

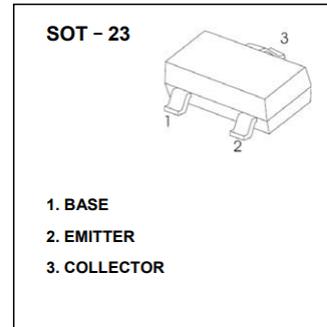


AD-BAP64-04/05/06 Plastic-Encapsulated Diodes

AD- BAP64-04/05/06 Pin Diode

FEATURES

- High voltage, current controlled
- RF resistor for RF attenuators and switches
- Low diode capacitance
- Low diode forward resistance
- Low series inductance
- For applications up to 3 GHz
- AEC-Q101 qualified



AD- BAP64-04	AD- BAP64-05	AD- BAP64-06

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

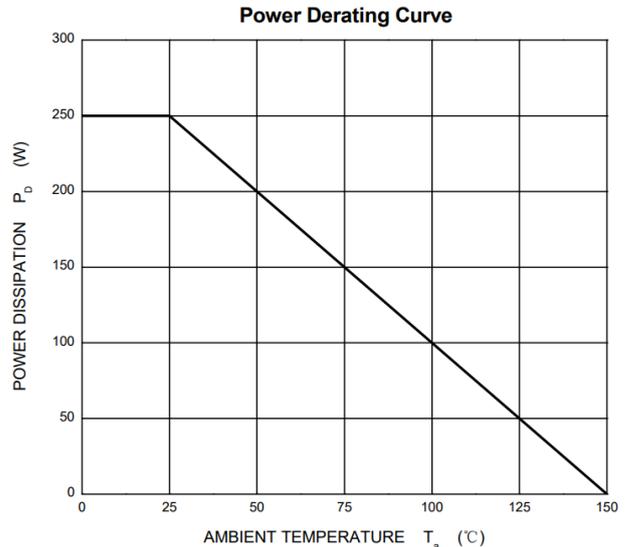
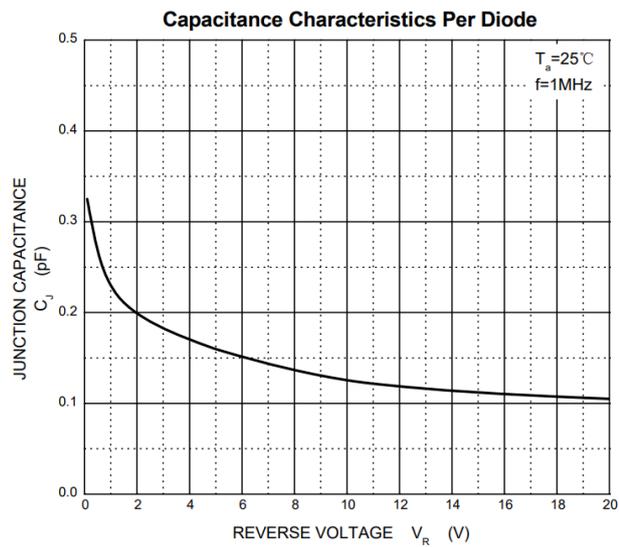
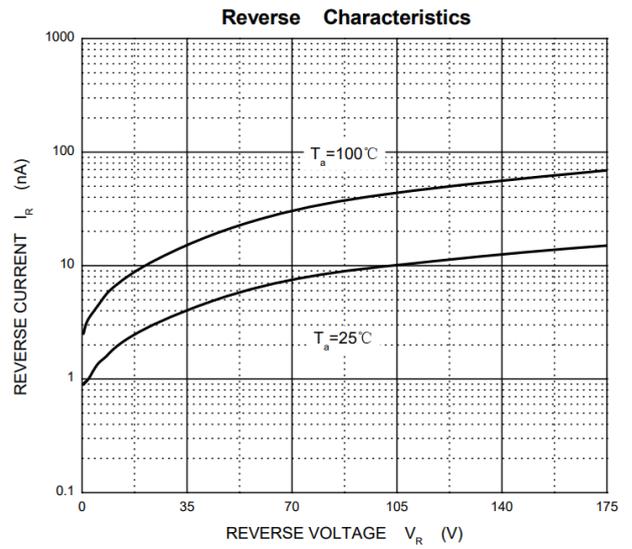
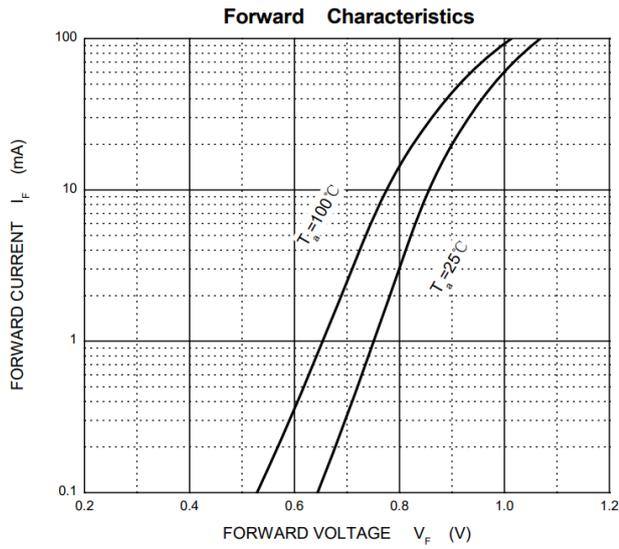
Parameter	Symbol	Value	Unit
Collector-base voltage	V_R	175	V
Collector continuous current	I_F	100	mA
Power dissipation	P_D	250	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Operating junction and storage temperature range	T_j, T_{stg}	-55 ~ 150	$^\circ\text{C}$

