



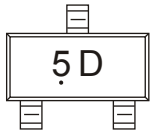
SOT-23 Plastic-Encapsulate Diodes

MMBD914 SWITCHING DIODE

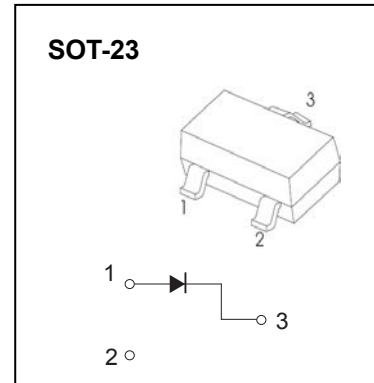
FEATURES

High-Speed Switching Diode

MARKING: 5D



5D = Device code
Solid dot = Green molding compound device.



Maximum Ratings @Ta=25°C

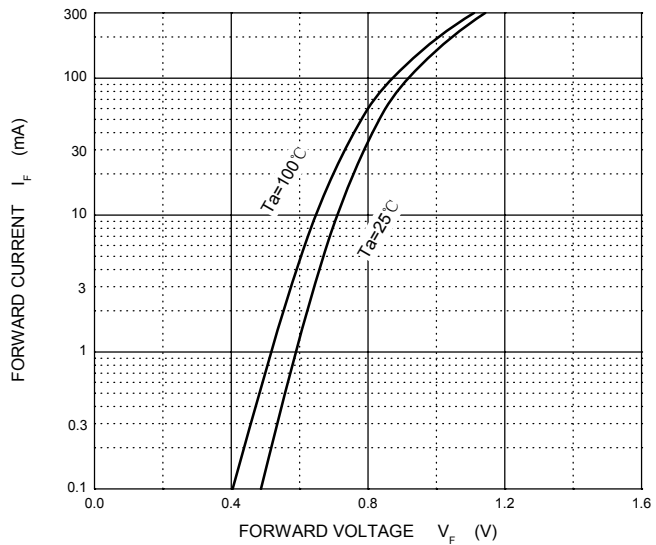
Parameter	Symbol	Limit	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Average Rectified Output Current	I_O	300	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	2	A
Power Dissipation	P_D	350	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	°C/W
Operation Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	°C

Electrical Characteristics@Ta=25°C

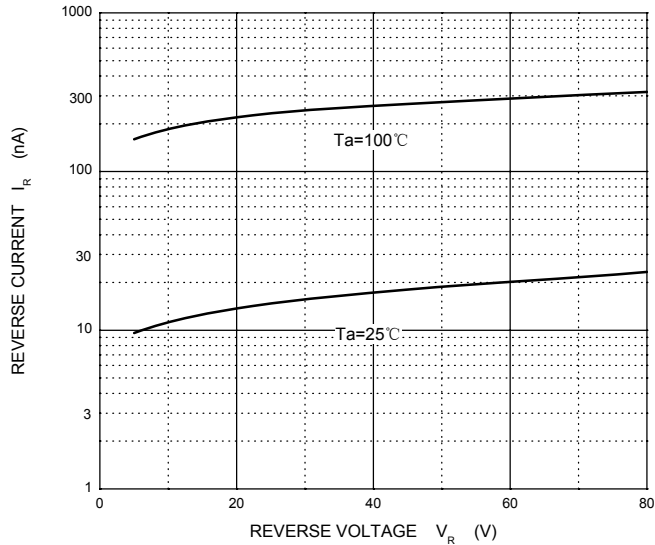
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse Breakdown Voltage	$V_{(BR)}$	100			V	$I_R=100\mu A$
Forward Voltage	V_{F1}			715	mV	$I_F=1mA$
	V_{F2}			855	mV	$I_F=10mA$
	V_{F3}			1000	mV	$I_F=50mA$
	V_{F4}			1250	mV	$I_F=150mA$
Reverse Current	I_{R1}			1	uA	$V_R=75V$
	I_{R2}			25	nA	$V_R=20V$
Diode Capacitance	C_D			2	pF	$V_R=0, f=1MHz$
Reverse Recovery Time	t_{rr}			4	ns	$I_F = I_R = 10mA,$ $I_{rr} = 0.1 * I_R$

