

## SOT-23 Plastic-Encapsulate Switching Diode

### Features

- 4.0nS; Fast Switching Device (TRR <4.0 nS)
- 350mW; Power Dissipation of 350mW
- High Stability and High Reliability
- Low reverse leakage



RoHS  
COMPLIANT



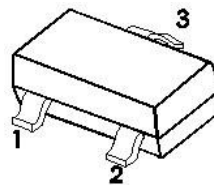
Marking:

SOT-23

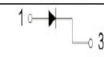
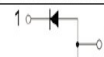
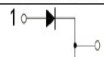
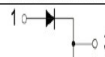
### Mechanical Data

- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

#### Pin definition



#### Equivalent circuit

MMBD4148A	MMBD4148CA	MMBD4148CC	MMBD4148SE
			
MARKING:5H	MARKING:D6	MARKING:D5	MARKING:D4

### Maximum Ratings & Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Reverse Voltage	V <sub>R</sub>	75	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	100	V
Power Dissipation	P <sub>D</sub>	350	mW
Average Rectified Current	I <sub>O</sub>	200	mA
Peak Forward Surge Current@tp=1us; T <sub>A</sub> =25°C	I <sub>FSM</sub>	2.0	A
Operating junction temperature range	T <sub>J</sub>	150	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C
Thermal Resistance from Junction to Ambient	R <sub>θJA</sub>	357	°C/W

Valid provided that electrodes are kept at ambient temperature.

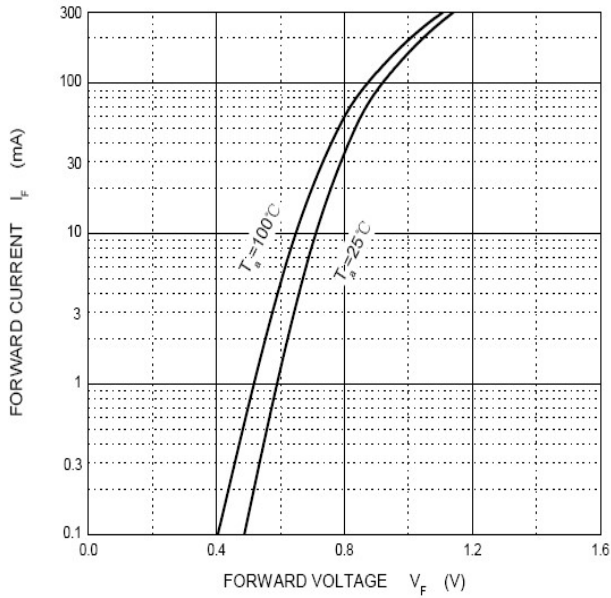
### Electrical Specifications (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Limits		Unit
			Min	Max	
Reverse Voltage	V <sub>(BR)</sub>	IR=100uA	75		V
Forward Voltage	V <sub>F</sub>	IF=10mA		1.00	V
Reverse Leakage Current	I <sub>R</sub>	VR=75V		5.0	uA
		VR=25V		25	nA
Typical junction capacitance	C <sub>J</sub>	VR=0V, f=1MHZ		4	pF
Typical reverse recovery time	T <sub>RR</sub>	IF=IR=1.0mA RL=100Ω IRR=0.1 X IR		4	nS

