

DATA SHEET

MCL4148

FAST SWITCHING SURFACE MOUNT DIODES

VOLTAGE 100 Volts **POWER** 500 mWatts **MICRO-MELF** Unit : inch (mm)

FEATURES

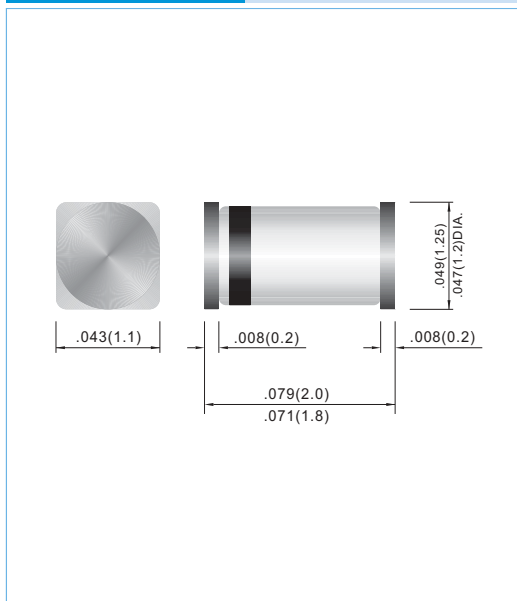
- Fast switching Speed.
- Surface Mount Package Ideally Suited For Automatic Insertion.
- Silicon Epitaxial Planar Construction.
- Both normal and Pb free product are available :
 - Normal : 80~95% Sn, 5~20% Pb
 - Pb free: 98.5% Sn above

MECHANICAL DATA

Case: MICRO-MELF, Model Glass
 Terminals: Solderable per MIL-STD-202E, Method 208
 Polarity: Cathode Band
 Marking: Cathode Band Only
 Weight: 0.01 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
Reverse Voltage	V _R	75	V
Peak Reverse Voltage	V _{RM}	100	V
RMS Voltage	V _{RMS}	50	V
Maximum Average Forward Current at T _a =25°C And f ≥ 50Hz	I _{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 (Note 1)	C _J	4	pF
Maximum Reverse Recovery Time (Note 2)	T _{RR}	4	ns
Maximum Thermal Resistance	R _{θJA}	350	°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

