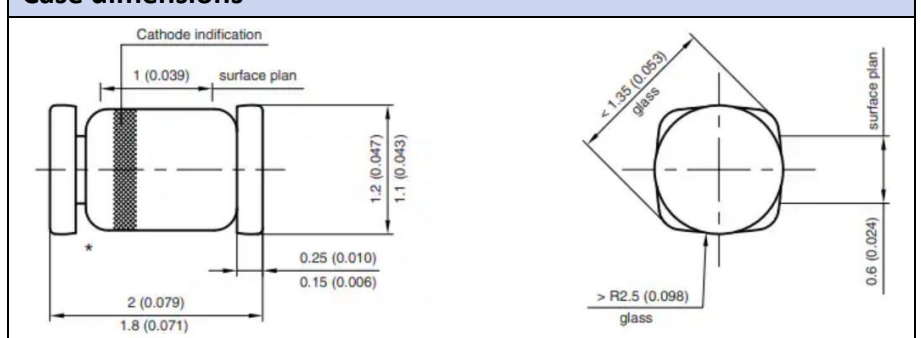


SMD Rectifying Diode

Primary characteristics		
Parameter	Value	Unit
V_{RM}	100	V
$I_{F(AV)}$	200	mA

Features

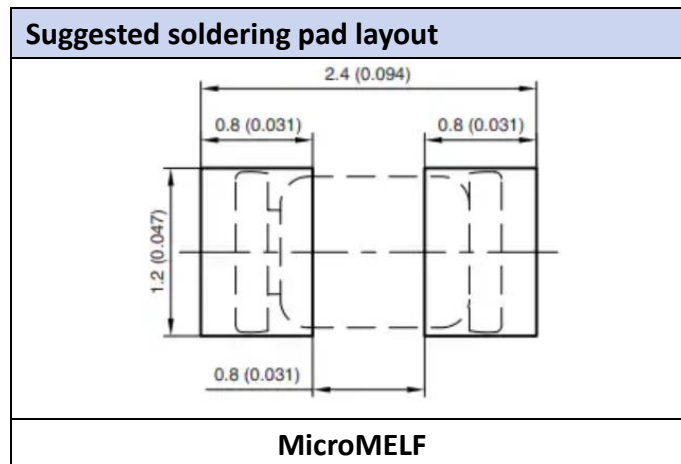
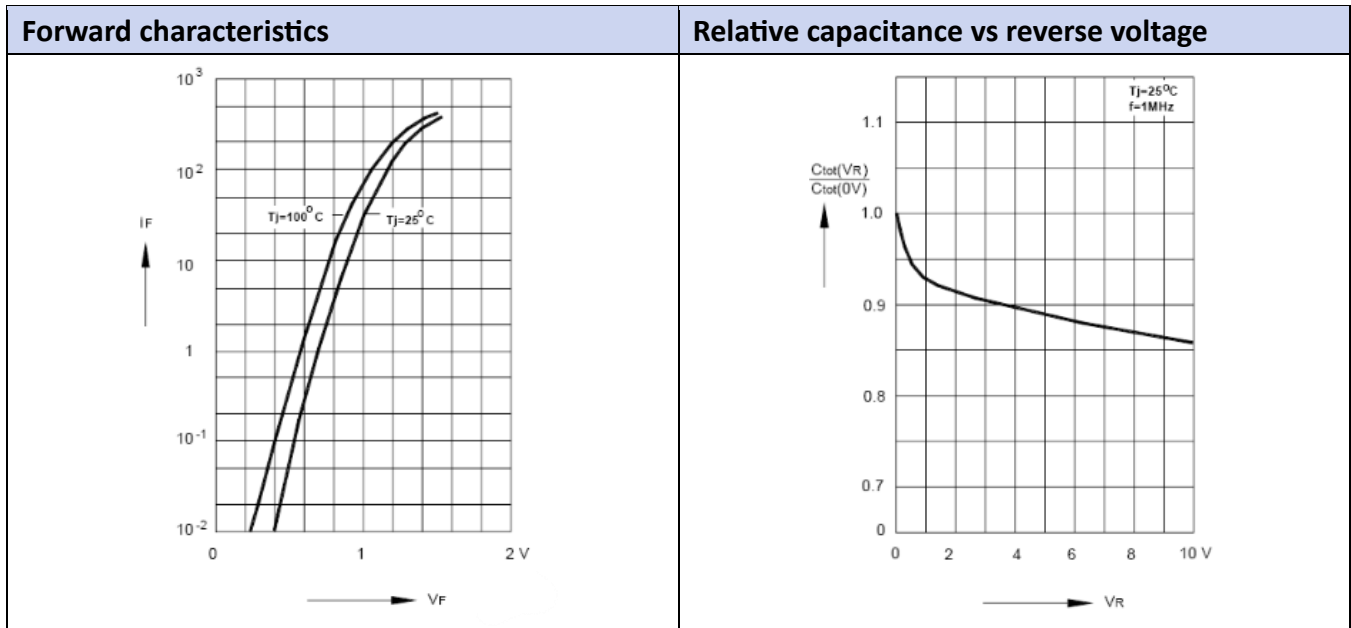
- **MicroMELF** case for easy automatic insertion.
- Pb-Free and **RoHS** Compliant
- Fits onto SOD-323/SOT-23 footprints
- Electrical data identical with the device 1N4148