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

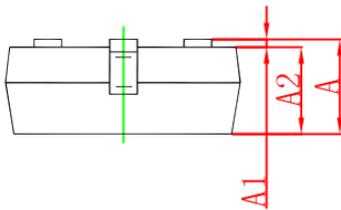
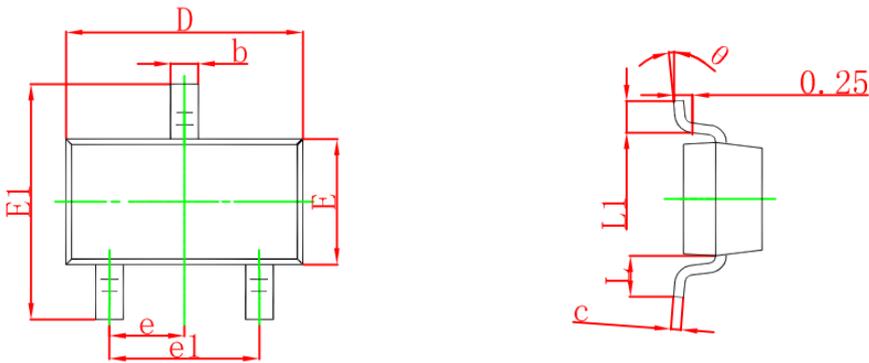
Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F = 50\text{mA}$	-	-	1.1	V
Reverse Current	I_{R1}	$V_{R1} = 175\text{V}$	-	-	10	μA
	I_{R2}	$V_{R1} = 20\text{V}$	-	-	1	
Diode Capacitance	C_{d1}	$V_R = 0\text{V}, f = 1\text{MHz}$	-	0.52	-	pF
	C_{d2}	$V_R = 1\text{V}, f = 1\text{MHz}$	-	-	0.5	
	C_{d3}	$V_R = 20\text{V}, f = 1\text{MHz}$	-	-	0.35	
Diode Forward Resistance	R_{d1}	$I_F = 0.5\text{mA}, f = 100\text{MHz}$	-	-	40	Ω
	R_{d2}	$I_F = 1\text{mA}, f = 100\text{MHz}$	-	-	20	
	R_{d3}	$I_F = 10\text{mA}, f = 100\text{MHz}$	-	-	3.8	
	R_{d4}	$I_F = 100\text{mA}, f = 100\text{MHz}$	-	-	1.35	
Charge Carrier Life Time	τ_L	When switched from $I_F = 10\text{mA}$ to $I_R = 6\text{mA}; R_L = 100\Omega$; measured at $I_R = 3\text{mA}$	-	1.55	-	μs
Series Inductance	L_S	$I_F = 10\text{mA}, f = 100\text{MHz}$	-	1.4	-	nH

1).Guaranteed on AQL basis: inspection level S4,AQL 1.0.

