

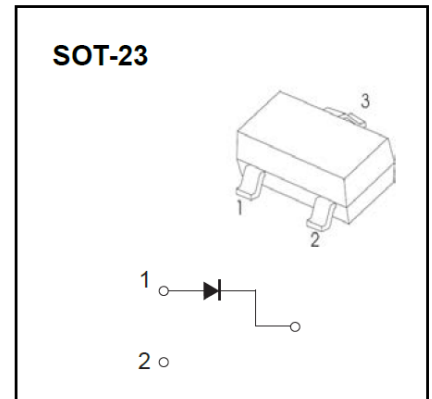


AD-MMBD4148 Plastic-Encapsulated Diode

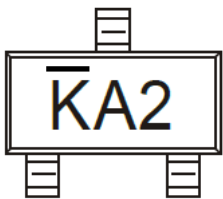
AD-MMBD4148 Switching diode

FEATURES

- Fast switching speed
- For general purpose switching applications
- High conductance
- AEC-Q101 qualified



MARKING



KA2 = Device code

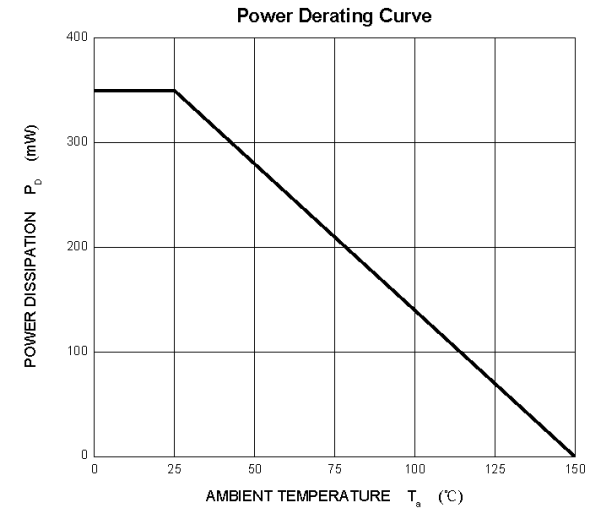
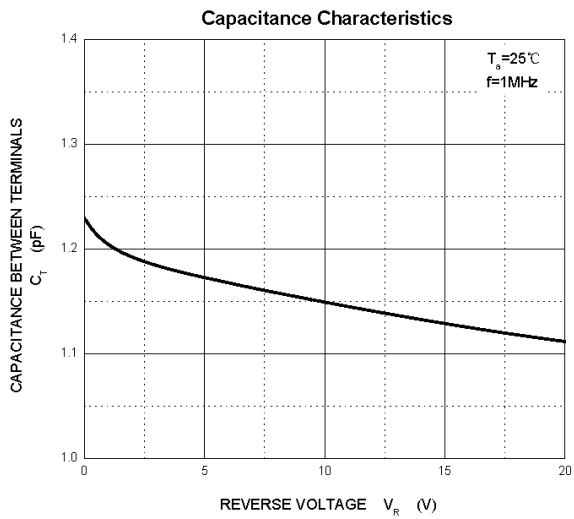
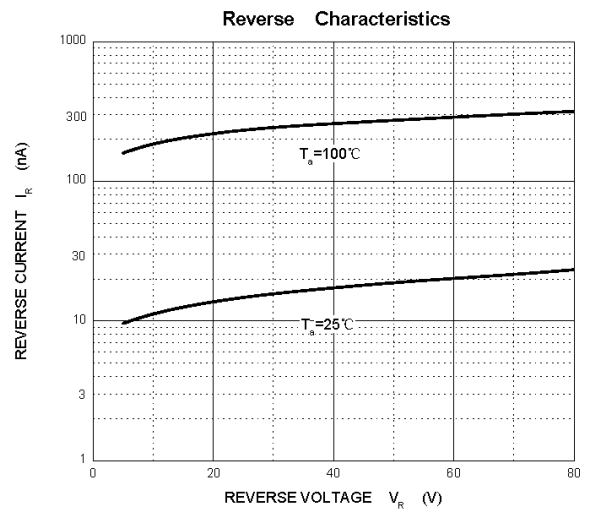
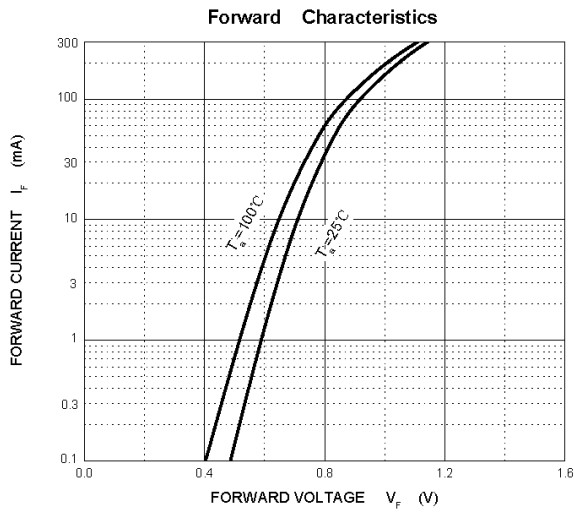
MAXIMUM RATINGS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	V_{RM}	100	V
Peak repetitive peak reverse voltage	V_{RRM}	75	V
Working peak reverse voltage	V_{RWM}	75	V
DC blocking voltage	V_R	75	V
RMS reverse voltage	$V_{R(RMS)}$	53	V
Forward continuous current	I_{FM}	300	mA
Average rectified output current	I_O	150	mA
Non-repetitive peak forward surge current @ $t = 8.3\text{ms}$	I_{FSM}	2.0	A
Power dissipation	P_D	350	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	375	$^\circ\text{C/W}$
Operating junction and storage temperature range	T_j, T_{stg}	-55 ~ 150	$^\circ\text{C}$

