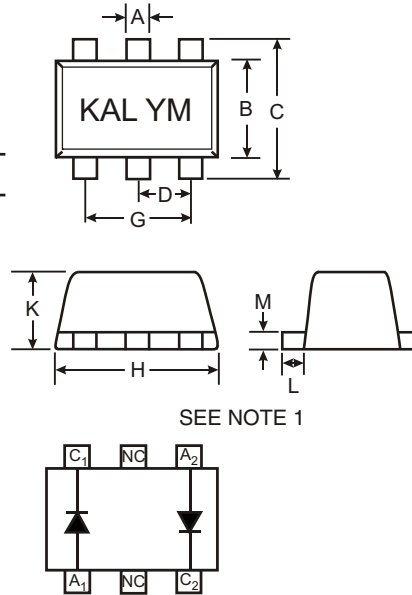


Features

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

Mechanical Data

- Case: SOT-563, Molded Plastic
- Case Material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Finish - Matte Tin (Note 2) Solderable per MIL-STD-202, Method 208
- Marking: KAL (See Page 3)
- Ordering & Date Code Information: See Page 3



SOT-563			
Dim	Min	Max	Typ
A	0.15	0.30	0.25
B	1.10	1.25	1.20
C	1.55	1.70	1.60
D	0.50		
G	0.90	1.10	1.00
H	1.50	1.70	1.60
K	0.56	0.60	0.60
L	0.10	0.30	0.20
M	0.10	0.18	0.11
All Dimensions in mm			

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 3)	I_{FM}	500	mA
Average Rectified Output Current (Note 3)	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 3)	P_d	150	mW
Thermal Resistance Junction to Ambient (Note 3)	$R_{\theta JA}$	833	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 4)	$V_{(BR)R}$	80	—	V	$I_R = 2.5\mu\text{A}$
Forward Voltage (Note 4)	V_F	0.62	0.72 0.855 1.0 1.25	V	$I_F = 5.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 100\text{mA}$ $I_F = 150\text{mA}$
Leakage Current (Note 4)	I_R	—	100 50 30 25	nA μA μA nA	$V_R = 70\text{V}$ $V_R = 75\text{V}, T_j = 150^\circ\text{C}$ $V_R = 25\text{V}, T_j = 150^\circ\text{C}$ $V_R = 20\text{V}$
Total Capacitance	C_T	—	3.5	pF	$V_R = 6\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	4.0	ns	$V_R = 6\text{V}, I_F = 5\text{mA}$

- Notes:
1. Package is non-polarized. Parts may be on reel in orientation illustrated, 180° rotated, or mixed (both ways).
 2. If lead-bearing terminal plating is required, please contact your Diodes Inc. sales representative for availability and minimum order details.
 3. 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>.
 4. Short duration test pulse used to minimize self-heating effect.