Typical Characteristics

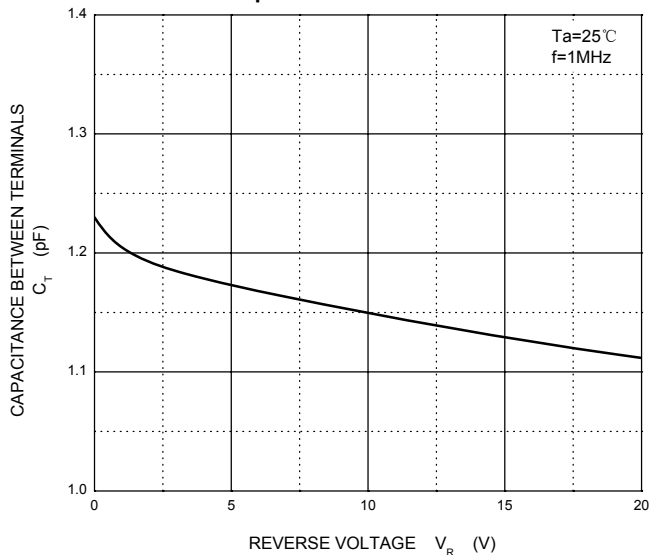
Forward Characteristics



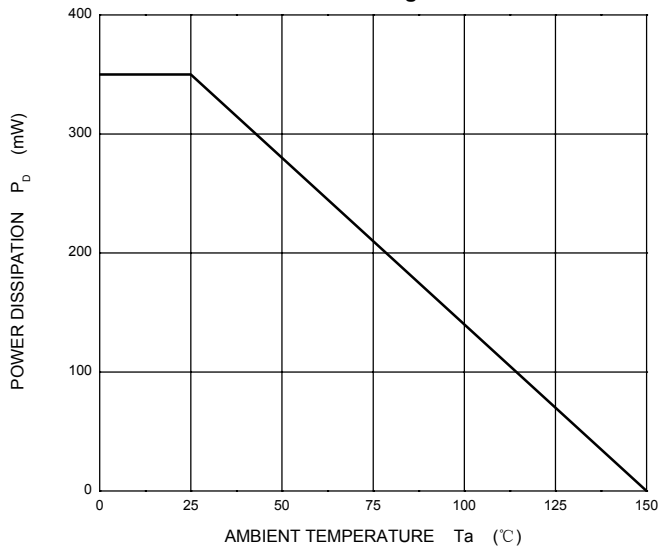
Reverse Characteristics



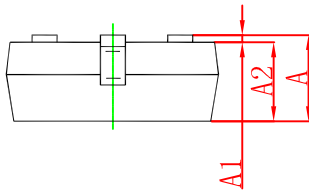
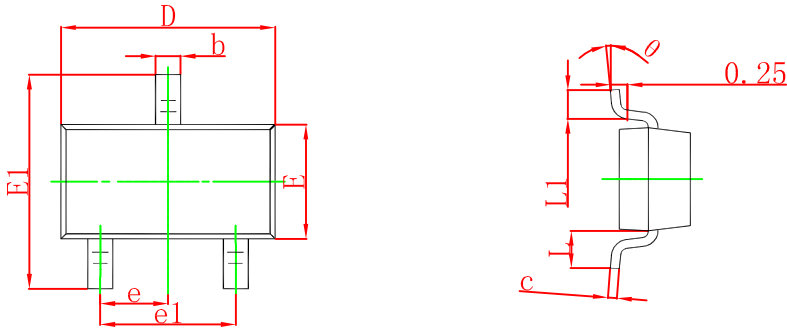
Capacitance Characteristics



