

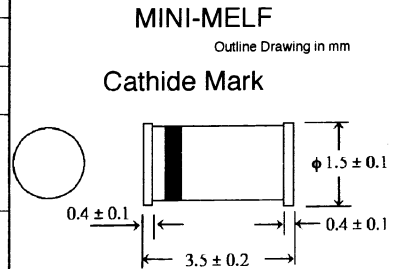


# MM4148/LS4148

## SURFACE MOUNT SWITCHING DIODES

### Absolute Maximum Ratings

	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 $T_{amb} = 25^\circ\text{C}$ and $f \geq 50\text{Hz}$	$I_O$	150	mA
Surge Forward Current at $t < I_s$ and $T_j = 25^\circ\text{C}$	$I_{FSM}$	500	mA
Power Dissipation at $T_{amb} = 25^\circ\text{C}$	$P_{tot}$	500	mW
Junction Temperature	$T_j$	200	$^\circ\text{C}$
Storage Temperature Range	$T_s$	- 65 to + 200	$^\circ\text{C}$



### Characteristics at $T_j = 25^\circ\text{C}$

	Symbol	Min	Typ	Max	Unit
Forward Voltage at $I_F = 10\text{mA}$	$V_F$	—	—	1	V
Leakage Current at $V_R = 20\text{V}$ at $V_R = 75\text{V}$ at $V_R = 20\text{V}, T_j = 150^\circ\text{C}$	$I_R$ $I_R$ $I_R$	— — —	— — —	25 5 50	nA $\mu\text{A}$ $\mu\text{A}$
Reverse Breakdown Voltage tested with $100 \mu\text{s}$ Pulses	$V_{(BR)R}$	100	—	—	V
Capacitance at $V_F = V_R = 0$	$C_{tot}$	—	—	4	pF
Voltage Rise when Switching On Tested with $50\text{mA}$ Forward Pulses $T_p = 0.1 \mu\text{s}$ , Rise Time $< 30\text{ns}$ , $f_p = 5 \sim 100\text{kHz}$	$V_{fr}$	—	—	2.5	V
Reverse Recovery Time From $I_F = -I_R = 10\text{mA}$ to $I_{RR} = -1\text{mA}$ , $V_R = 6\text{V}$ $R_L = 100\Omega$	$t_{rr}$	—	—	4	ns
Thermal Resistance Function to Ambient Air	$R_{\theta JA}$	—	—	0.35	K/mW
Rectification Efficiency at $f = 100\text{MHz}, V_{RF} = 2\text{V}$	$\eta_V$	0.45	—	—	—

# RATINGS AND CHARACTERISTIC CURVES(MM4148/LS4148)

## SURFACE MOUNT SWITCHING DIODES



FIG. 1 – ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

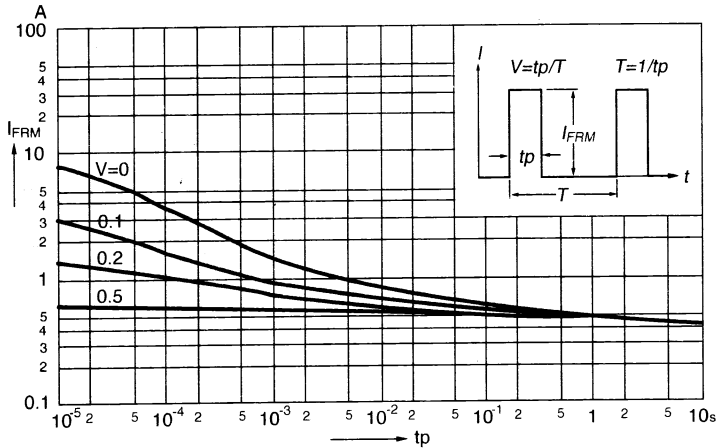


FIG. 2 – FORWARD CHARACTERISTICS

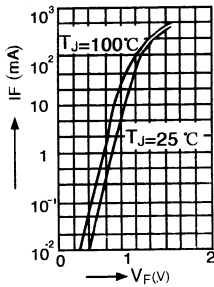


FIG. 3 – DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

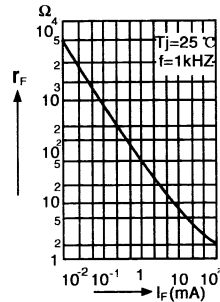


FIG. 4 – ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURES

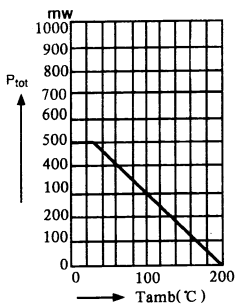
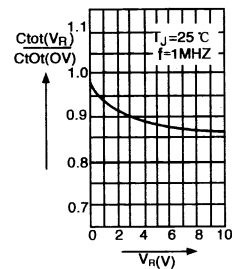


