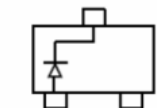
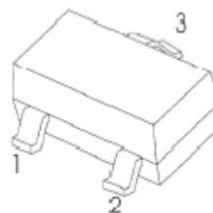


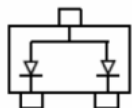
Features

- ◆Extremely Fast Switching Speed
- ◆P/N suffix V means AEC-Q101qualified, eg:BAT54V

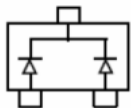
SOT-23



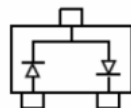
BAT54 MARKING: KL1



BAT54A MARKING: KL2

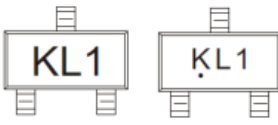


BAT54C MARKING: KL3



BAT54S MARKING: KL4

Marking

BAT54	BAT54A	BAT54C	BAT54S
			

Solid dot = Green molding compound device, if none, the normal device.

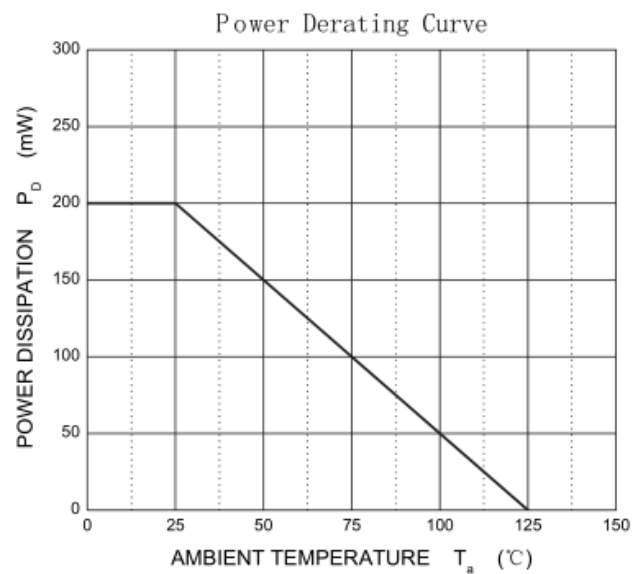
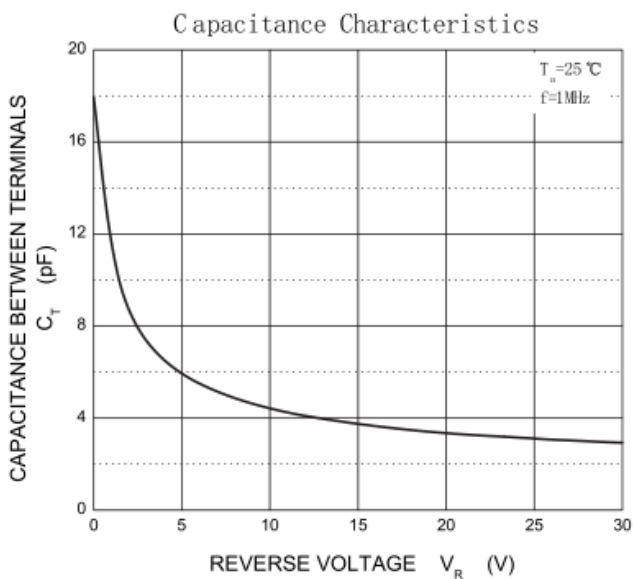
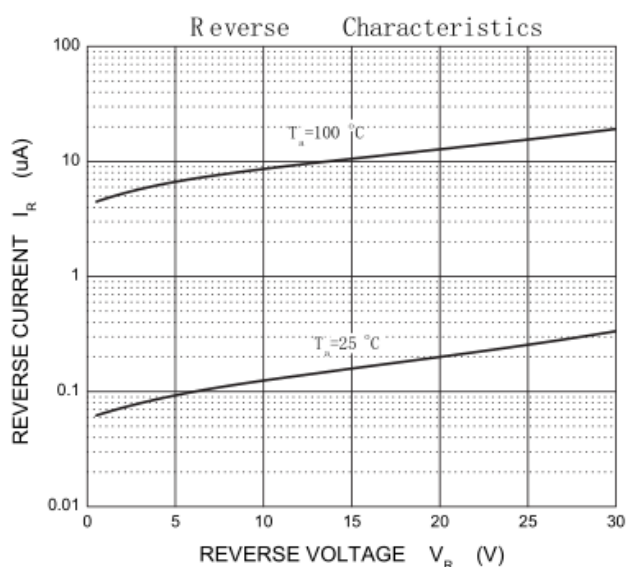
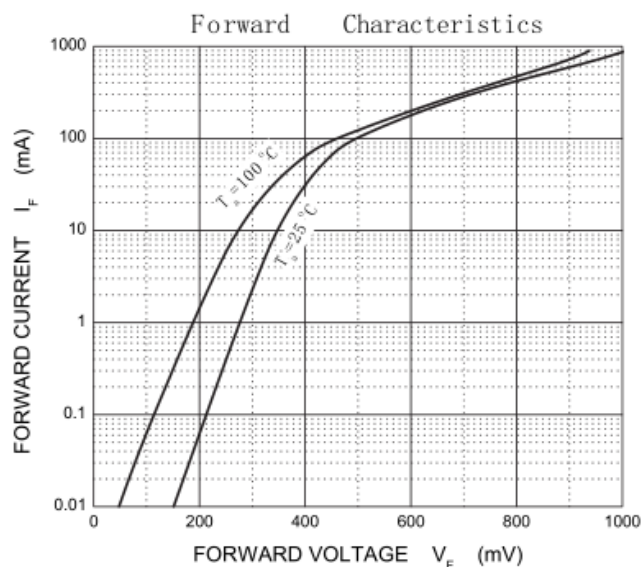
Maximum Ratings (T_a= 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	30	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
Forward Continuous Current	I _{FM}	200	mA
Non-repetitive Peak Forward Surge Current @ t=8.3ms	I _{FSM}	600	mA
Typical Current Squared Time	I ² T	0.15	A ² S
Repetitive Peak Forward Current @ t≤1s, δ≤0.5	I _{FRM}	300	mA
Power Dissipation	P _D	200	mW
Thermal Resistance from Junction to Ambient	R _{ΘJA}	500	°C/W
Junction Temperature	T _j	125	°C
Storage Temperature	T _{stg}	-66~+150	°C