Power Derating Curve

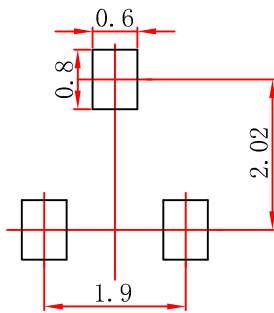


SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout

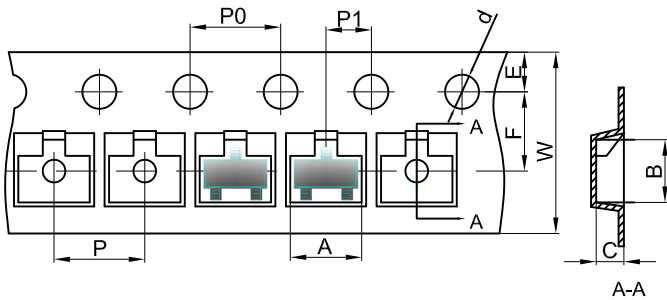


Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape



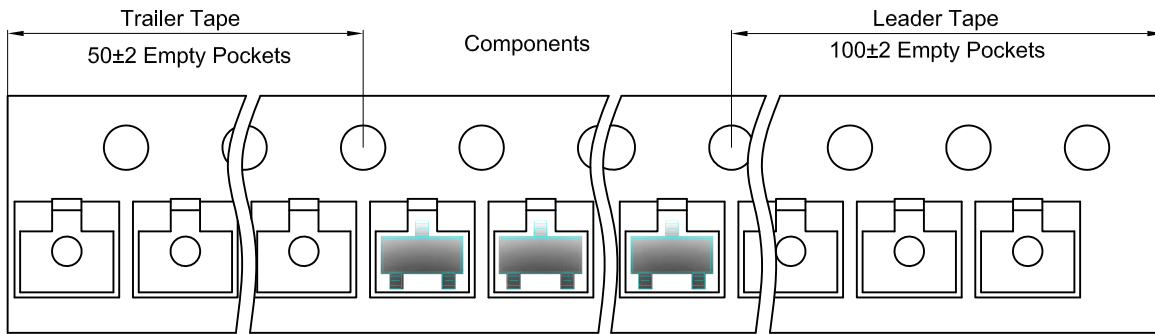
Packaging Description:

SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

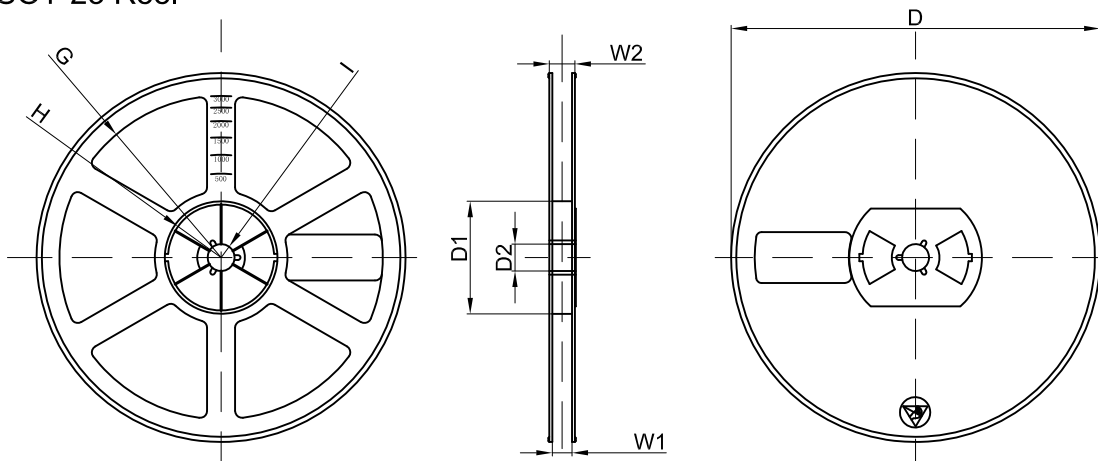
Dimensions are in millimeter

Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer



SOT-23 Reel



Dimensions are in millimeter

Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	