FIG. 5 – RELATIVE CAPACITANCE VERSUS REVERSE VOLTAGE





## SURFACE MOUNT SWITCHING DIODES

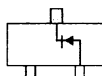
**Case:** SOT – 23 Molded Plastic

**Operating Temperature:** – 65°C to 150°C

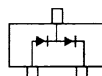
Part No.	Cross-Reference	Marking	Min. Repetitive Rev. Voltage	Max. Fwrd. Current	Max. Cont. Reverse Current	Max. forward Voltage	Maximum Capacitance	Reverse Recovery Time	Pin – out Diagram
			V <sub>rrm</sub> (V)	IF(mA)	Ir(nA) @ Vr(v)	VF(V) @ IF(mA)	C(pF)	T <sub>rr</sub> (nS)	
BAS21	–	JS	–	–	–	1.00@100	–	–	1
MMBD1401	–	29	–	–	–	1.00@200	–	–	1
MMBD1402	–	31	200	–	–	1.00@200	–	50.00	2
MMBD1403	–	32	200	–	100@200	1.00@200	–	–	3
MMBD1404	–	33	–	–	–	1.00@200	–	–	4
MMBD1405	–	34	–	–	–	1.00@200	–	–	5
MMBD1501A	–	11A	200	–	–	1.00@200	–	–	1
MMBD1503A	–	13A	200	–	–	1.00@200	–	–	3
BAS20	–	A81	150	–	100@150	1.00@100	–	50.00	1
BAS19	–	A8	–	–	–	1.00@100	–	–	1
BAS29	–	L20	120	–	100@120	0.84@50	–	50.00	1
BAS31	–	L21	–	–	–	0.84@50	–	–	3
BAS35	–	L22	–	–	–	0.84@50	–	–	5
TMPD7000	MMBD7000	–	–	200	500@100	0.75@100	1.5	–	3
TMPD914	MMBD914	5D	–	–	5000@75	1.00@10	4.0	–	1
MMBD914	SMD4148	5D	–	–	5000@75	1.00@10	4.0	–	1
MMBD914B	SMD4448	–	–	–	5000@75	1.00@100	4.0	–	–
MMBD1201	–	24	–	–	25@100	1.00@200	–	–	1
MMBD1202	–	25	100	–	25@100	1.00@200	–	4.00	2
MMBD1203	–	26	–	–	25@100	1.00@200	–	–	3
MMBD1204	–	27	–	–	25@100	1.00@200	–	–	4
MMBD1205	–	28	–	–	25@100	1.00@200	–	–	5
MMBD4148	SMD914	5H	–	–	5000@75	1.00@10	4.0	–	1
TMPD4148	MMBD4148	5D	–	–	5000@75	1.00@10	4.0	–	1
MMBD4448	SMD914B	–	–	–	5000@75	1.00@100	4.0	–	–
TMPD2836	MMBD2836	–	–	100	100@50	1.00@50	4.0	15.00	5
BAS16	–	A6	75	250	1000@75	1.00@50	2.0	6.00	–
TMPD6050	MMBD6050	–	–	200	100@50	1.1@100	2.5	4.00	1
BAV70	–	A4	–	–	5000@70	–	1.5	–	4
BAV99	–	A7	70	250	2500@70	1.00@50	1.5	6.00	3
BAW56	–	A1	–	–	2500@70	–	2.0	–	5
BAV74	–	JA	50	–	–	1.00@100	–	0.70	4
TMPD2835	MMBD2835	–	35	100	100@50	1.00@50	4.0	15.00	5
MMBD1701	–	85	–	–	–	–	–	–	1
MMBD1702	–	86	–	–	–	–	–	–	2
MMBD1703	–	87	–	–	–	1.10@50	–	0.70	3
MMBD1704	–	88	–	–	–	–	–	–	4
MMBD1705	–	89	30	–	50@30	–	–	–	5
BA779	–	–	–	–	–	–	–	–	1
BA779S	–	–	–	50	–	1.00@20	0.5	–	1
BA779 – 2	–	–	–	–	–	–	–	–	3
BB804	–	–	–	–	–	–	47.5	–	4
BB814	–	–	20	50	20@16	–	46.5	–	4
BB824	–	–	–	–	–	–	45.0	–	4



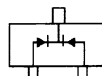
(1)



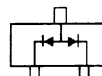
(2)



(3)



(4)



(5)