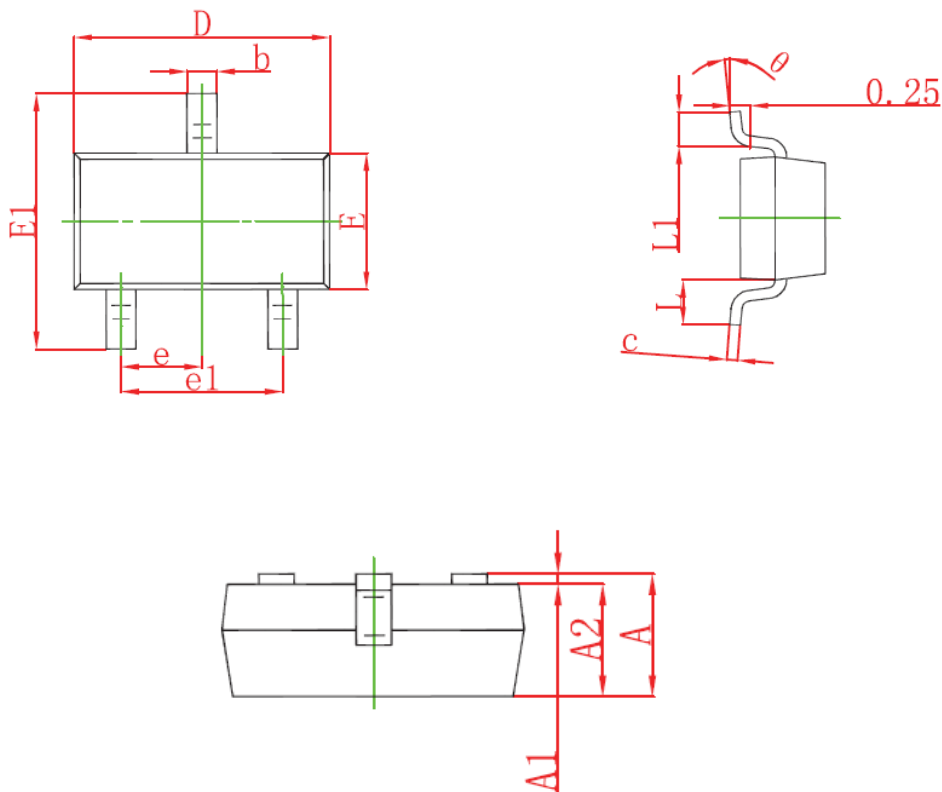
Electrical Characteristics (T_a= 25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test conditions
Reverse voltage	V _(BR)	30			V	I _R =100μA
Forward voltage	V _F			0.24	V	I _{F1} =0.1mA
				0.32	V	I _{F2} =1mA
				0.40	V	I _{F3} =10mA
				0.50	V	I _{F4} =30mA
				1	V	I _{F5} =100mA
Reverse current	I _R			2	μA	V _R =25V
Diode capacitance	C _D			10	pF	V _R =1V, f=1MHz
Reverse recovery time	t _{rr}			5	ns	I _F =I _R =20mA I _{rr} =0.1×I _R , R _L =100Ω

Rating And Characteristics Curves (BAT54V(AV)(CV)(SV))

