LITE-ON SEMICONDUCTORS

MMBD4148SE

SURFACE MOUNT
FAST SWITCHING DIODE

REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 0.2 Ampere

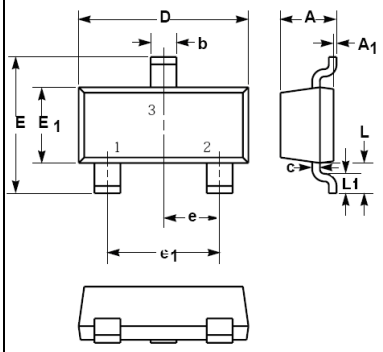
FEATURES

- Fast switching speed
- Ideally suited for automatic insertion
- For general purpose switching applications

MECHANICAL DATA

- Case: SOT-23 Plastic
- Case material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture sensitivity: Level 1 per J-STD-020D
- Lead free in RoHS 2002/95/EC compliant

SOT-23



SOT-23		
Dim.	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	2.25	2.55
E1	1.20	1.40
e	0.95 Typ.	
e1	1.80	2.00
L	0.55 Ref.	
L1	0.30	0.50
Dimensions in millimeter		

Maximum Ratings & Thermal Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Symbol	MMBD4148SE	Units
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	I_{FM}	300	mA
Average Rectified Output Current	I_O	200	mA
Non-Repetitive Peak Forward Current @t=1us @t=1s	I_{FSM}	2 1	A
Power Dissipation	P_D	350	mW
Thermal Resistance Junction to Ambient	$R_{\Theta JA}$	357	℃/W
Operating Temperature Range	T_J	150	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Test Condition	Symbol	MMBD4148SE	Unit
Reverse Breakdown Voltage	I_R = 5uA I_R = 100uA	V_{BR}	75 100	V
Maximum Forward Voltage	I_F = 10mA	V_F	1	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	V_R = 75V V_R = 25V	I_R	5000 25	nA
Typical Diode Capacitance	V_R =0V,f=1MHz	C_D	4	pF
Reverse Recovery time	Irr=1mA, I_F=10mA, V_R= 6V,R_L=100Ω	trr	4	ns

RATING AND CHARACTERISTIC CURVES
MMBD4148SE

Fig.1 Power Derating Curve

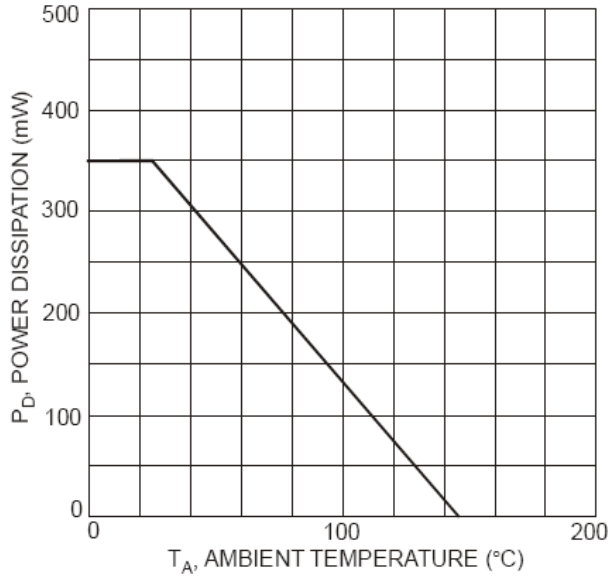


Fig.2 Typical Forward Characteristics

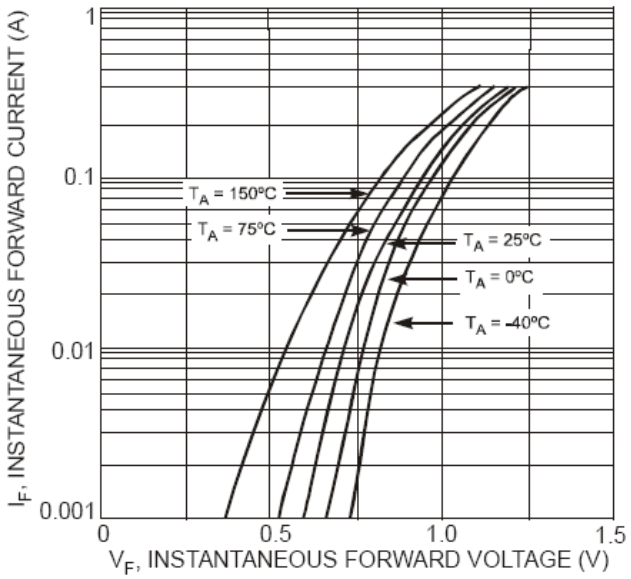


Fig.1 Typical Reverse Characteristics

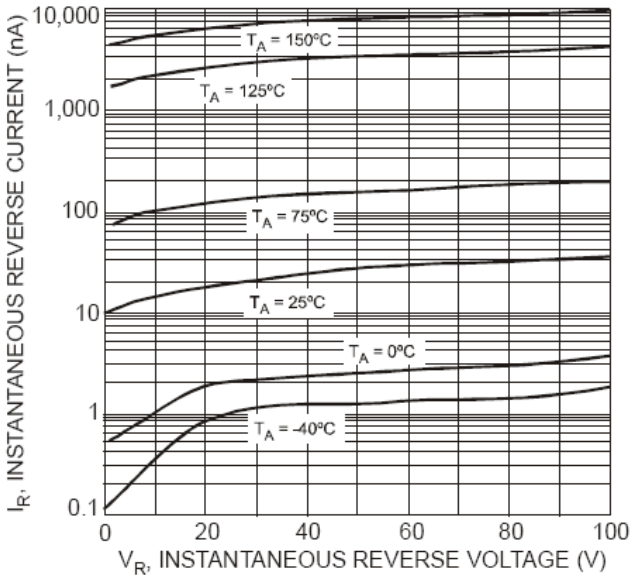
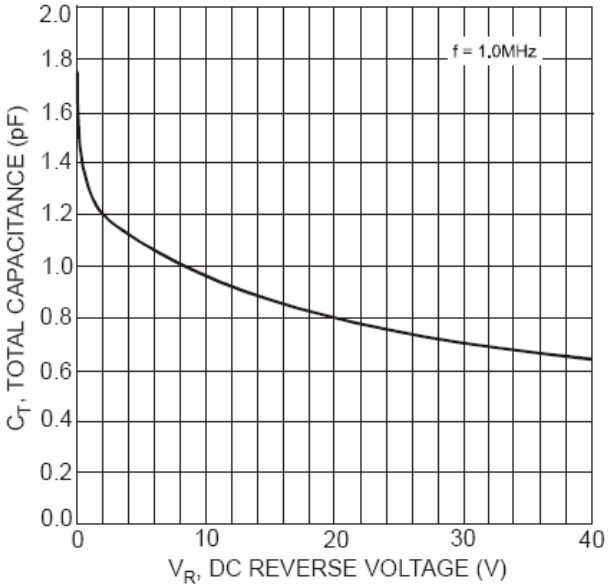
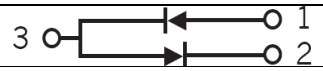


Fig.4 Total Capacitance vs. Reverse Voltage



Device Marking :

Device P/N	Marking code	Equivalent Circuit Diagram
MMBD4148SE	D4	

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