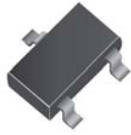
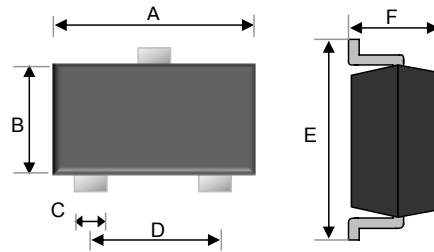


**Small Signal Diode**



SOT-23



**Features**

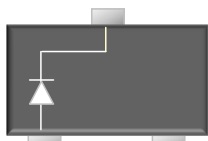
- ◇ Fast switching speed
- ◇ Surface device type mounting
- ◇ Moisture sensitivity level 1
- ◇ Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- ◇ Pb free version and RoHS compliant
- ◇ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

**Mechanical Data**

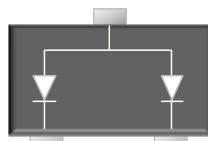
- ◇ Case :SOT-23 small outline plastic package
- ◇ Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ◇ High temperature soldering guaranteed: 260°C/10s
- ◇ Weight : 0.008gram (approximately)
- ◇ Marking Code: 5D.A7.A4.A1

Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.80	3.00	0.110	0.118
B	1.20	1.40	0.047	0.055
C	0.30	0.50	0.012	0.020
D	1.80	2.00	0.071	0.079
E	2.25	2.55	0.089	0.100
F	0.90	1.20	0.035	0.047

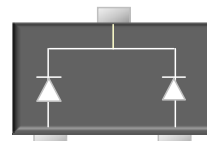
**Pin Configuration**



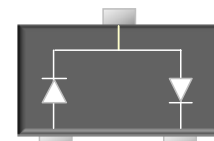
MMBD4148



MMBD4148CA



MMBD4148CC

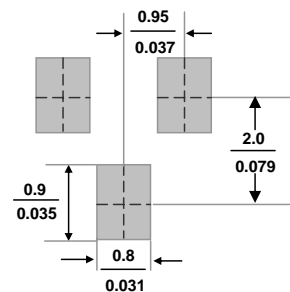


MMBD4148SE

**Ordering Information**

Part No.	Package	Packing Code	Packing	Marking
MMBD4148	SOT-23	RF	3K / 7" Reel	5D
MMBD4148CC	SOT-23	RF	3K / 7" Reel	A4
MMBD4148CA	SOT-23	RF	3K / 7" Reel	A1
MMBD4148SE	SOT-23	RF	3K / 7" Reel	A7
MMBD4148	SOT-23	RFG	3K / 7" Reel	5D
MMBD4148CC	SOT-23	RFG	3K / 7" Reel	A4
MMBD4148CA	SOT-23	RFG	3K / 7" Reel	A1
MMBD4148SE	SOT-23	RFG	3K / 7" Reel	A7

**Suggested PAD Layout**



**Maximum Ratings and Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified.

**Maximum Ratings**

Type Number	Symbol	Value	Units
Power Dissipation	P <sub>D</sub>	350	mW
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	V
Reverse Voltage	V <sub>R</sub>	75	V
Average Rectified Forward Current	I <sub>F(AV)</sub>	200	mA
Repetitive Peak Forward Current	I <sub>FRM</sub>	700	mA
Non-Repetitive Peak Forward Surge Current	I <sub>FSM</sub>	at t=1μs	2
		at t=1s	1
Thermal Resistance (Junction to Ambient)	RθJA	357	°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150	°C

Note1. The suggested land pattern dimensions have been provided for reference only, as actual pad layouts may vary depending on application.

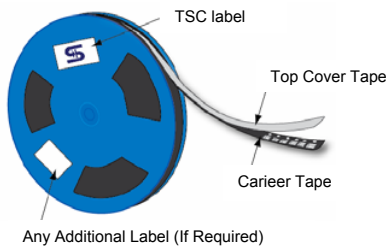
Version : A11

**Small Signal Diode**

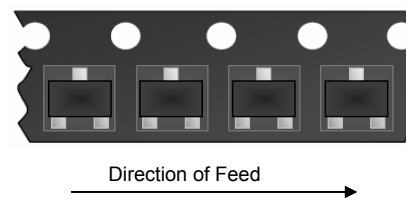
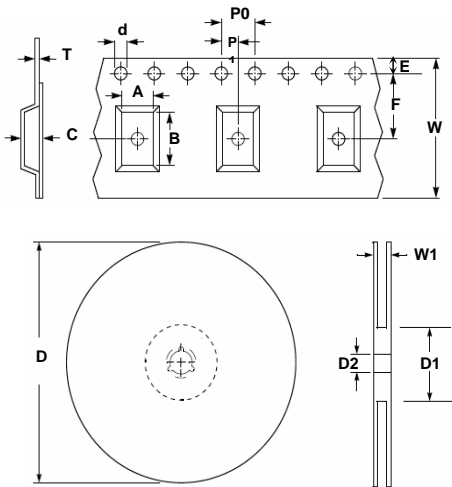
**Electrical Characteristics**

