

## DATA SHEET

### LL4148

#### FAST SWITCHING SURFACE MOUNT DIODES

**VOLTAGE** 75 V **POWER** 500 mW

#### FEATURES

- FAST SWITCHING SPEED
- SURFACE MOUNT PACKAGE IDEALLY SUITED FOR AUTOMATIC INSERTION
- SILICON EPITAXIAL PLANAR CONSTRUCTION
- LEAD FREE AND HALOGEN-FREE

#### MECHANICAL DATA

- CASE: MINI MELF ,GLASS
- TERMINALS: SOLDERABLE PER MIL-STD-202E, METHOD 208
- POLARITY: CATHODE BAND
- MARKING: CATHODE BAND ONLY
- WEIGHT: 0.05 GRAMS



CASE : MINI-MELF

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

##### RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED.

PARAMETER	SYMBOL	VALUE	UNITS
MAXIMUM REVERSE VOLTAGE	$V_R$	75	V
PEAK REVERSE VOLTAGE	$V_{RM}$	100	V
RMS VOLTAGE	$V_{RMS}$	50	V
MAXIMUM AVERAGE FORWARD CURRENT AT $T_A=25^\circ\text{C}$ AND $f \geq 50\text{Hz}$	$I_{AV}$	150	mA
PEAK FORWARD SURGE CURRENT < 1s AND $T_J=25^\circ\text{C}$	$I_{FSM}$	500	mA
MAXIMUM THERMAL RESISTANCE	$R_{\theta JA}$	350	$^\circ\text{C/W}$
POWER DISSIPATION DERATE ABOVE 25°C	$P_{TOT}$	500	mW
OPERATING JUNCTION AND STORAGE TEMPERATURE RANGE	$T_J, T_{STG}$	- 65 to + 175	$^\circ\text{C}$

##### ELECTRICAL CHARACTERISTICS (AT $T_A=25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

PARAMETER	SYMBOL	VALUE	UNITS
MAXIMUM FORWARD VOLTAGE AT 10mA	$V_F$	1.0	V
MAXIMUM DC REVERSE CURRENT	$I_R$	$V_R=20\text{V}$	nA
		$V_R=75\text{V}$	$\mu\text{A}$
		$V_R=20\text{V}, T_J=150^\circ\text{C}$	$\mu\text{A}$
JUNCTION CAPACITANCE (NOTE.1)	$C_J$	4.0	pF
MAXIMUM REVERSE RECOVERY TIME (NOTE.2)	$T_{RR}$	4.0	nS

##### NOTE:

1.  $C_J$  AT  $V_R=0\text{V}, f=1\text{MHz}$
2. FROM  $I_F=10\text{mA}$  TO  $I_R=1\text{mA}, V_R=6\text{V}, R_L=100\Omega$

