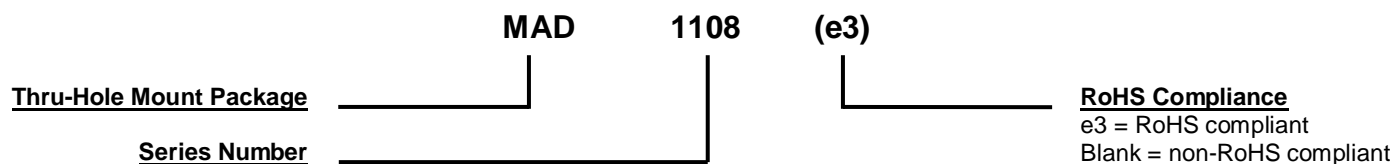


MAXIMUM RATINGS

| Parameters/Test Conditions | Symbol | Value | Unit |
|---|---------------------|-------------|------|
| Junction and Storage Temperature | T_J and T_{STG} | -55 to +150 | °C/W |
| Peak Working Reverse Voltage | V_{RWM} | 75 | V |
| Repetitive Peak Forward Current (one diode) | I_{FRM} | 400 | mA |
| Forward Surge Current @ 8.3 ms | I_{FSM} | 2 | A |
| @ 8/20 μ s | | 12 | |
| Rated Average Power dissipation (total) | $P_{M(AV)}$ | 1500 | mW |
| Solder Temperature @ 10 s | T_{SP} | 260 | °C |

MECHANICAL and PACKAGING

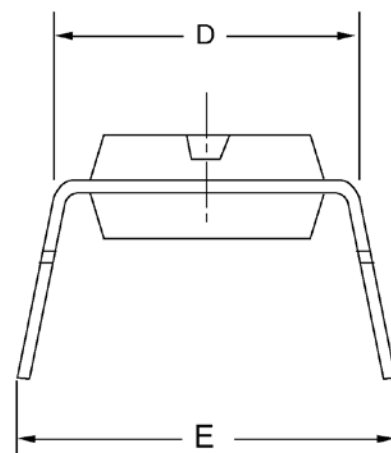
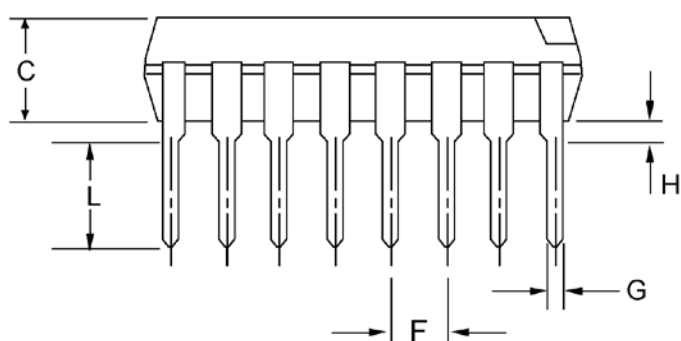
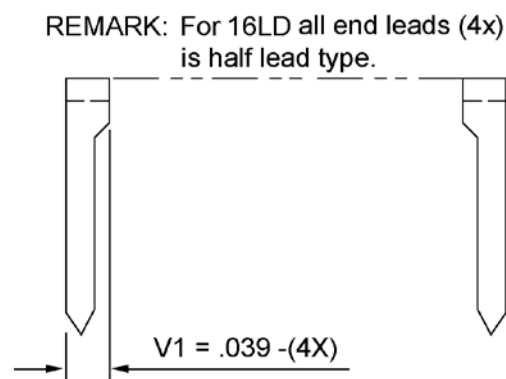
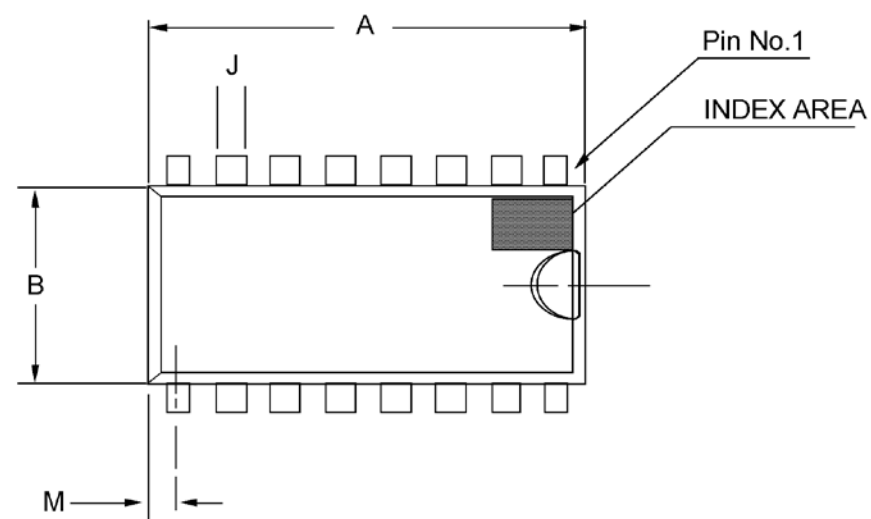
- CASE: Void-free transfer molded thermosetting epoxy body meeting UL94V-0 flammability classification
- TERMINALS: Tin-lead or RoHS compliant annealed matte-tin plating solderable per MIL-STD-750 method 2026
- MARKING: MSC logo, MAD1108 or MAD1108e3 and date code. Pin #1 is to the left of the dot or indent on top of package.
- DELIVERY OPTION: Carrier tube. Consult factory for quantities
- WEIGHT: Approximately 0.997 grams
- See [Package Dimensions](#) on last page.