Type Number		Symbol	Min	Max	Units
Reverse Breakdown Voltage	$I_R = 100\mu A$	$V_{(BR)}$	100	-	V
	$I_R = 5\mu A$		75	-	
Forward Voltage	$I_F = 10mA$	$V_F$	-	1.0	V
Reverse Leakage Current	$V_R = 20V$	$I_R$	-	25.0	nA
	$V_R = 75V$		-	5.0	$\mu A$
	$V_R = 200V, I_F = 100\mu A$		-	50.0	$\mu A$
Junction Capacitance	$V_R = 0V, f = 1 MHz$	$C_J$	-	4.0	pF
Reverse Recovery Time	$I_F = 10mA, V_R = 6V, I_{RR} = 1mA, R_L = 100\Omega$	$T_{rr}$	-	4.0	ns

**Tape & Reel specification**



Item	Symbol	Dimension(mm)
Carrier width	A	3.15 ±0.10
Carrier length	B	2.77 ±0.10
Carrier depth	C	1.22 ±0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178 ± 1
Reel inner diameter	D1	55 Min
Feed hole width	D2	13.0 ± 0.20
Sprocket hole position	E	1.75 ±0.10
Punch hole position	F	3.50 ±0.05
Sprocket hole pitch	P0	4.00 ±0.10
Embossment center	P1	2.00 ±0.05
Overall tape thickness	T	0.229 ±0.013
Tape width	W	8.10 ±0.20
Reel width	W1	12.30 ±0.20



**Small Signal Diode**

**Rating and Sharacteristic Curves**

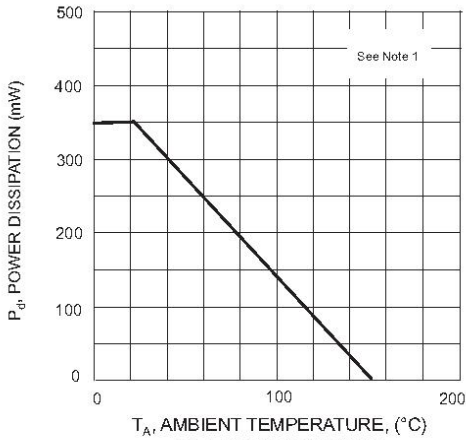


Fig. 1 Power Derating Curve

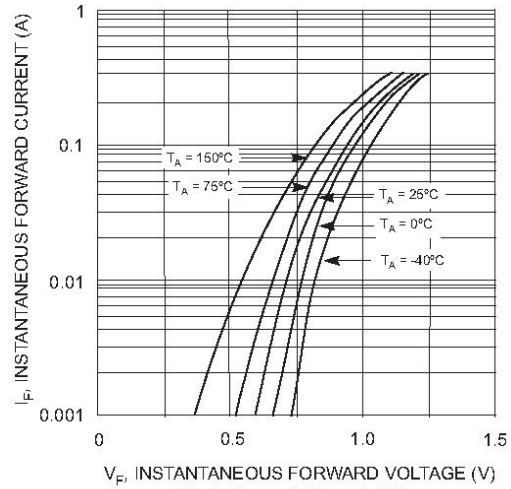


Fig. 2 Forward Characteristics

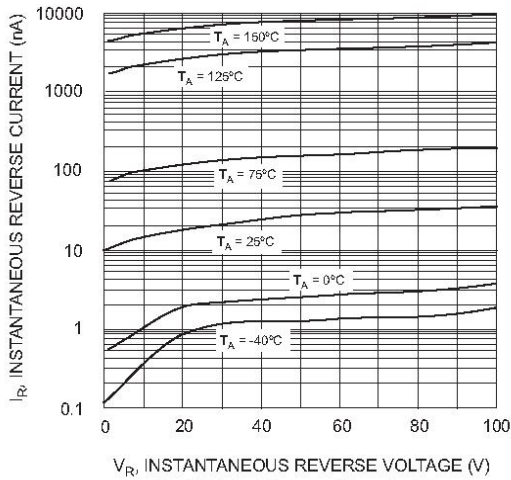


Fig. 3 Typical Reverse Characteristics

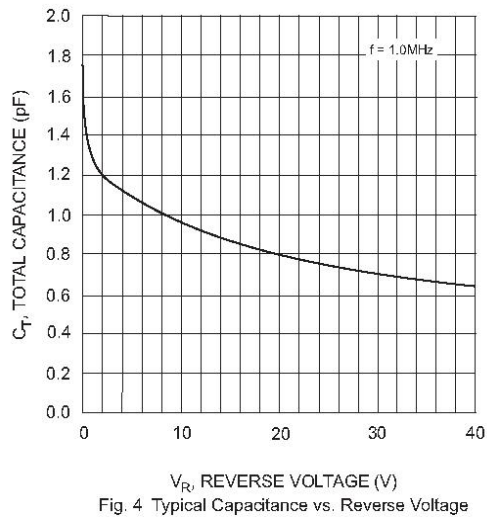


Fig. 4 Typical Capacitance vs. Reverse Voltage