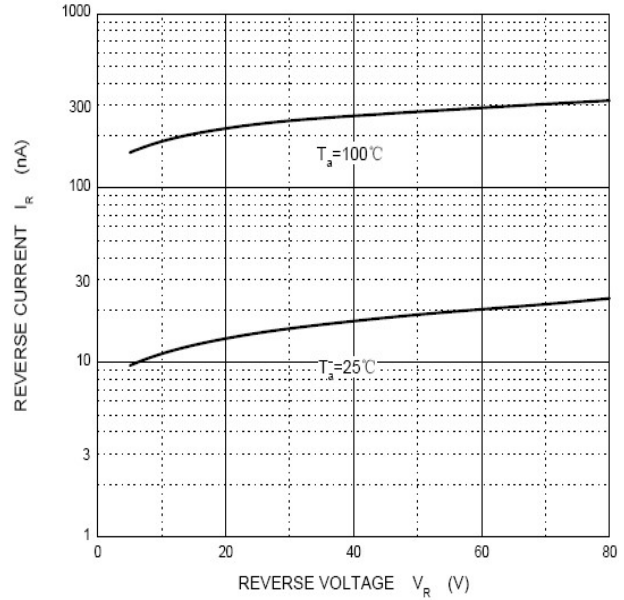
## Ratings and Characteristics Curves

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

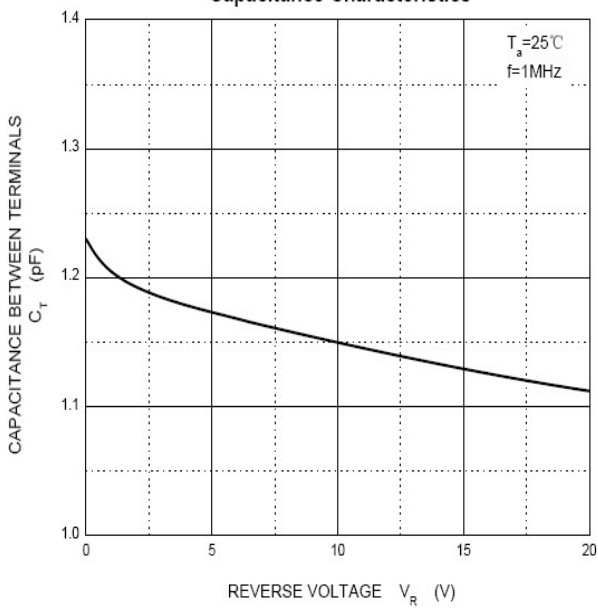
**Forward Characteristics**



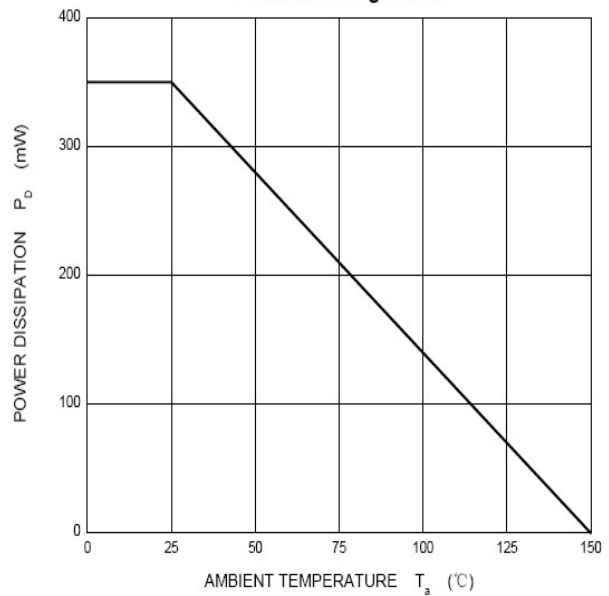
**Reverse Characteristics**



**Capacitance Characteristics**

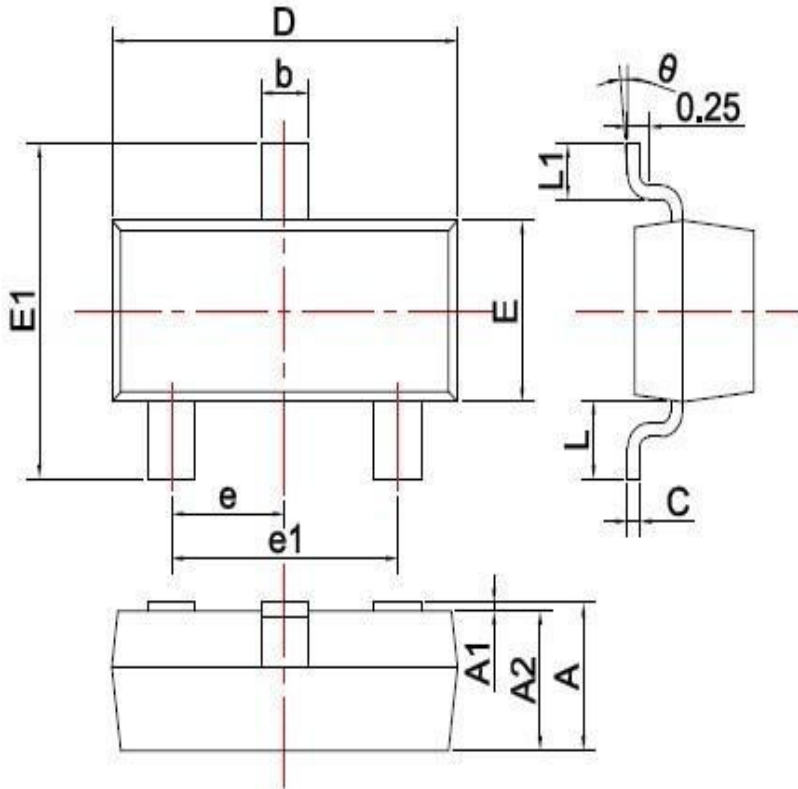


**Power Derating Curve**



## Package Outline Dimensions

millimeters



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

## Revision History

Document Version	Date of release	Description of changes
Rev.A	2017.07.11	First issue

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