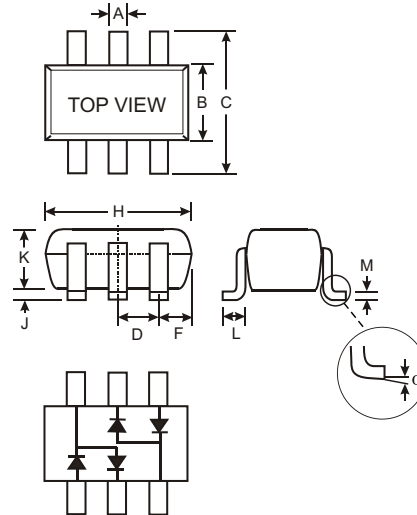


### Features

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

### Mechanical Data

- Case: SOT-26, Molded Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: KLG, See Page 2
- Weight: 0.016 grams (approx.)
- Ordering Information: See Below



SOT-26			
Dim	Min	Max	Typ
A	0.35	0.50	0.38
B	1.50	1.70	1.60
C	2.70	3.00	2.80
D	—	—	0.95
F	—	—	0.55
H	2.90	3.10	3.00
J	0.013	0.10	0.05
K	1.00	1.30	1.10
L	0.35	0.55	0.40
M	0.10	0.20	0.15
α	0°	8°	—
All Dimensions in mm			

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	45	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	40	V
Forward Continuous Current (Note 1)	I <sub>FM</sub>	100	mA
Forward Surge Current @ t < 8.3ms	I <sub>FSM</sub>	1.0	A
Power Dissipation (Note 1)	P <sub>d</sub>	225	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R <sub>θJA</sub>	444	°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-40 to +125	°C

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

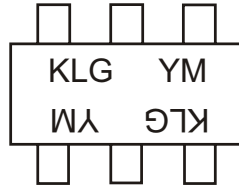
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V <sub>(BR)R</sub>	45	—	—	—	I <sub>R</sub> = 100μA
Forward Voltage (Note 2)	V <sub>F</sub>	—	370	450	mV	I <sub>F</sub> = 10mA
Reverse Leakage Current (Note 2)	I <sub>R</sub>	—	0.07	1.0	μA	V <sub>R</sub> = 10V
Total Capacitance	C <sub>T</sub>	—	6.0	—	pF	V <sub>R</sub> = 10V, f = 1.0MHz

### Ordering Information (Note 3)

Device	Packaging	Shipping
SDM10M45SD-7	SOT-26	3000/Tape & Reel

- Note:
1. Device mounted on FR-5 PCB 1.0 x 0.75 x 0.062 inch pad layout as shown on Diodes, Inc. suggested pad layout AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  2. Short duration pulse test to minimize self-heating effect.
  3. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



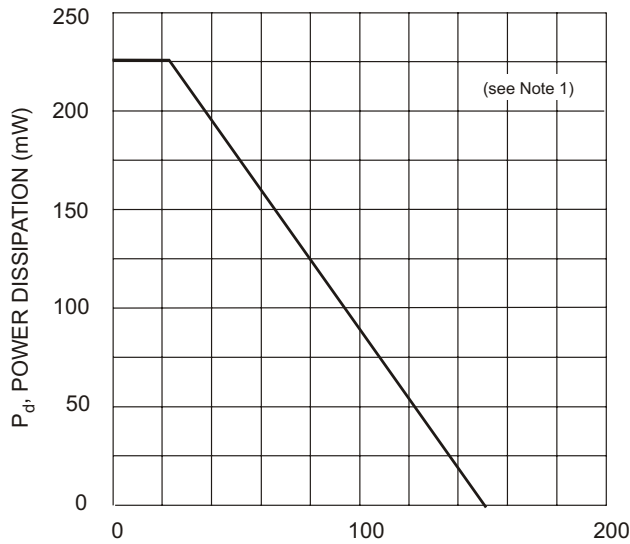
KLG = Product Type Marking Code  
 YM = Date Code Marking  
 Y = Year ex: P = 2003  
 M = Month ex: 9 = September

Date Code Key

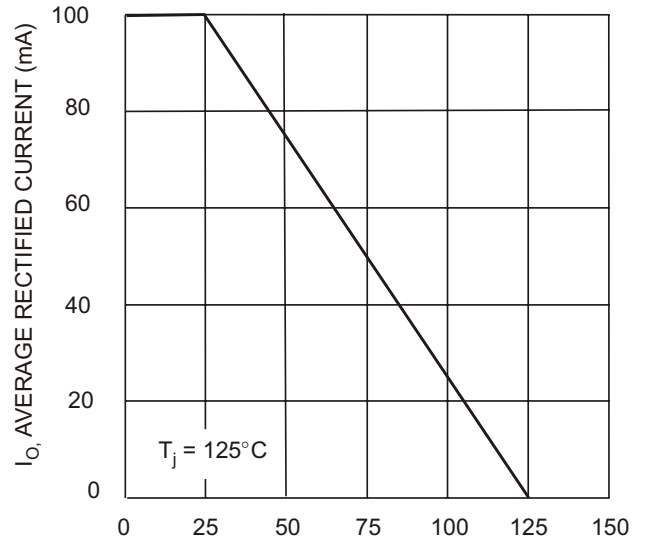
Year	2003	2004	2005	2006	2007	2008	2009
Code	P	R	S	T	U	V	W