PART NOMENCLATURE

SYMBOLS & DEFINITIONS

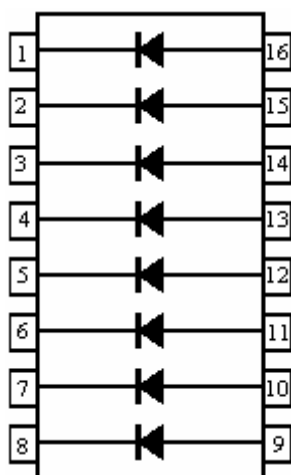
| Symbol | Definition |
|------------|--|
| C_T | Total Capacitance: The total small signal capacitance between the diode terminals of a complete device. |
| I_R | Reverse Current: The dc current flowing from the external circuit into the cathode terminal at the specified voltage V_R . |
| $V_{(BR)}$ | Breakdown Voltage: The voltage across the device at a specified current $I_{(BR)}$ in the breakdown region. |
| V_F | Forward Voltage: A positive dc anode-cathode voltage the device will exhibit at a specified forward current. |
| V_{RWM} | Working Peak Reverse Voltage: The peak voltage excluding all transient voltages (ref JESD282-B). Also sometimes known historically as PIV. |

ELECTRICAL CHARACTERISTICS @ 25 °C unless otherwise stated

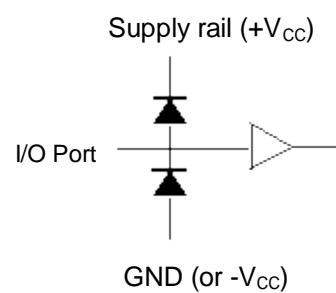
| PART NUMBER | BREAKDOWN VOLTAGE V _(BR) @ I _(BR) =100 μA | LEAKAGE CURRENT I _R T _A = 25 °C | | LEAKAGE CURRENT I _R T _A = 150 °C | | TOTAL CAPACITANCE C _T @ 0 V | REVERSE RECOVERY TIME t _{rr} | FORWARD VOLTAGE V _F I _F = 10 mA | FORWARD VOLTAGE V _F I _F = 100 mA |
|----------------------|--|--|-----------------|---|-----------------|---|--|--|---|
| | V | μA | | μA | | pF | ns | V | V |
| | MIN | MAX | @V _R | MAX | @V _R | TYP | MAX | MAX | MAX |
| MAD1108 MAD1108e3 | 90 | 0.200 | 20 | 300 | 20 | 1.5 | 5.0 | 1.00 | 1.20 |

PACKAGE DIMENSIONS


| Ref. | Dimensions | | | |
|------|------------|-------|-------------|-------|
| | Inch | | Millimeters | |
| | Min | Max | Min | Max |
| A | 0.746 | 0.754 | 18.95 | 19.15 |
| B | 0.246 | 0.254 | 6.248 | 6.452 |
| C | 0.126 | 0.134 | 3.200 | 3.404 |
| D | 0.300 | 0.325 | 7.619 | 8.255 |
| E | 0.320 | 0.370 | 8.128 | 9.398 |
| F | 0.098 | 0.102 | 2.489 | 2.591 |
| G | 0.016 | 0.020 | 0.406 | 0.508 |
| H | 0.015 | 0.040 | 0.381 | 1.016 |
| J | 0.058 | 0.062 | 1.473 | 1.575 |
| L | 0.121 | 0.129 | 3.073 | 3.277 |
| M | 0.25 REF | | 0.635 REF | |

PAD LAYOUT


CONFIGURATION



STEERING DIODE APPLICATION