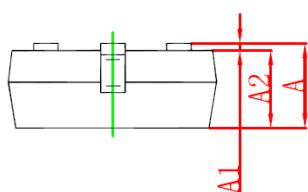
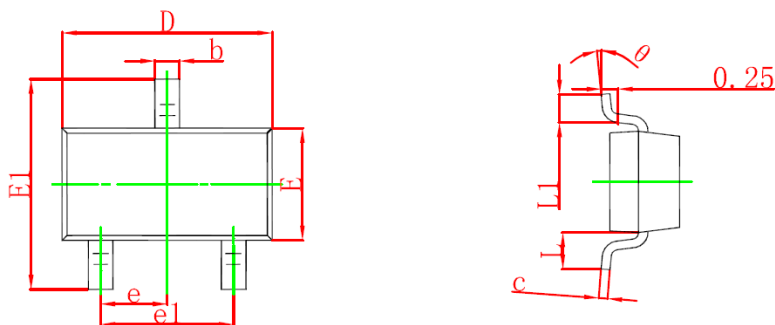
ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Reverse breakdown voltage	V_{BR}	$I_R = 100\mu\text{A}$	75	-	-	V
Forward voltage	V_{F1}	$I_F = 1\text{mA}$	-	-	0.715	V
	V_{F2}	$I_F = 10\text{mA}$	-	-	0.855	
	V_{F3}	$I_F = 50\text{mA}$	-	-	1	
	V_{F4}	$I_F = 150\text{mA}$	-	-	1.25	
Reverse current	I_{R1}	$V_R = 75\text{V}$	-	-	2.5	μA
	I_{R2}	$V_R = 20\text{V}$	-	-	25	nA
Capacitance between terminals	C_T	$V_R = 0\text{V}, f = 1\text{MHz}$	-	-	2	pF
Reverse recovery time	t_{rr}	$I_F = I_R = 10\text{mA}, I_{rr} = 0.1I_{IR}, R_L = 100\Omega$	-	-	4	ns