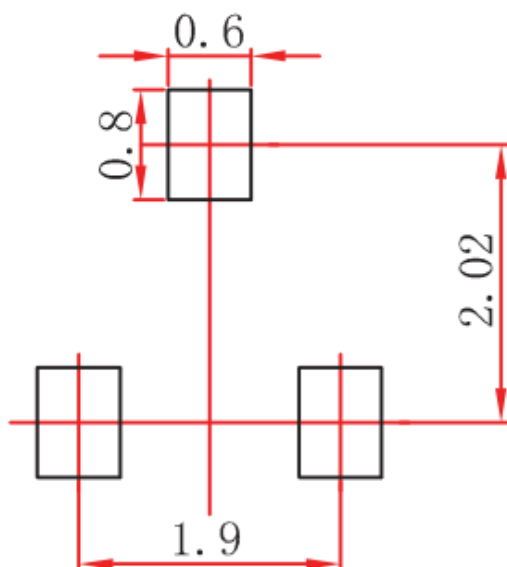


SOT-23 Package Outline Dimensions



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	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
Θ	0°	8°	0°	6°

SOT-23 Suggested Pad Layout

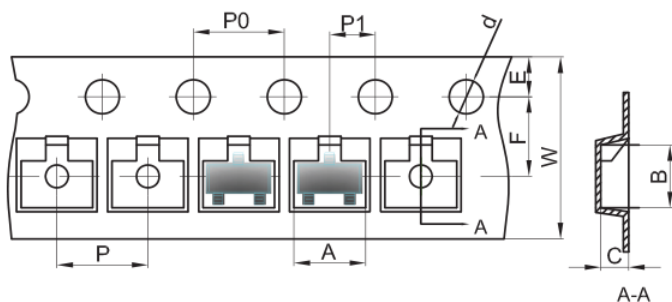


Note:

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

SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

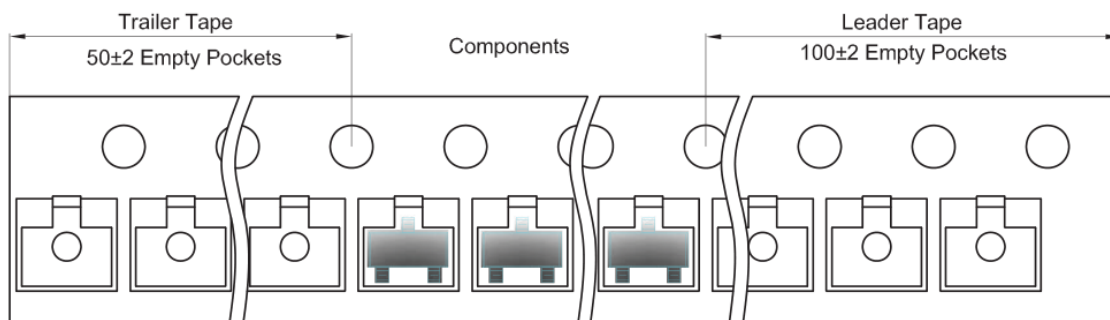


Packaging Description:

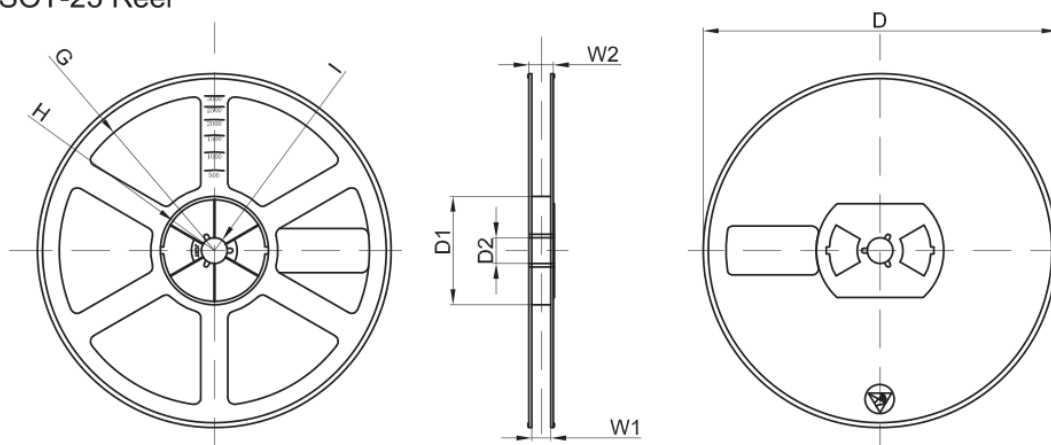
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in 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	$\varnothing 1.50$	1.75	3.50	4.00	4.00	2.00	8.00
(Tolerance)	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	$\pm 0.3/\pm 0.1$

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
Tolerance	+/-2	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1

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	