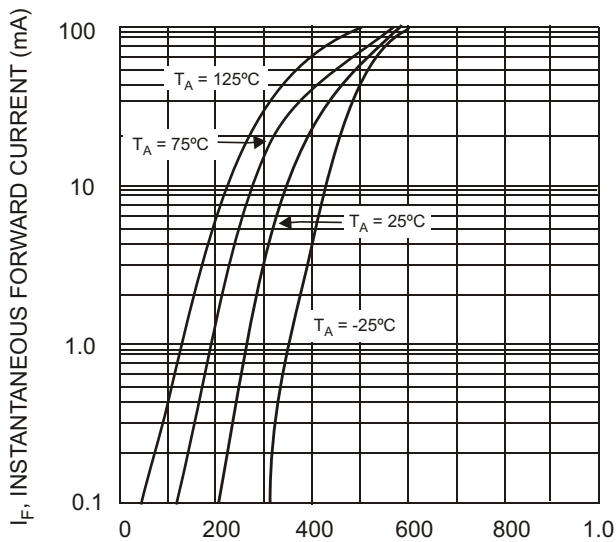
Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D



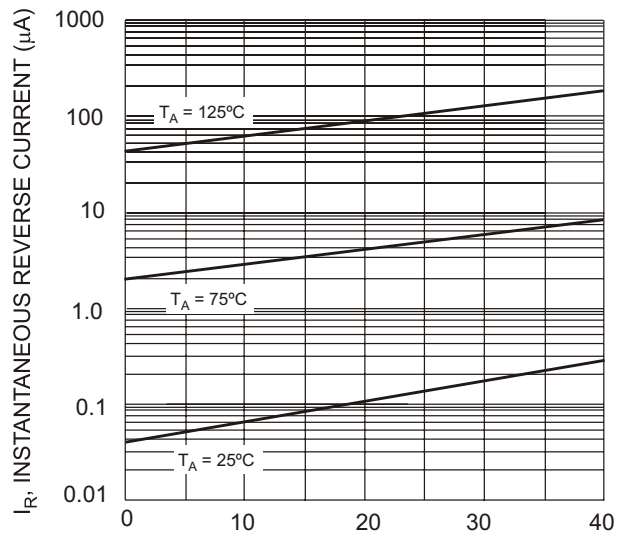
$T_A$ , AMBIENT TEMPERATURE (°C)  
 Fig. 1. Power Derating Curve



$T_A$ , AMBIENT TEMPERATURE (°C)  
 Fig. 2. Forward Current Derating Curve (Per Element)



$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
 Fig. 3. Typical Forward Characteristics



$V_R$ , INSTANTANEOUS REVERSE VOLTAGE (V)  
 Fig. 4. Typical Reverse Characteristics

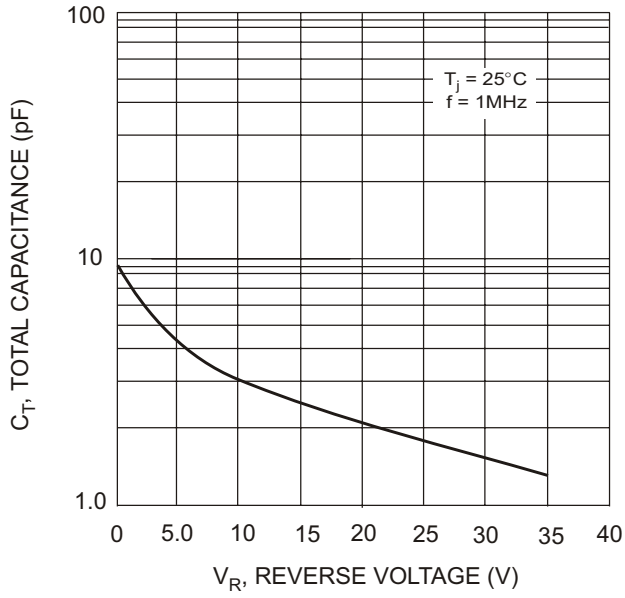


Fig. 5 Total Capacitance vs. Reverse Voltage