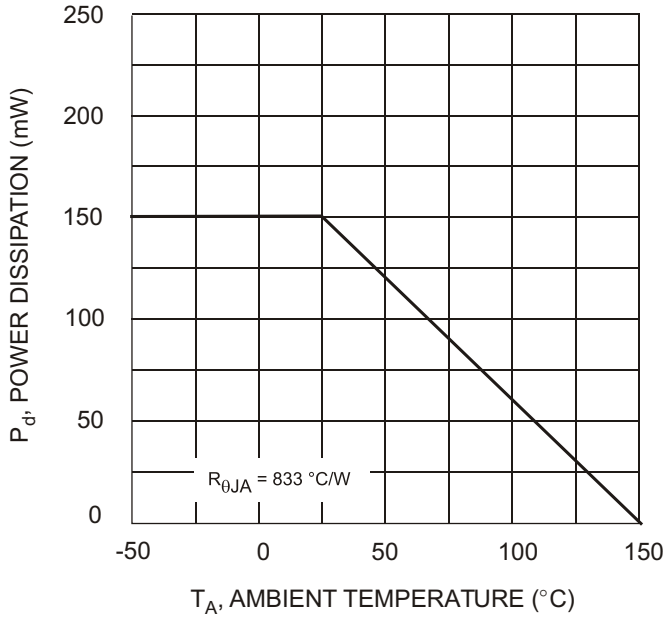


Fig. 1, Derating Curve - Total

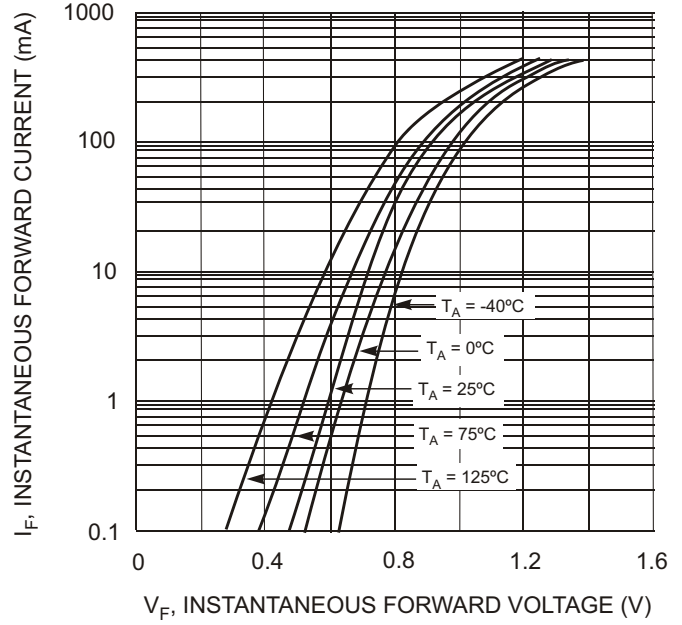


Fig. 2 Typical Forward Characteristics

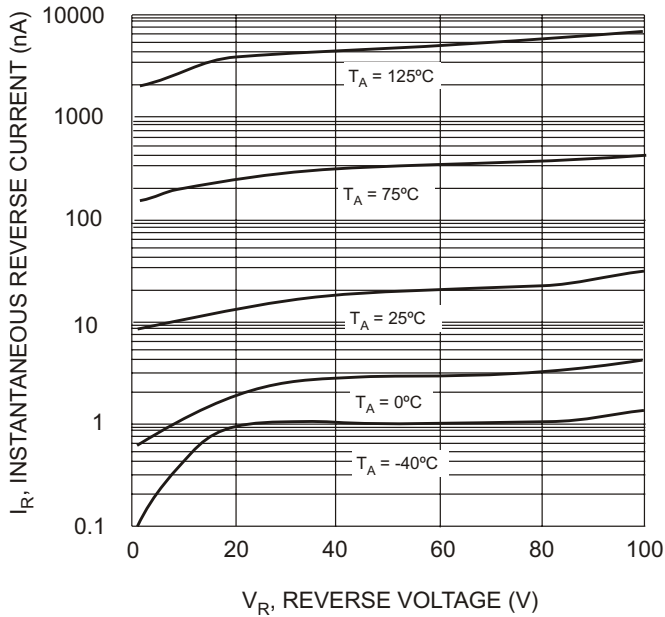


Fig. 3 Typical Reverse Characteristics

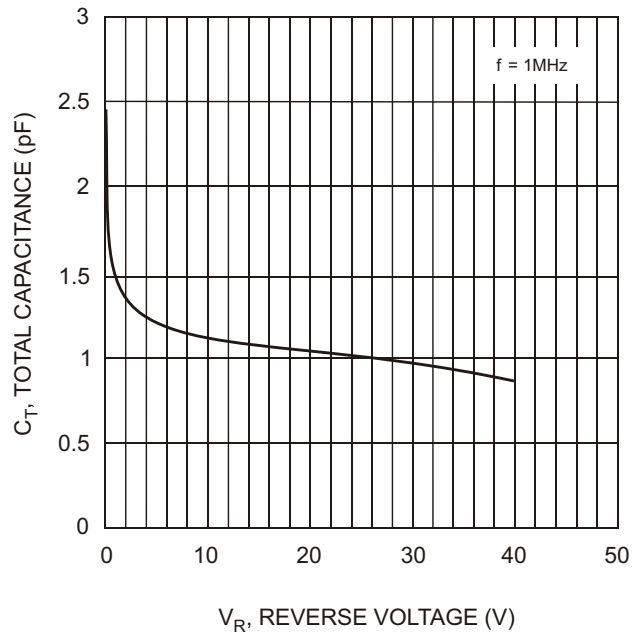
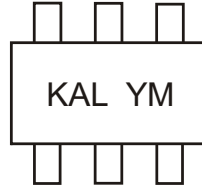


Fig. 4 Typical Capacitance vs. Reverse Voltage

Ordering Information (Note 5)

Device	Packaging	Shipping
MMBD4448V-7	SOT-563	3000/Tape & Reel

Marking Information



KAL = Product Type Marking Code (See Page 1 Diagrams)
 YM = Date Code Marking
 Y = Year (ex: R = 2004)
 M = Month (ex: 9 = September)

Date Code Key

Year	2004	2005	2006	2007	2008	2009
Code	R	S	T	U	V	W

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

Notes: 5. For Packaging Details: go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.