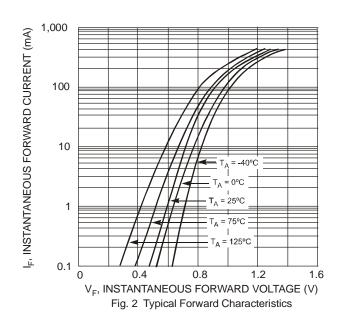
Electrical Characteristics @TA = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition										
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	80		V	$I_R = 2.5 \mu A$										
		0.62	0.72	V	$I_F = 5.0 \text{mA}$										
Forward Voltage	VF	_	0.855		$I_F = 10 \text{mA}$										
Forward voltage		_	1.0		I _F = 100mA										
		_	1.25		I _F = 150mA										
	I _R		100	nA	$V_R = 70V$										
Peak Reverse Current (Note 6)		I_R		50	μΑ	$V_R = 75V, T_J = 150^{\circ}C$									
reak Neverse Current (Note o)			IR.	IR.	'R	'R	IR.	'R	'R	'R	'R	'R	'R	ir —	
			25	nA	$V_R = 20V$										
Total Capacitance	C _T		3.5	pF	$V_R = 6V, f = 1.0MHz$										
Reverse Recovery Time	t _{rr}	_	4.0	ns	$V_R = 6V$, $I_F = 5mA$										

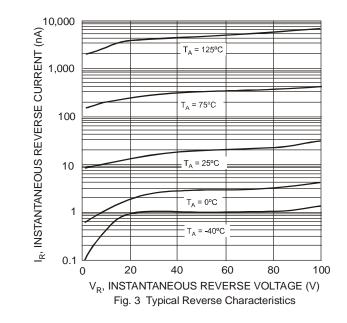
Notes:

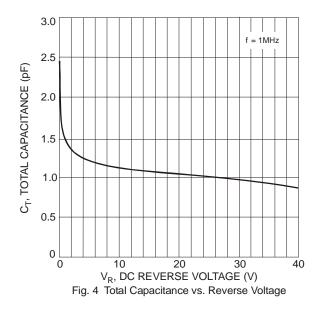
- 5. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at http://www.diodes.com.
- 6. Short duration pulse test used to minimize self-heating effect.



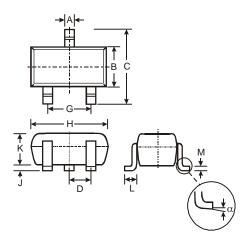






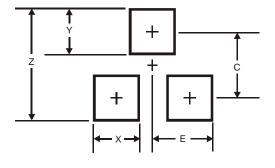


Package Outline Dimensions



SOT-323							
Dim	Min	Max	Тур				
Α	0.25	0.40	0.30				
В	1.15	1.35	1.30				
С	2.00	2.20	2.10				
D	-	-	0.65				
G	1.20	1.40	1.30				
Н	1.80	2.20	2.15				
J	0.0	0.10	0.05				
K	0.90	1.00	1.00				
L	0.25	0.40	0.30				
M	0.10	0.18	0.11				
α	0°	8°	-				
All	All Dimensions in mm						

Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.8
Х	0.7
Υ	0.9
С	1.9
E	1.0



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