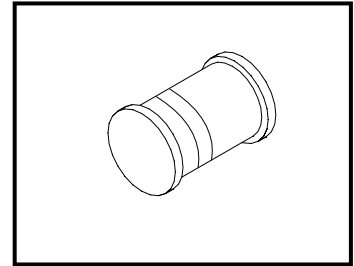


**SURFACE MOUNT SWITCHING DIODE**

# MM4148SM


**Description**

The MM4148SM is designed for high-speed switching application in hybrid thick-and thin-film circuits.

**Absolute Maximum Ratings**

( Operating temperature range applies unless otherwise specified )

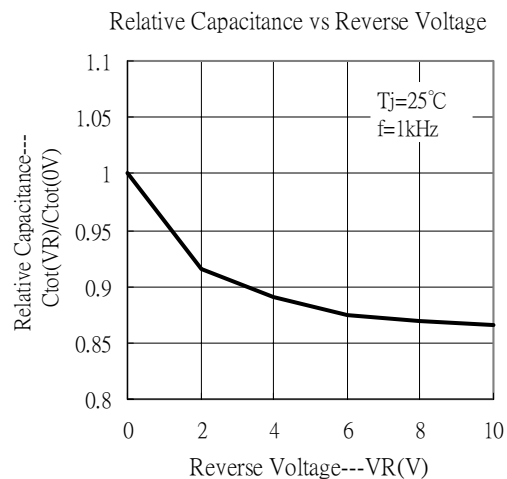
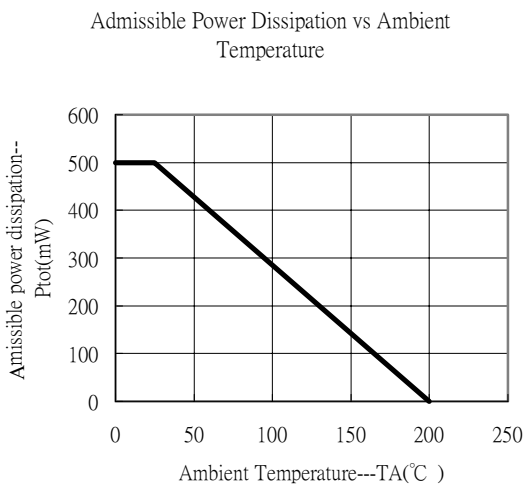
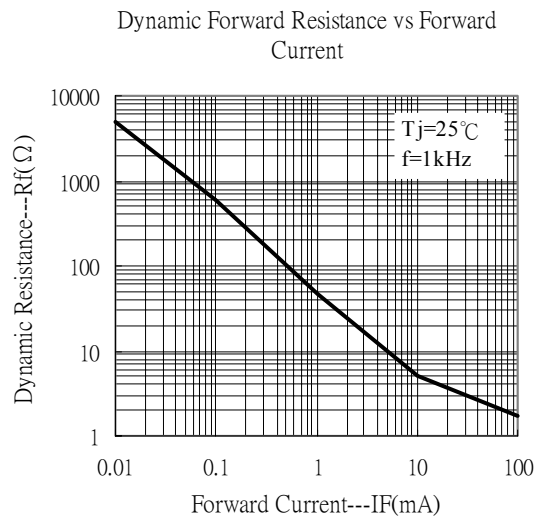
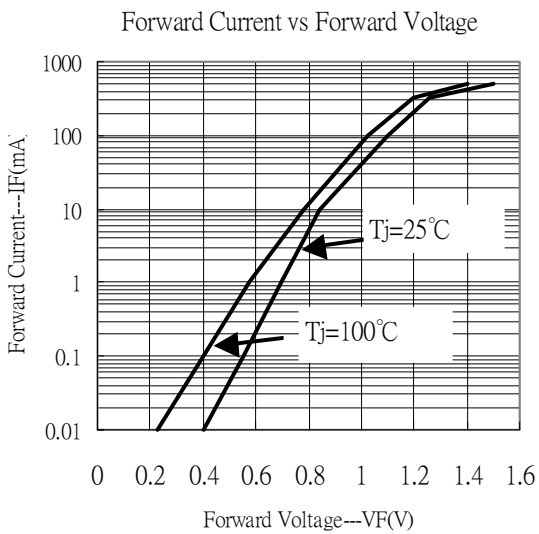
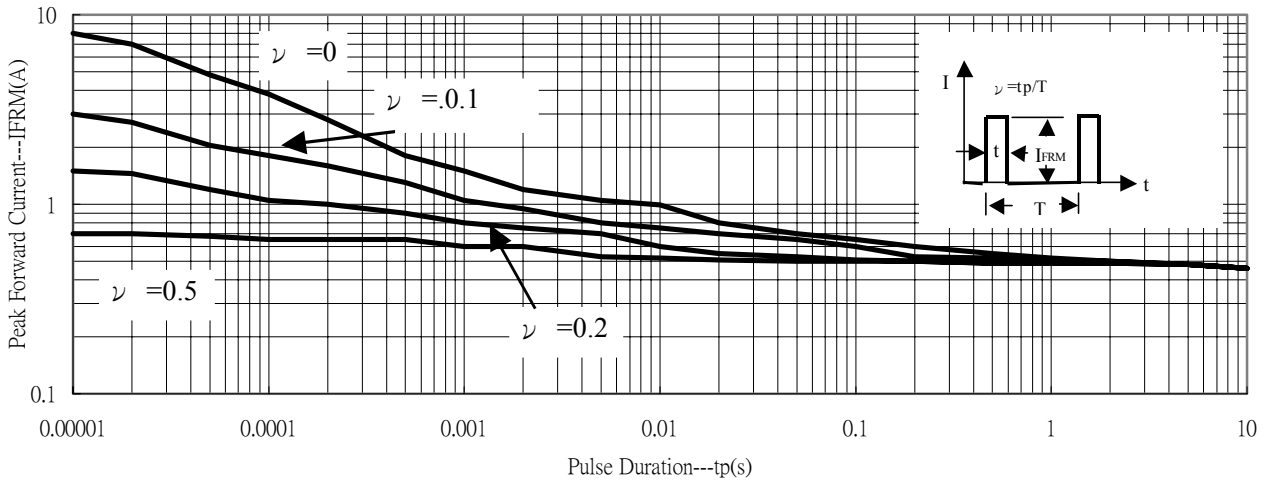
Characteristics	Symbol	Value	Unit
Reverse Voltage	$V_R$	75	V
Peak Reverse Voltage	$V_{RM}$	100	V
Rectified Current(Average) Half Wave Rectification with Resistive Load at $T_{amb}=25^{\circ}C$ and $f \geq 50Hz$	$I_O$	150	mA
Surge Forward Current at $t < 1s$ and $T_j = 25^{\circ}C$	$I_{FSM}$	500	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	500	mW
Junction Temperature	$T_j$	200	$^{\circ}C$
Storage Temperature Range	$T_s$	-65 to +200	$^{\circ}C$