TYPICAL CHARACTERISTICS

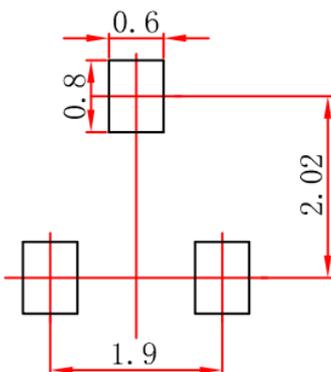


SOT-23 PACKAGE OUTLINE DIMENSIONS



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
θ	0°	8°	0°	8°

SOT-23 SUGGESTED PAD LAYOUT

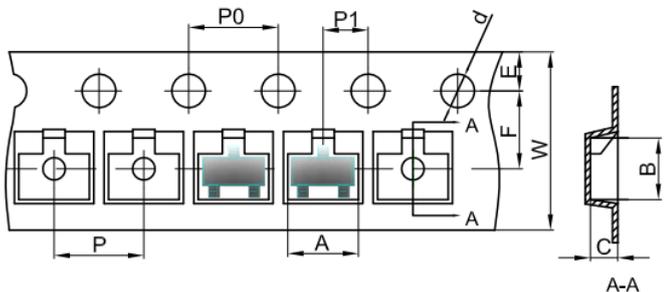


Note:

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

SOT-23 TAPE AND REEL

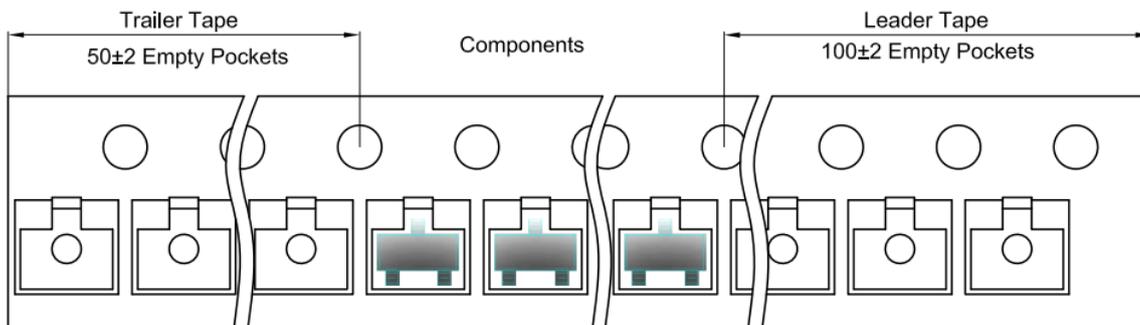
SOT-23 Embossed Carrier Tape



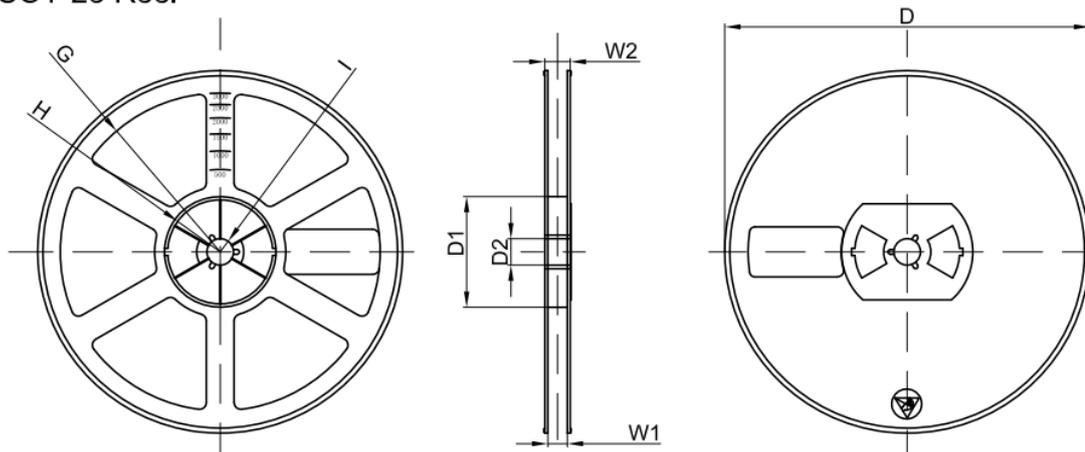
Packaging Description:
 SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent.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