



MCL4148

FAST SWITCHING SURFACE MOUNT DIODES

VOLTAGE 100 Volt **POWER** 500 mWatt

MICRO-MELF Unit : inch (mm)

FEATURES

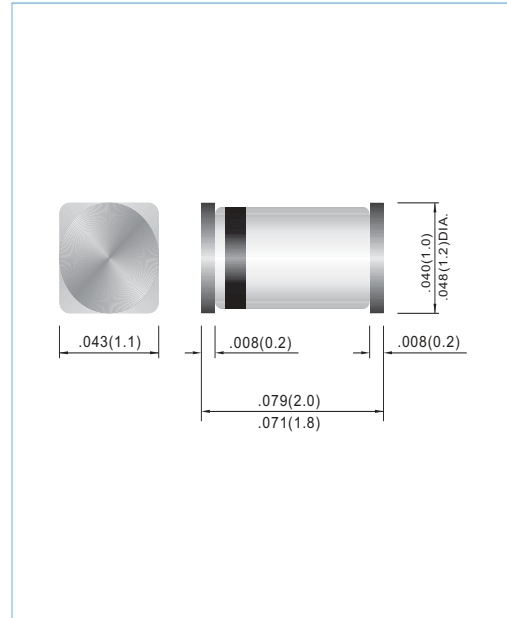
- Fast switching Speed.
- Surface Mount Package Ideally Suited For Automatic Insertion.
- Silicon Epitaxial Planar Construction.
- Lead free in compliance with EU RoHS 2.0

MECHANICAL DATA

- Case: MICRO MELF, Glass
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band
- Marking: Cathode Band Only
- Weight: 0.011 grams
- Packing information

T/R - 2.5K per 7" plastic reel

T/R - 10K per 13" plastic reel



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_J=25°C unless otherwise noted)

| PARAMETER | SYMBOL | MCL4148 | UNITS |
|---|--------------------------------|---------------|----------------|
| Peak Reverse Voltage | V _{RM} | 100 | V |
| Maximum Average Forward Current at Ta=25 °C And f≥50Hz | I _{F(AV)} | 150 | mA |
| Surge Forward Current at t < 1s and T _J = 25 °C | I _{FSM} | 500 | mA |
| Power Dissipation at Tamb= 25 °C | P _{TOT} | 500 | mW |
| Maximum Forward Voltage at I _F =10mA | V _F | 1.0 | V |
| Maximum Leakage Current at V _R =20V at V _R =75V at V _R =20V ,T _J = 150°C | I _R | 25 5 50 | nA μA μA |
| Maximum Capacitance at V _F =V _R =0 | C _J | 4 | pF |
| Maximum Reverse Recovery Time From I _F =-I _{RR} =10mA to I _{RR} =-1mA ,V _R =6V R _L =100 Ω | t _{rr} | 4 | ns |
| Typical Thermal Resistance | R _{θJA} | 300 | °C / W |
| Junction Temperature and Storage Temperature Range | T _J ,T _S | -65 to +175 | °C |

NOTE:

1. C_J at V_R=0, f=1MHZ
2. From I_F=10mA to I_R=1mA, V_R=6Volts, R_L=100Ω



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RATING AND CHARACTERISTIC CURVES

