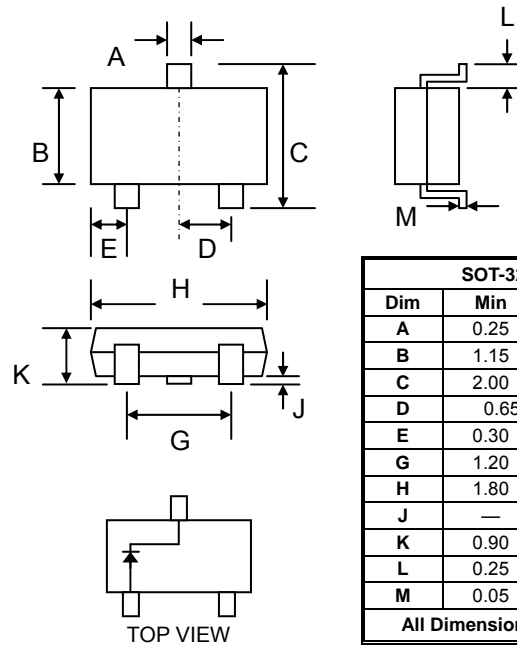


### Features

- 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**



### Maximum Ratings @ $T_A=25^{\circ}\text{C}$ 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 @ $t = 1.0\text{s}$	$I_{FSM}$	0.5		A
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150		$^{\circ}\text{C}$

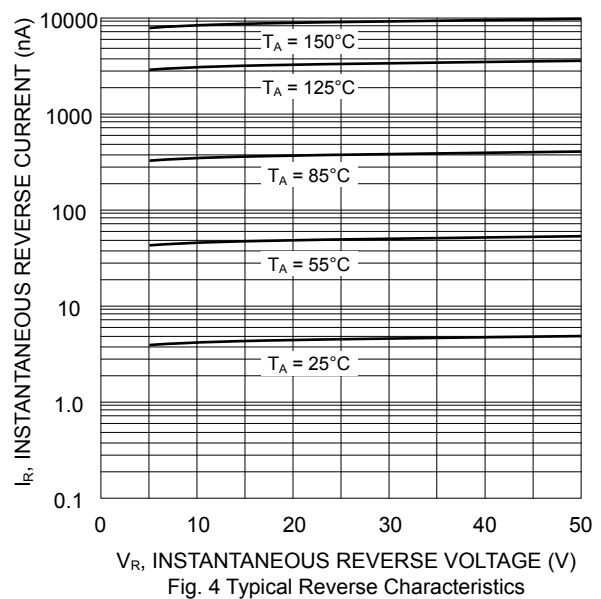
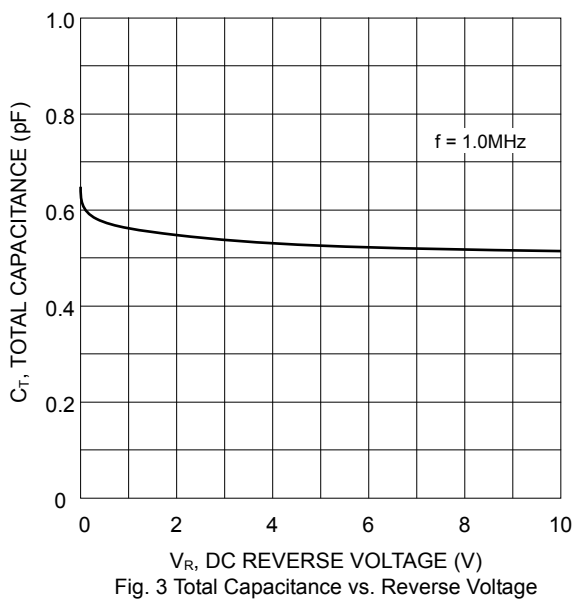
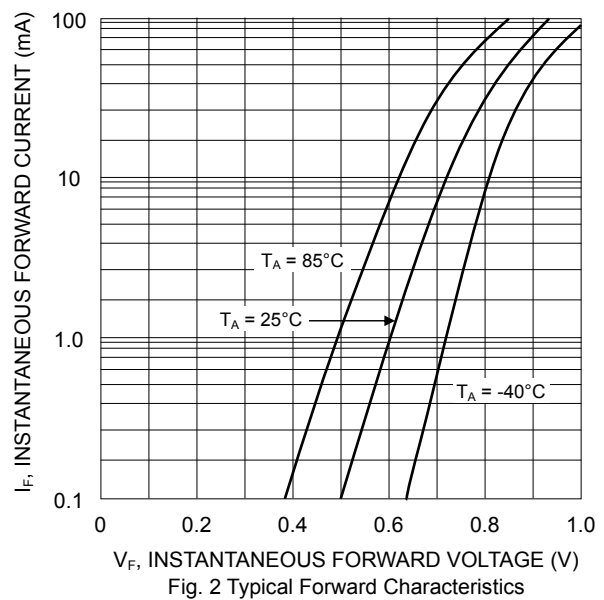
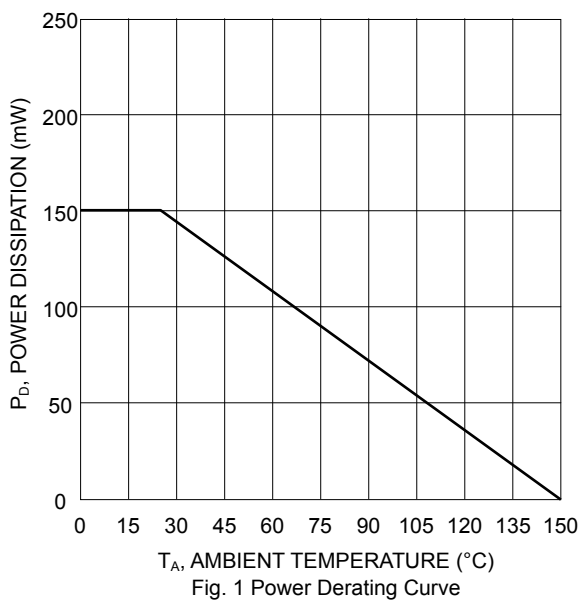
### Thermal Characteristics

