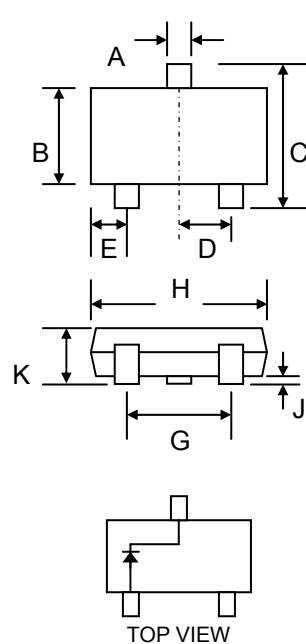


Features

- High Conductance
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0

Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.006 grams (approx.)
- Mounting Position: Any
- Marking: Device Code, See Page 3
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



SOT-323		
Dim	Min	Max
A	0.25	0.40
B	1.15	1.35
C	2.00	2.40
D	0.65 Nominal	
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	—	0.10
K	0.90	1.10
L	0.25	—
M	0.05	0.15
All Dimensions in mm		

Maximum Ratings @T_A=25°C unless otherwise specified

Characteristic	Symbol	M1MA141K	M1MA142K	Unit
Peak Reverse Voltage DC Blocking Voltage	V _{RM} V _R	40	80	V
Forward Continuous Current	I _F	100		mA
Peak Forward Current	I _{FM}	225		mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0s	I _{FSM}	0.5		A
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150		°C

Thermal Characteristics

Characteristic	Symbol	M1MA141K	M1MA142K	Unit
Power Dissipation (Note 1)	P _D	150		mW

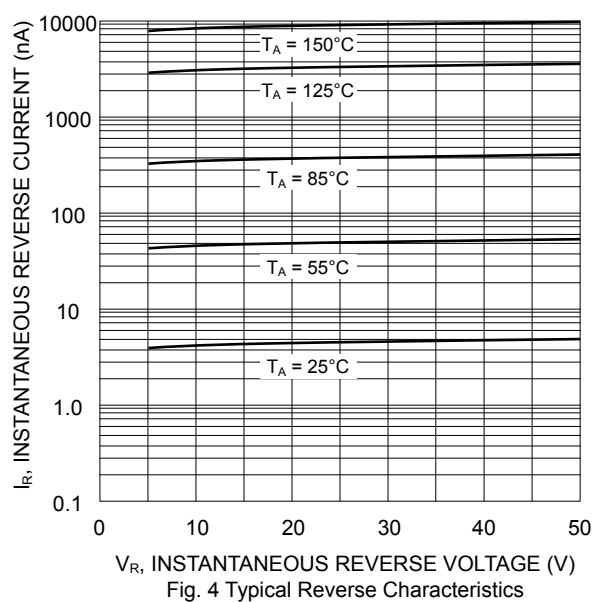
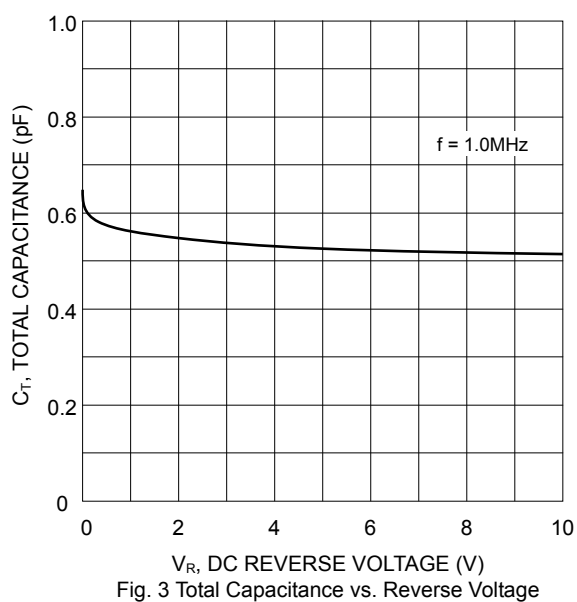
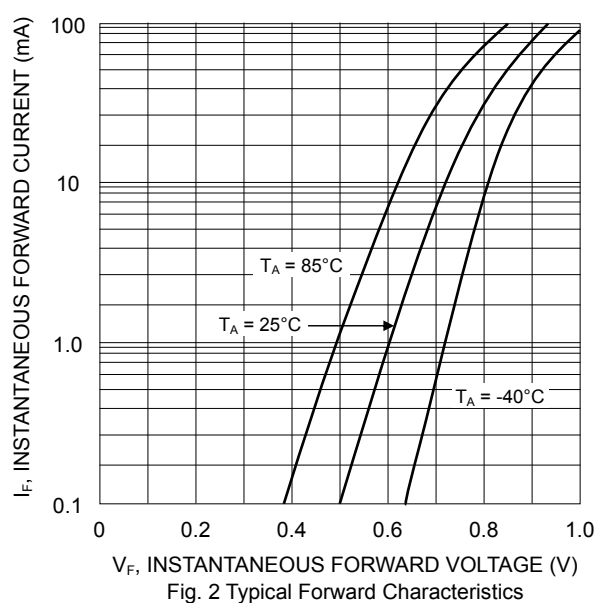
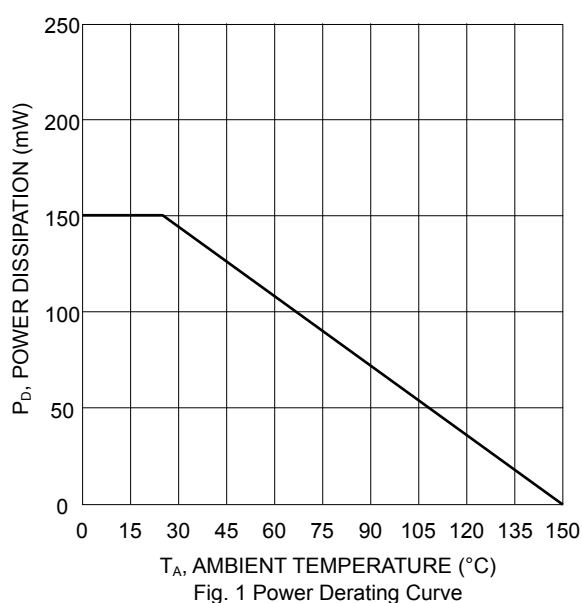
Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