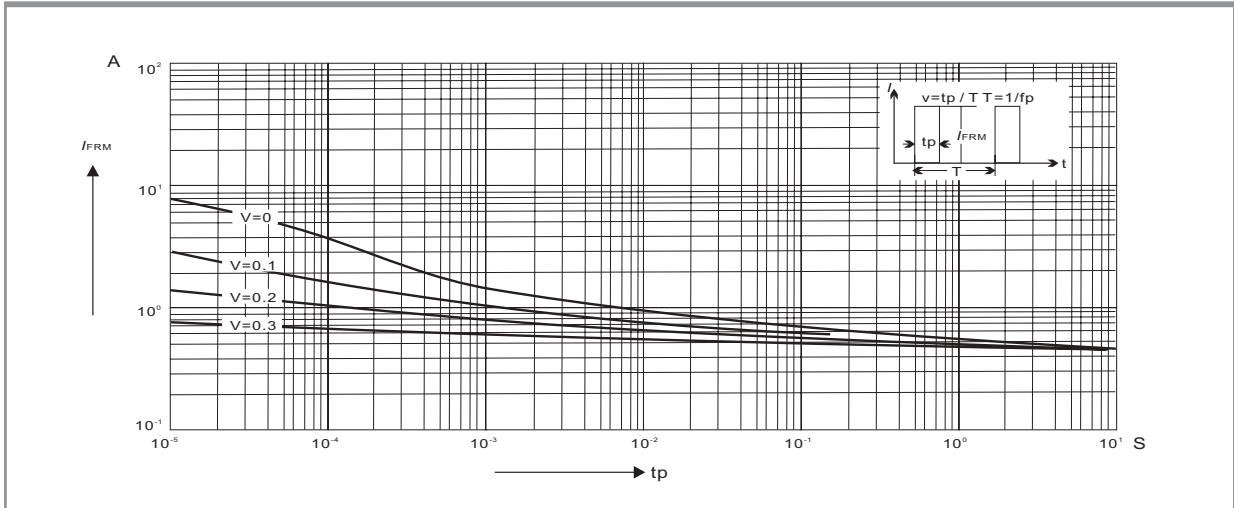


Fig.1 ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

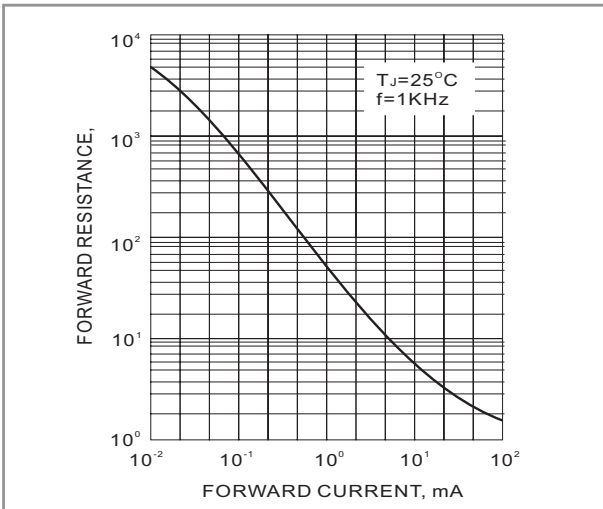


Fig.2-DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

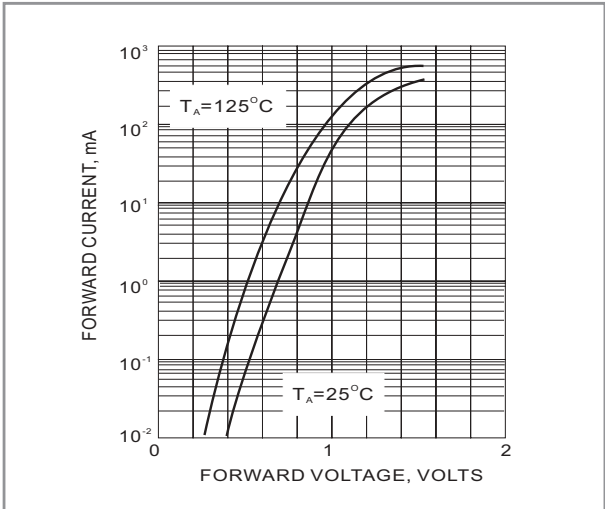


Fig.3 FORWARD CHARACTERISTICS

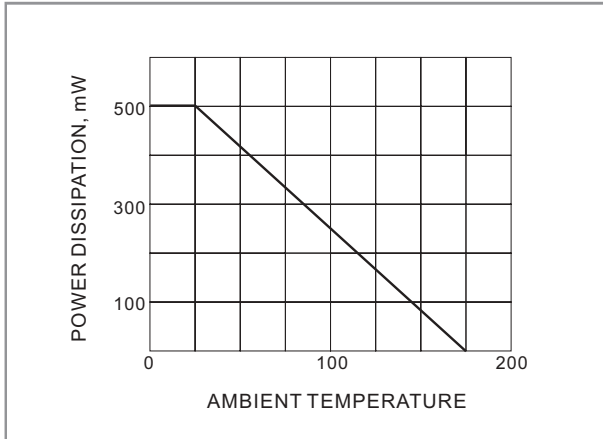


Fig.4 DERATING CURVE

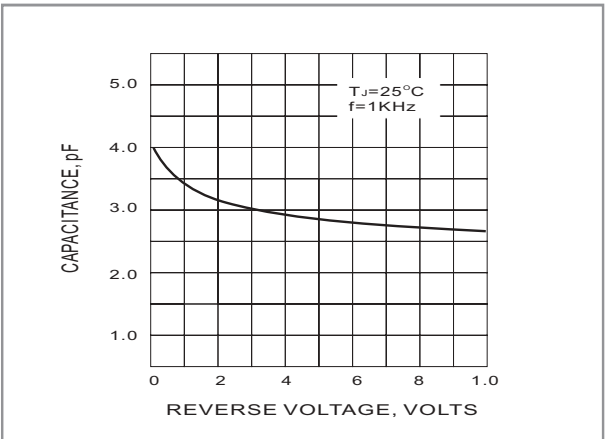


Fig.5 TYPICAL JUNCTION CAPACITANCE

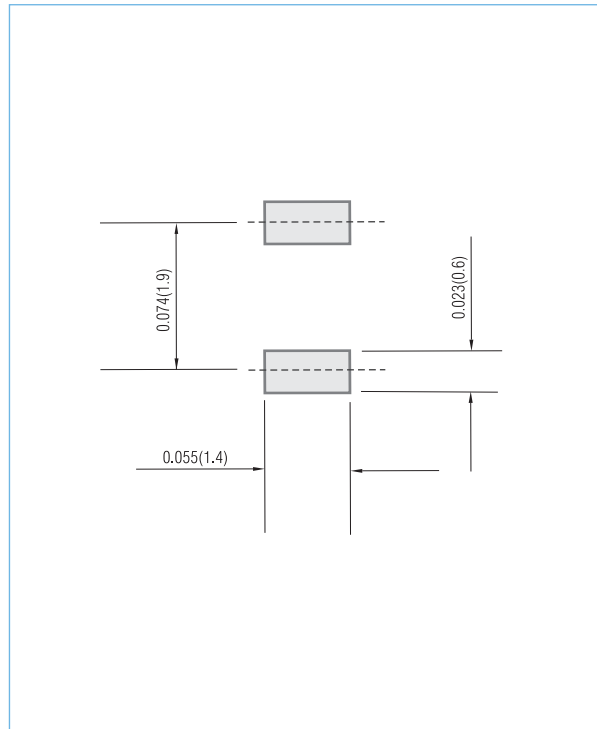


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MOUNTING PAD LAYOUT

MICRO-MELF

Unit: inch (mm)



ORDER INFORMATION

- Packing information

T/R - 10K per 13" plastic Reel

T/R - 2.5K per 7" plastic Reel



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Part No_packing code_Version

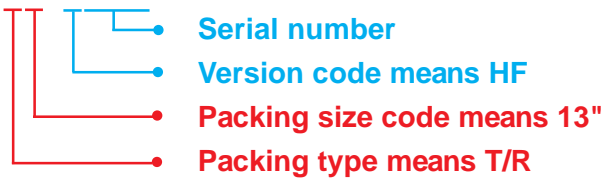
MCL4148_R1_10001

MCL4148_R2_10001

For example :

RB500V-40_R2_00001

Part No.



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | HF | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS | 1 | serial number |
| Bulk Packing (B/P) | B | 13" | 2 | | | |
| Tube Packing (T/P) | T | 26mm | X | | | |
| Tape and Reel (Right Oriented) (TRR) | S | 52mm | Y | | | |
| Tape and Reel (Left Oriented) (TRL) | L | PANASERT T/B CATHODE UP (PBCU) | U | | | |
| FORMING | F | PANASERT T/B CATHODE DOWN (PBCD) | D | | | |