TYPICAL CHARACTERISTICS

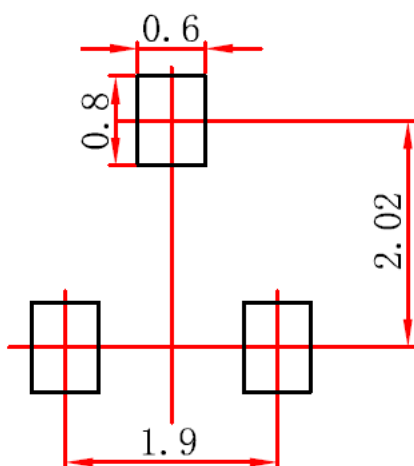


SOT-23 PACKAGE OUTLINE DIMENSIONS



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
theta	0°	8°	0°	8°

SOT-23 SUGGESTED PAD LAYOUT

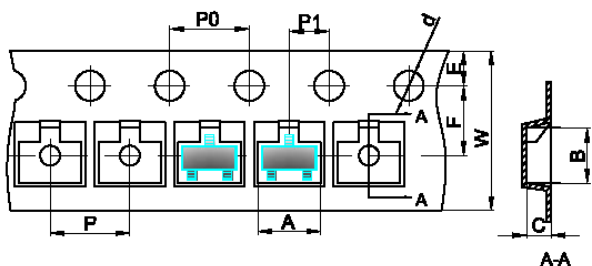


Note:

1. Controlling dimension in millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purpose only.

SOT-23 TAPE AND REEL

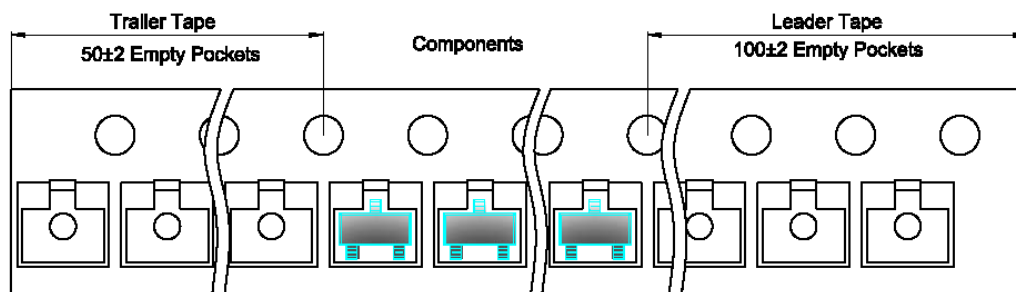
SOT-23 Embossed Carrier Tape



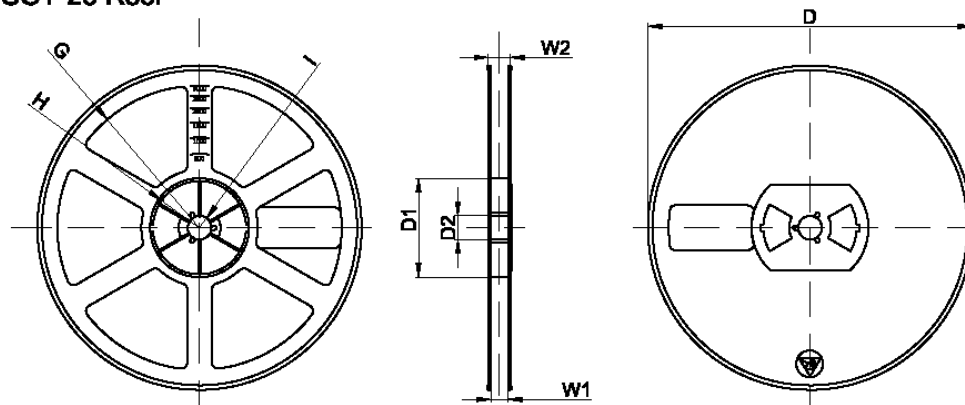
Packaging Description:
 SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. 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	

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