M1MA141K & M1MA142K

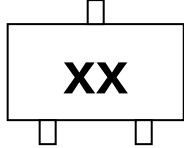


Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	M1MA141K	M1MA142K	Unit
Min. Reverse Breakdown Voltage @ I _R = 100μA	V _(BR)	40	80	V
Max. Forward Voltage Drop @ I _F = 100mA	V _{FM}	1.2		V
Peak Reverse Leakage Current @ V _R = 35V @ V _R = 75V	I _{RM}	100 —	— 100	nA
Diode Capacitance (V _R = 0V, f = 1.0MHz)	C _D	2.0		pF
Reverse Recovery Time (I _F = I _R = 10mA, I _{RR} = 0.1 x I _R , R _L = 100Ω)	t _{rr}	3.0		nS



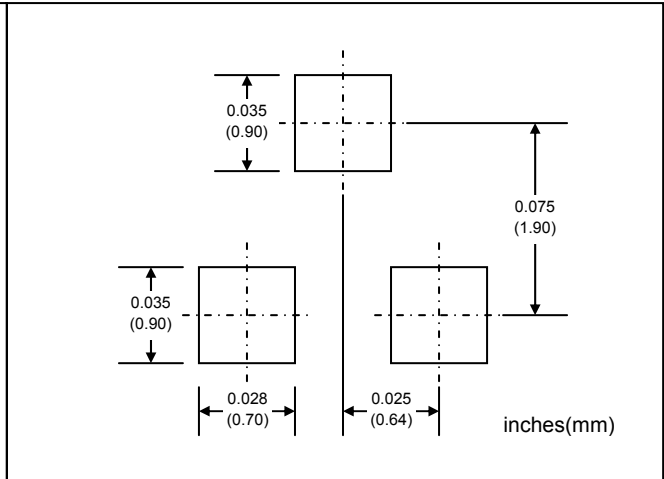
MARKING INFORMATION



xx = Device Code, See Table Below

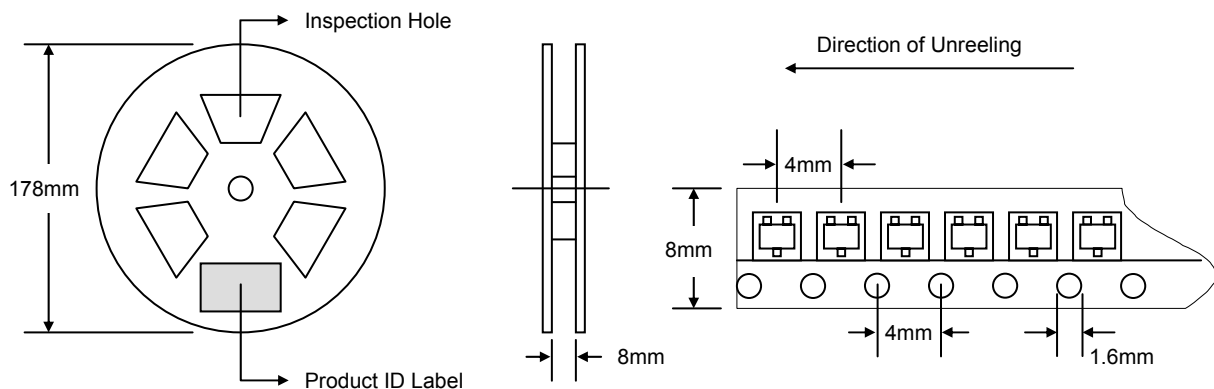
M1MA141K	M1MA142K
MH	MI

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	10.0

Note: 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
M1MA141K-T1	SOT-323	3000/Tape & Reel
M1MA142K-T1	SOT-323	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, M1MA141K-T1-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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