# LITE ON SEMICONDUCTOR

### **LT2M SERIES**

### SURFACE MOUNT UNIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSORS

## STAND-OFF VOLTAGE - 5.0 to 24 Volts POWER DISSIPATION - 200 WATTS

**DO-216AA** 

#### FEATURES

- For surface mounted applications
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-O
- Typical IR less than 1uA above 10V
- Fast response time: typically less than 1.0ns
- IEC6100-4-2, Level 4(ESD), >15KV(air); >8KV(Contact)
- RoHS compliant

#### MECHANICAL DATA

- Case Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.)
- Polarity : Cathode designated by TAB1
- Weight : 15.5 mg





#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at  $25^{\circ}$ C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

| CHARACTERISTICS  | SYMBOLS       | VALUE                    | UNIT           |        |  |
|--|---------------|--------------------------|----------------|--------|--|
| PEAK POWER DISSIPATION AT TJ= 25 $^\circ\!\mathbb{C},$ TP = 1ms (Note 1)                         | Ррк           | Minimum 200              | Minimum 200    |        |  |
| Non repetitve Peak Forward Surge<br>Current 8.3ms single half sine-wave<br>@ TJ = 25 $^{\circ}C$ | IFSM          | 25                       | 25             |        |  |
| Power Dissipation on infinite heatsink @Ta = 100 $^{\circ}C$                                     | PM(AV)        | 2.5                      | 2.5            |        |  |
| Typical Thermal Resistance (Note 2)<br>(Note 3)  | Rejt<br>Reja  | 20<br>250                |                | °C/W   |  |
| Operating Temperature Range  | TJ            | -55 to +175              | -55 to +175    |        |  |
| Storage Temperature Range  | Тята          | -55 to +175              |                | °C     |  |
| NOTES 1 Non-repetitive current pulse per Fig   | 3 and derated | above Ti– 25 ℃ per Fig 1 | BEV 6 Jan-2016 | KEIVUS |  |

NOTES : 1. Non-repetitive current pulse, per Fig. 3 and derated above TJ= 25  $^{\circ}$ C per Fig.1.

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2. Thermal Resistance Junction to Tab.

3. Thermal Resistance Junciton to ambient on PCB with recommended pad layout

#### **RATING AND CHARACTERISTIC CURVES LT2M SERIES**



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| Device<br>Uni-<br>directional | Marking | Working<br>Peak<br>Reverse<br>Voltage | Breakdowm voltage<br>VBR Volts |      | Maximum<br>Reverse<br>Leakage<br>at VRWM | Maximum<br>Reverse<br>Surge Current | Maximum<br>Reverse Voltage<br>at IRSM<br>(Clamping<br>Voltage) | Off-State<br>Capacitance |         |
|-------------------------------|---------|---------------------------------------|--------------------------------|------|--|-------------------------------------|--|--------------------------|---------|
|                               |         | VRWM(Volts)                           | Min.                           | Max. | @IT( mA)                                 | IR (uA)                             | IRSM(Amps)   | VRSM(Volts)              | Co (pf) |
| LT2M5.0A                      | MNB     | 5.0                                   | 6.40                           | 7.07 | 10                                       | 50                                  | 21.7   | 9.2                      | 850.0   |
| LT2M12A                       | MNF     | 12.0                                  | 13.3                           | 14.7 | 1  | 1                                   | 10.1   | 19.9                     | 330.0   |
| LT2M16A                       | MNH     | 16.0                                  | 17.1                           | 18.9 | 1  | 1                                   | 7.7  | 26.0                     | 260.0   |
| LT2M24A                       | MNK     | 24.0                                  | 25.7                           | 28.4 | 1  | 1                                   | 5.1  | 38.9                     | 180.0   |

Note: Off-state capacitance measured at f=1.0MHz; 1.0VRMS signal; VR=2VDC bias.



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