



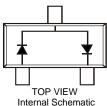
Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automated Insertion
- For General Purpose Switching Applications
- **High Conductance**
- Lead, Halogen and Antimony Free, RoHS Compliant "Green" Device (Notes 3 and 4)

Mechanical Data

- Case: SOT-23
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe)
- Polarity: See Diagram
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.008 grams (approximate)

TOP VIEW



Maximum Ratings @T_A = 25°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	75	V	
RMS Reverse Voltage		V _{R(RMS)}	53	V	
Forward Continuous Current (Note 1)		I _{FM}	300	mA	
Non-Repetitive Peak Forward Surge Current	@ t = 1.0μs @ t = 1.0s	I _{FSM}	2.0 1.0	A	

SOT-23

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	PD	350	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{ ext{ heta}JA}$	357	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V _{(BR)R}	75		V	I _R = 100μA
Forward Voltage	VF	0.55 0.67 0.75 —	0.70 0.82 1.10 1.25	V	I _F = 1.0mA I _F = 10mA I _F = 50mA I _F = 150mA
Reverse Current (Note 2)	I _R		1.0 3.0 100 25	μΑ μΑ μΑ nA	$V_R = 50V$ $V_R = 100V$ $V_R = 50V, T_J = 125^{\circ}C$ $V_R = 20V$
Total Capacitance	CT	_	2.0	pF	$V_{R} = 0, f = 1.0MHz$
Reverse Recovery Time	t _{rr}	_	4.0	ns	$I_{F} = I_{R} = 10mA,$ $I_{rr} = 0.1 \times I_{R}, R_{L} = 100\Omega$

Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf. 1.

Short duration pulse test used to minimize self-heating effect. No purposefully added lead. Halogen and Antimony Free. 2.

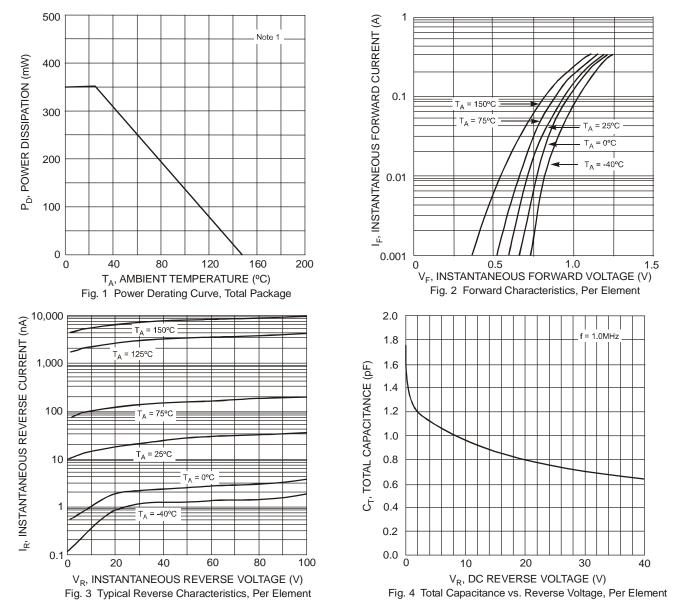
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Product manufactured with Data Code V9 (week 33, 2008) and newer are built with Green Molding Compound. Product manufactured prior to Date 4. Code V9 are built with Non-Green Molding Compound and may contain Halogens or Sb₂O₃ Fire Retardants.

Notes:



MMBD7000

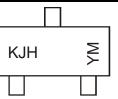


Ordering Information (Note 5)

Part Number	Case	Packaging
MMBD7000-7-F	SOT-23	3000/Tape & Reel

Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



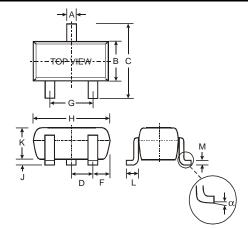
KJH = Product Type Marking Code YM = Date Code Marking Y = Year ex: N = 2002 M = Month ex: 9 = September

Date Code Key

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	К	L	М	Ν	Р	R	S	Т	U	V	W	Х	Y	Z
Month	Jan	Feb	Ма	ar /	Apr	Мау	Jun	Jul	Aug	Se	p (Oct	Nov	Dec
Code	1	2	3	5	4	5	6	7	8	9		0	Ν	D

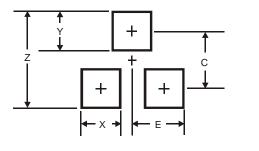


Package Outline Dimensions



	SOT-23					
Dim	Min	Max				
Α	0.37	0.51				
В	1.20	1.40				
С	2.30	2.50				
D	0.89	1.03				
F	0.45	0.60				
G	1.78	2.05				
Н	2.80	3.00				
J	0.013	0.10				
K	0.903	1.10				
L	0.45	0.61				
М	0.085	0.180				
α	0°	8°				
All Dir	nensions	in mm				

Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.9
Х	0.8
Y	0.9
С	2.0
E	1.35

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