**Characteristics (  $T_j=25^{\circ}C$  )**

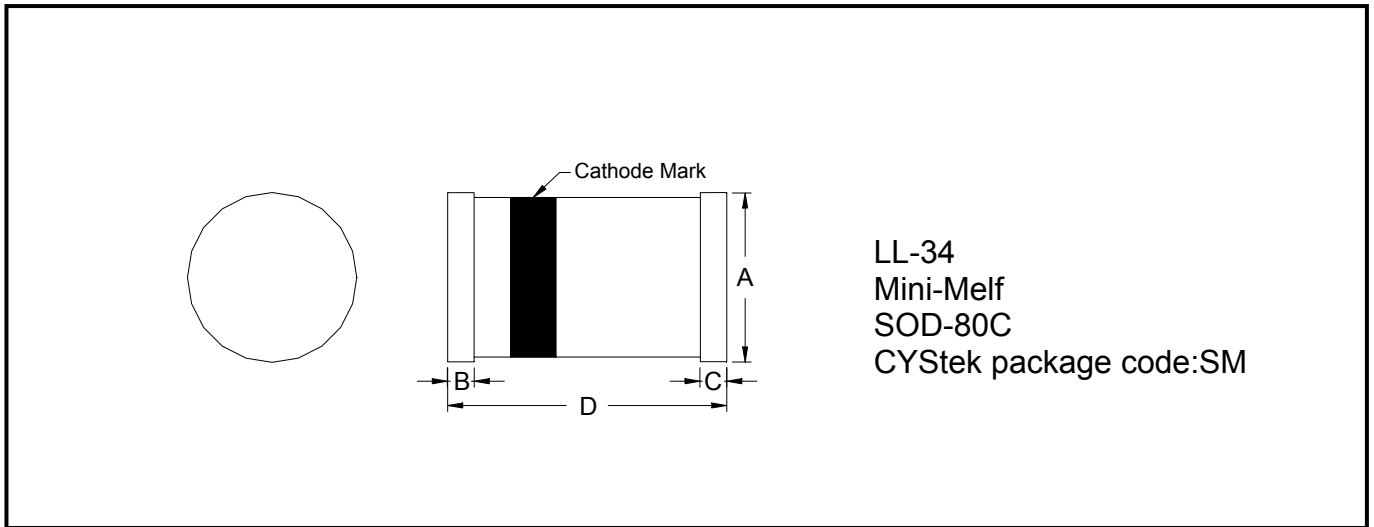
Characteristics	Symbol	Min	Typ	Max	Unit	
Forward Voltage at $I_F=10mA$	$V_F$	-	-	1	V	
Leakage Current	$I_R$	$V_R=20V$	-	-	25	nA
		$V_R=75V$	-	-	5	uA
		$V_R=20V, T_j=150^{\circ}C$	-	-	50	uA
Reverse Breakdown Voltage tested with 100us Pulses	$V_{(BR)R}$	100	-	-	V	
Capacitance at $V_F=V_R=0$	$C_{tot}$	-	-	4	pF	
Voltage Rise when Switching On Tested with 50mA Forward Pulses $T_p=0.1us$ , Rise Time<30ns, $f_p=5\sim 100kHz$	$V_{fr}$	-	-	2.5	V	
Reverse Recovery Time From $I_F=-I_R=10mA$ to $I_{RR}=-1mA$ , $V_R=6V$ , $R_L=100\Omega$	$t_{rr}$	-	-	4	ns	
Thermal Resistance, Junction to Ambient Air	$R_{thJA}$	-	-	350	$^{\circ}C/W$	
Rectification Efficiency at $f=100MHz$ , $V_{RF}=2V$	$\eta_v$	0.45	-	-	-	

## Characteristic Curves

Admissible Repetitive Peak Forward Current vs Pulse Duration



## Mini-melf(SOD-80C) Dimension



\*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.0512	0.0591	1.30	1.50	C	0.0118	0.0197	0.30	0.50
B	0.0118	0.0197	0.30	0.50	D	0.1260	0.1417	3.2	3.6

Notes : 1.Controlling dimension : millimeters.  
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

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