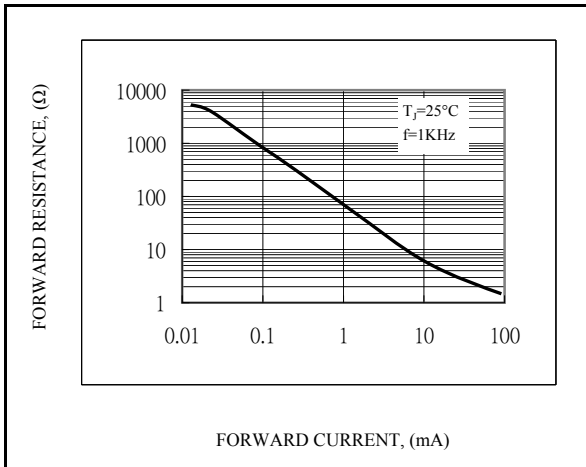


Fig.1-DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

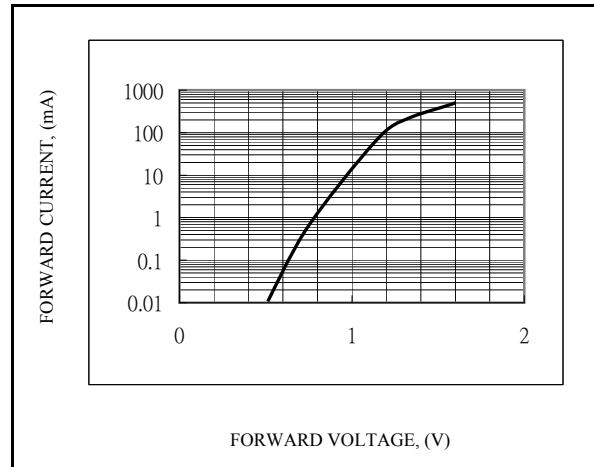


Fig.2-FORWARD CHARACTERISTICS

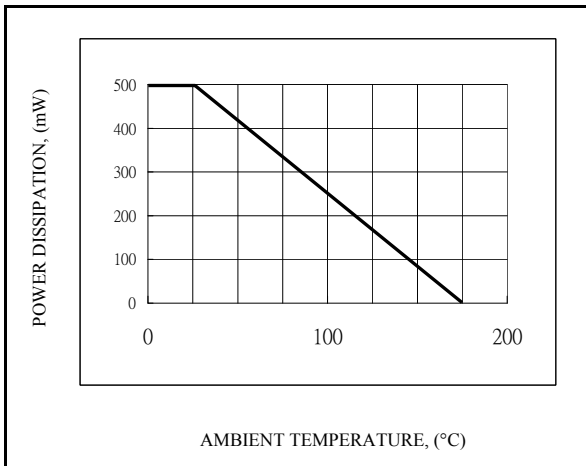


Fig.3-DERATING CURVE

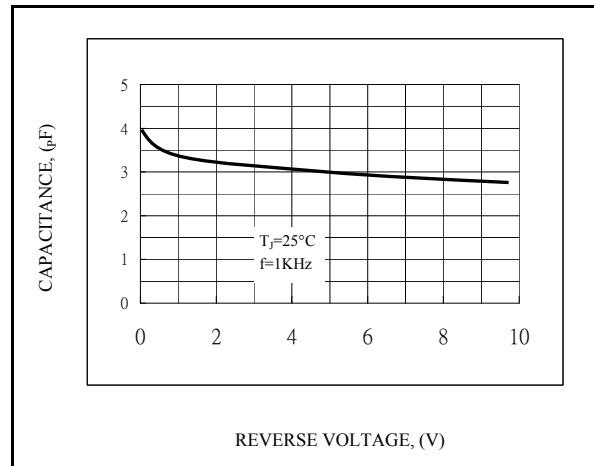
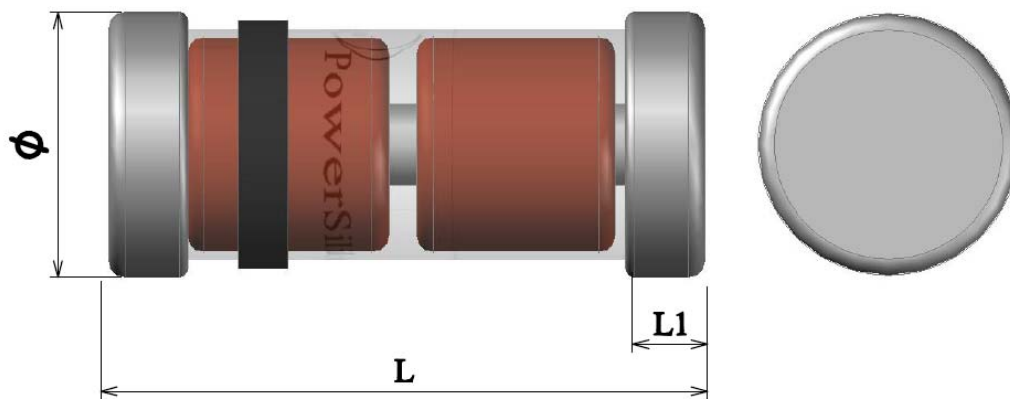


Fig.4-TYPICAL JUNCTION CAPACITANCE

## MINI-MELF DIMENSION



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
L	3.40	3.60	0.134	0.142
L1	0.28	0.48	0.011	0.019
$\Phi$	1.40	1.60	0.055	0.063