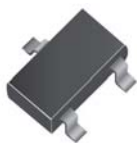
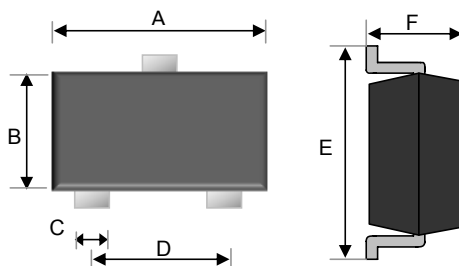


Small Signal Diode



SOT-23



Features

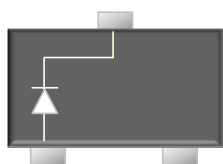
- ✧ Fast switching speed
- ✧ Surface device type mounting
- ✧ Moisture sensitivity level 1
- ✧ Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- ✧ Pb free version and RoHS compliant
- ✧ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

Mechanical Data

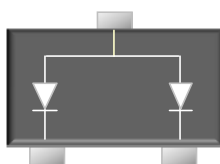
- ✧ Case :SOT-23 small outline plastic package
- ✧ Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ High temperature soldering guaranteed: 260°C/10s
- ✧ Weight : 0.008gram (approximately)
- ✧ Marking Code: 5D.A7.A4.A1

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

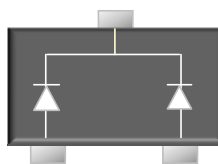
Pin Configuration



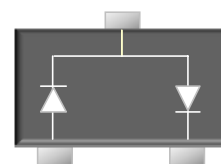
MMBD4148



MMBD4148CA



MMBD4148CC

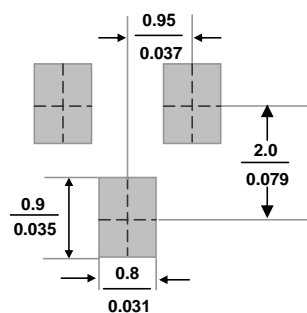


MMBD4148SE

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_D	350	mW
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_R	75	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current	I_{FRM}	700	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	2	A
		1	
Thermal Resistance (Junction to Ambient)	$R_{\theta JA}$	357	°C/W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

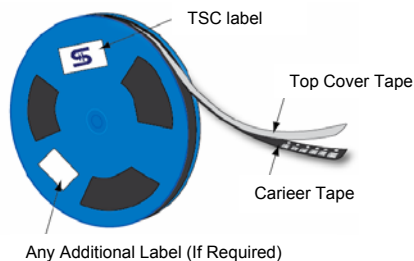
Note1. The suggested land pattern dimensions have been provided for reference only, as actual pad layouts may vary depending on application.

Small Signal Diode

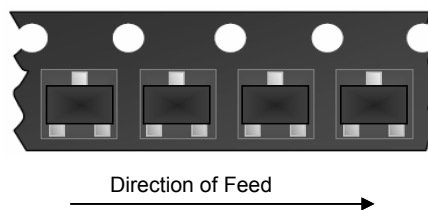
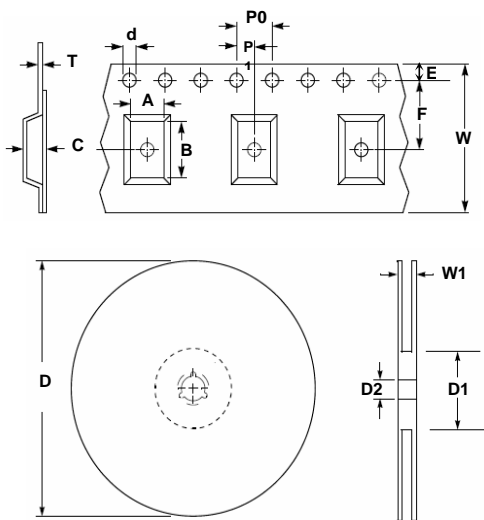
Electrical Characteristics

