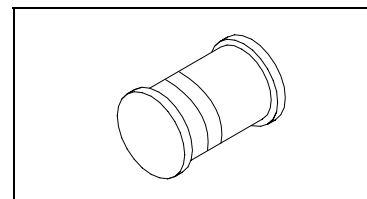




HMM4148

SURFACE MOUNT SWITCHING DIODES



Description

The HMM4148 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	I_{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	$^{\circ}C$

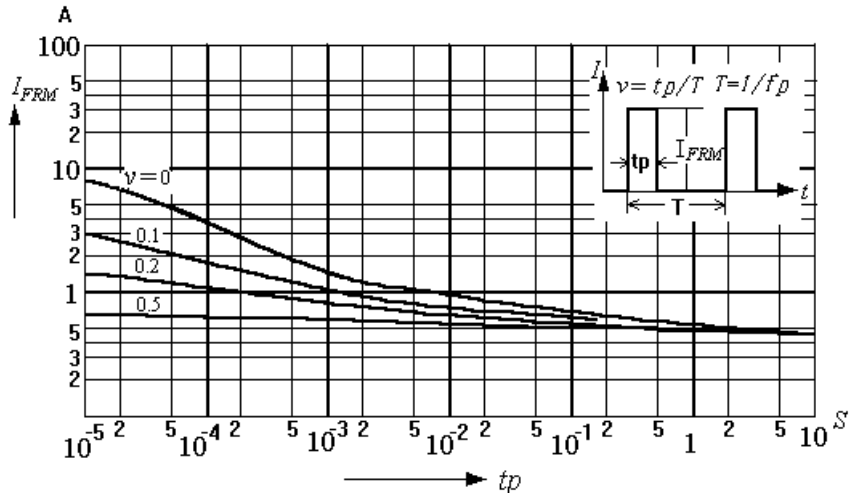
Characteristics ($T_j=25^{\circ}C$)

Characteristics	Symbol	Min	Typ	Max	Unit
Forward Voltage at $I_F=10mA$	V_F	-	-	1	V
Leakage Current at $V_R=20V$ $V_R=75V$ $V_R=20V, T_j=150^{\circ}C$	I_R	-	-	25	nA
		-	-	5	μA
		-	-	50	μA
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 $T_p=0.1\mu s$, 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 Function to Ambient Air	R_{thA}	-	-	0.35	K/mW
Rectification Efficiency at $f=100MHz$, $V_{RF}=2V$	η_v	0.45	-	-	-

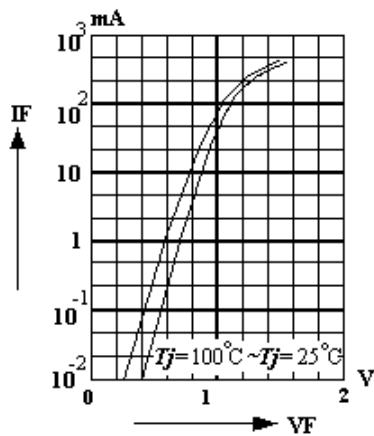


Characteristics Curve

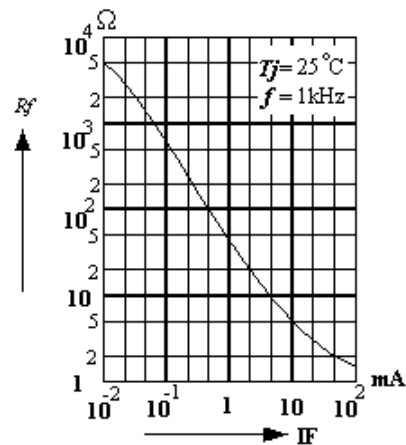
Admissible repetitive peak forward current versus pulse duration



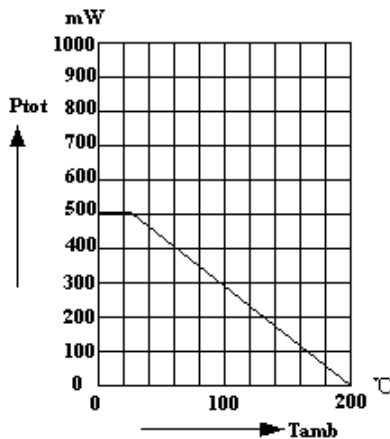
Forward characteristics



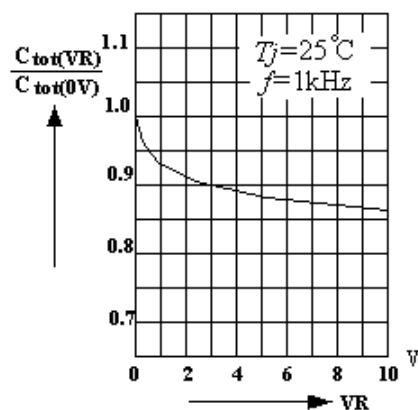
Dynamic forward resistance versus forward current



Admissible power dissipation versus ambient temperature

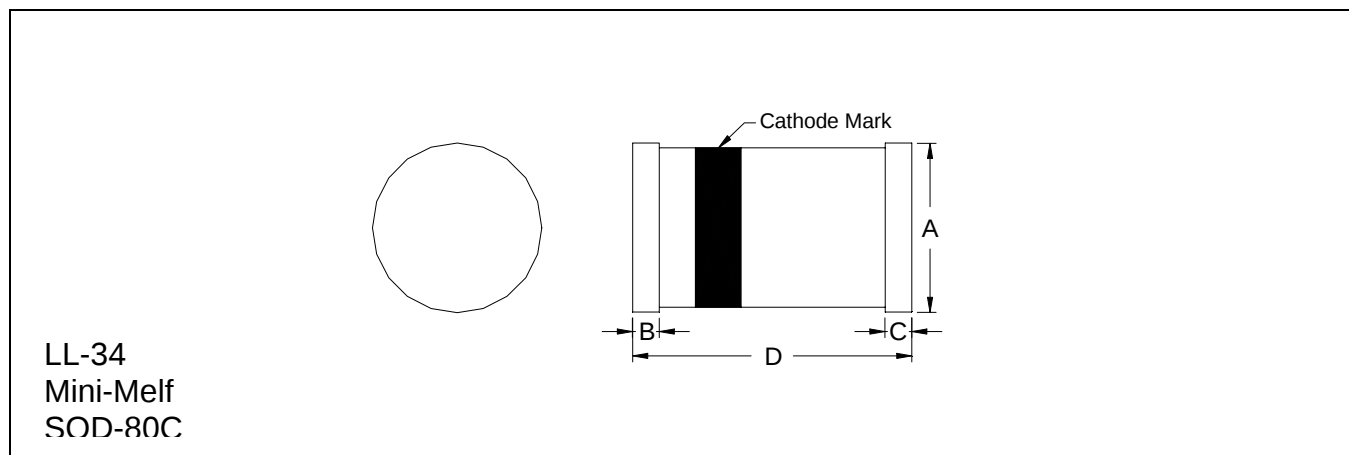


Relative capacitance versus reverse voltage





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.Dimension and tolerance based on our Spec. dated Sep. 30,1999
2.Controlling dimension : millimeters.
3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

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