Case dimensions	
 <p>The diagram shows the MicroMELF case dimensions. The side view (left) shows a cathode indication, a surface plan, and dimensions: 1 (0.039) for the cathode width, 1.2 (0.047) for the total height, 1.1 (0.043) for the body height, 0.25 (0.010) for the cathode height, 0.15 (0.006) for the cathode width, 2 (0.079) for the total width, and 1.8 (0.071) for the body width. The top view (right) shows a circular body with a diameter of 1.35 (0.053) and a surface plan. The body has a radius of > R2.5 (0.098) and a thickness of 0.6 (0.024).</p>	
MicroMELF	
Units: mm (inch)	

Applications

- Extremely fast switches

Absolute maximum ratings and general characteristics ($T_a = 25^\circ\text{C}$)					
Parameter	Test condition	Symbol	Value		Unit
			Min.	Max.	
Peak reverse voltage		V_{RM}	-	100	V
Reverse voltage		V_R	-	75	V
Repetitive peak forward current		I_{FRM}	-	450	mA
Average rectified forward current		$I_{F(AV)}$	-	200	mA
Non-repetitive peak forward surge current	$t=1.0\text{s}$	I_{FSM}	-	0.5	A
	$t=1.0\text{ms}$		-	1.0	
	$t=1.0\mu\text{s}$		-	4.0	
Power dissipation		P_{tot}	-	500	mW
Operating junction temperature		T_j	-	175	$^\circ\text{C}$
Storage temperature range		T_{STG}	-65	175	$^\circ\text{C}$
Forward voltage	$I_F=50\text{mA}$	V_F	-	1.0	V
Leakage current	$V_R=20\text{V}$	I_R	-	25	nA
	$V_R=75\text{V}$		-	5.0	μA
	$V_R=20\text{V}, T_j=150^\circ\text{C}$		-	50	μA
Capacitance	$V_R=0\text{V}, f=1.0\text{MHz}$	C_{tot}	-	4.0	pF
Voltage rise when switching ON	50mA forward pulses, $t_p=100\text{ms}$, $t_{rise}<30\text{ns}$, $f_p=5.0$ to 100kHz	V_{fr}	-	2.5	V
Reverse recovery time	$I_F=10\text{mA}$ to $I_R=1.0\text{mA}$, $I_{rr}=0.1I_R$, $V_R=6.0\text{V}$, $R_L=100\Omega$	t_{rr}	-	4.0	ns
Rectification efficiency	$F=100\text{MHz}$, $V_{RF}=2.0\text{V}$	η_v	0.45	-	-



Ordering information			
Part Number	Package	Shipping Quantity	Dimensions
MCL4148	MicroMELF	2500 pcs / reel	---

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