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
	$V_R = 20V$		-	25.0	
Reverse Leakage Current	$V_R = 75V$	I_R	-	5.0	μA
	$V_R = 20V, I_a = 10\mu A$		-	50.0	μA
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

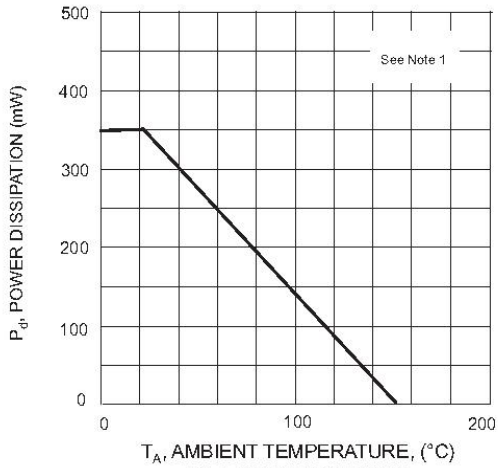


Fig. 1 Power Derating Curve

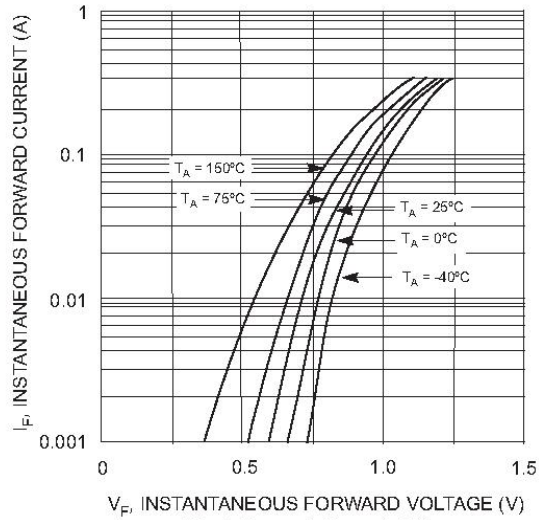


Fig. 2 Forward Characteristics

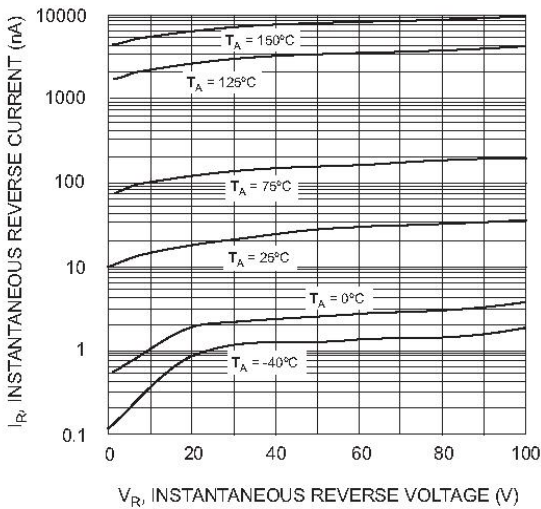


Fig. 3 Typical Reverse Characteristics

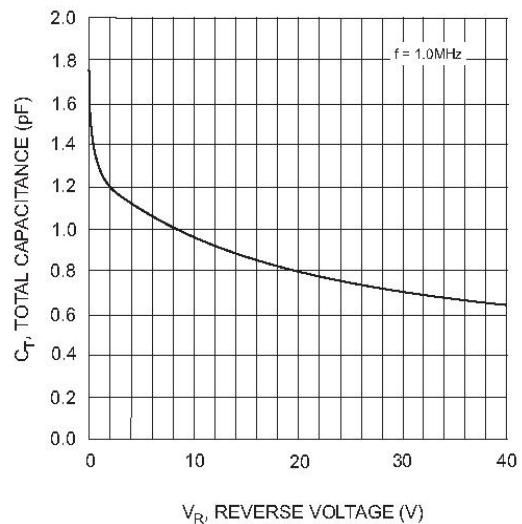


Fig. 4 Typical Capacitance vs. Reverse Voltage