RATING AND CHARACTERISTIC CURVES

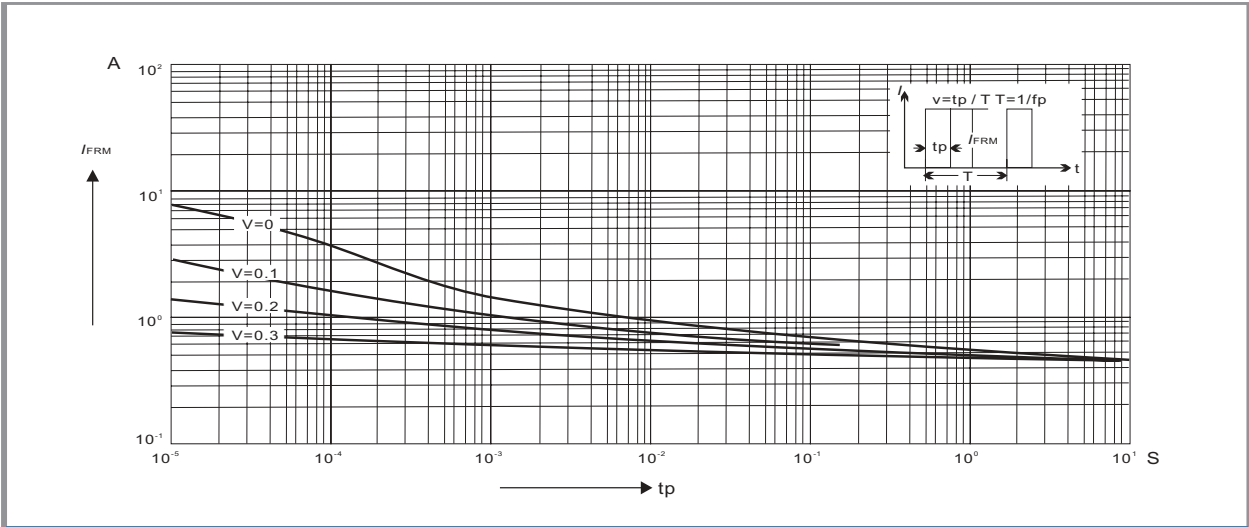


Fig.1 ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

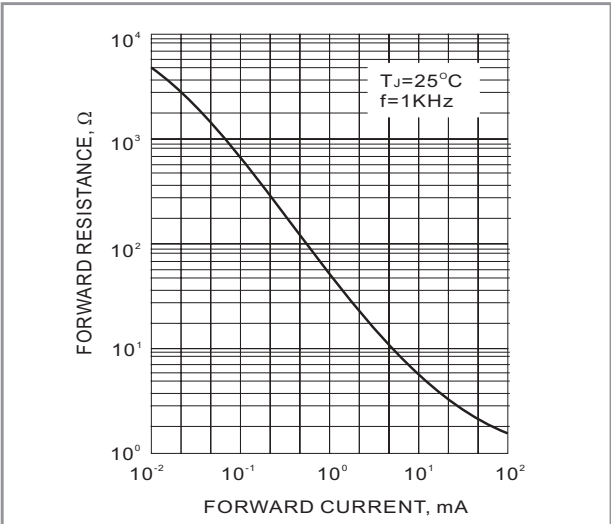


Fig.2-DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

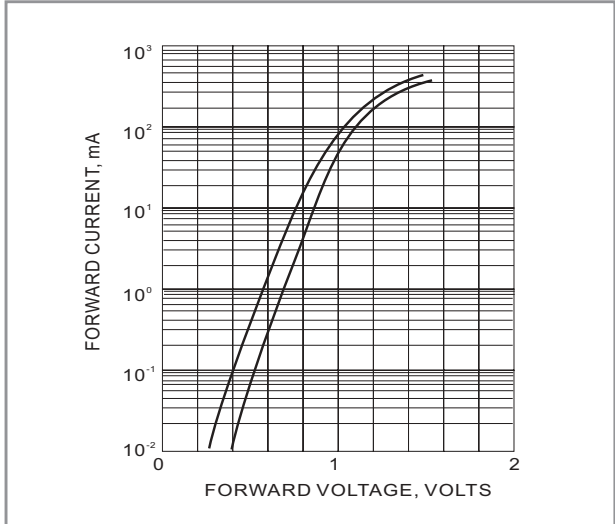


Fig.3 FORWARD CHARACTERISTICS

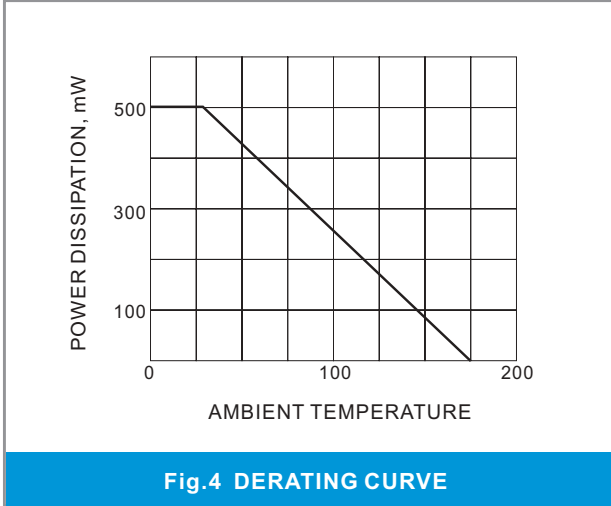


Fig.4 DERATING CURVE

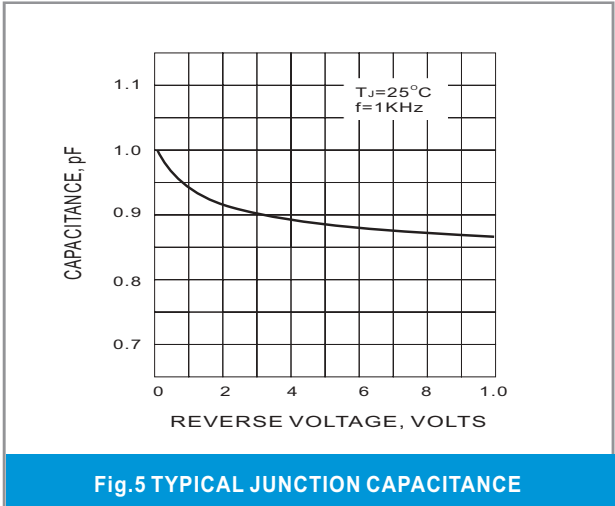


Fig.5 TYPICAL JUNCTION CAPACITANCE