Characteristic	Symbol	M1MA141K	M1MA142K	Unit
Power Dissipation (Note 1)	$P_D$	150		mW

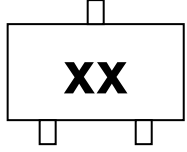
Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

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

Characteristic	Symbol	M1MA141K	M1MA142K	Unit
Min. Reverse Breakdown Voltage @ $I_R = 100\mu\text{A}$	$V_{(BR)}$	40	80	V
Max. Forward Voltage Drop @ $I_F = 100\text{mA}$	$V_{FM}$	1.2		V
Peak Reverse Leakage Current @ $V_R = 35\text{V}$ @ $V_R = 75\text{V}$	$I_{RM}$	100 —	— 100	nA
Diode Capacitance ( $V_R = 0\text{V}$ , $f = 1.0\text{MHz}$ )	$C_D$	2.0		pF
Reverse Recovery Time ( $I_F = I_R = 10\text{mA}$ , $I_{RR} = 0.1 \times I_R$ , $R_L = 100\Omega$ )	$t_{rr}$	3.0		nS



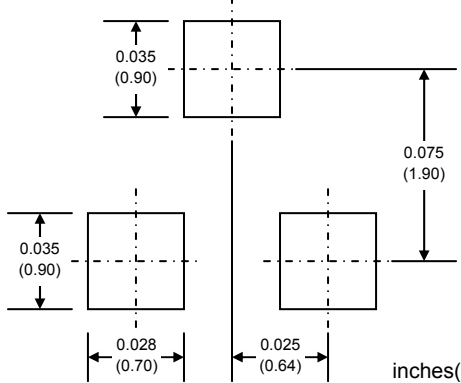
## MARKING INFORMATION



xx = Device Code, See Table Below

M1MA141K	M1MA142K
MH	MI

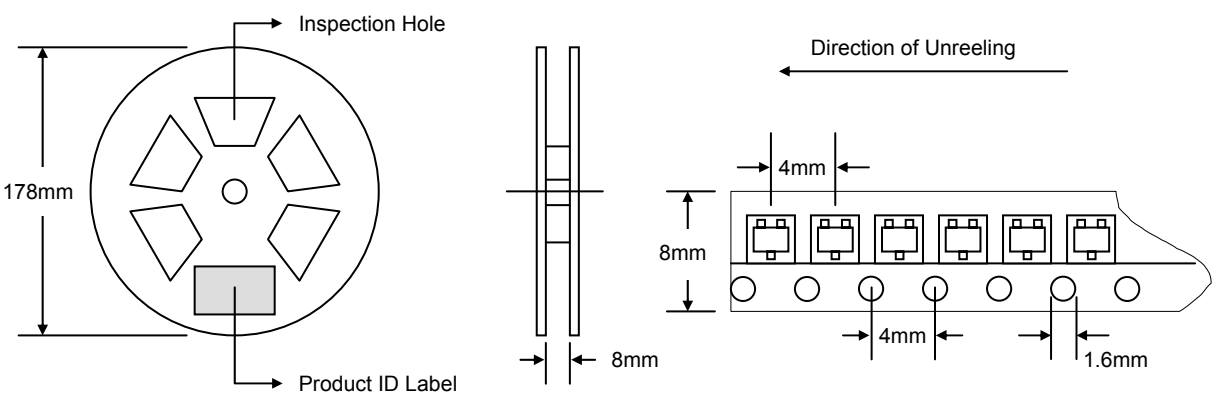
## RECOMMENDED FOOTPRINT



0.035 (0.90)  
0.075 (1.90)  
0.028 (0.70)  
0.025 (0.64)  
inches(mm)

## 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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