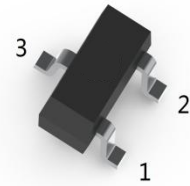


FEATURES

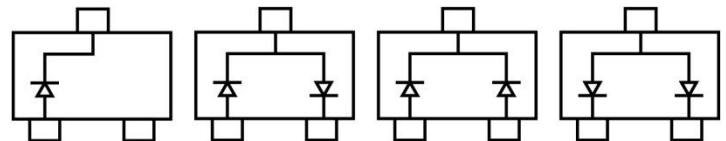
- Low Forward Voltage
- Fast Switching
- Surface Mount device
- For General Purpose Switching Applications



SOT-23

MECHANICAL DATA

- Case: SOT-23
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.013 grams (approximate)



BAS40:B1

BAS40-04:CB

BAS40-05:45

BAS40-06:L2

MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

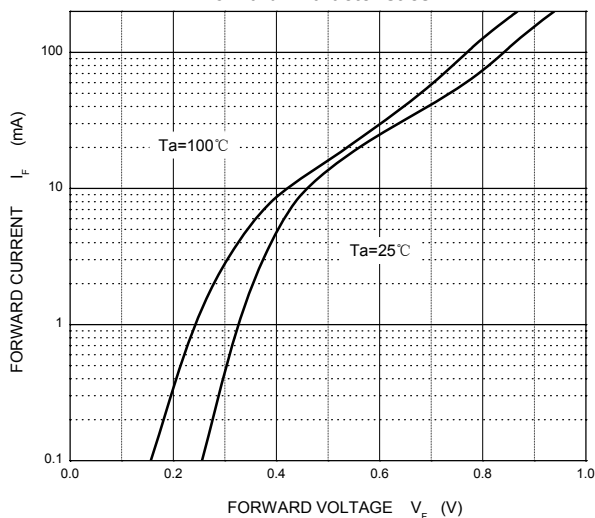
Parameter	Symbol	Value	Unit
Reverse Voltage	V _R	40	V
Peak Repetitive Peak Reverse Voltage	V _{RRM}		
Working Peak Reverse Voltage	V _{RWM}		
Forward Continuous Current	I _F	200	mA
Power Dissipation	P _D	200	mW
Thermal Resistance From Junction To Ambient	R _{θJA}	500	°C/W
Junction Temperature	T _J	125	°C
Storage Temperature	T _{STG}	-55 ~+150	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

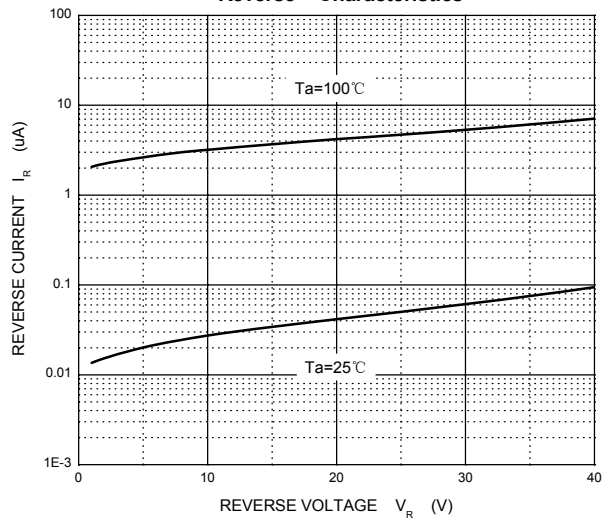
Parameter	Symbol	Min	Max	Unit	Conditions
Reverse breakdown voltage	V _(BR)	40		V	I _R =10uA
Reverse voltage leakage current	I _R		200	nA	V _R =30V
Forward voltage	V _{F1}		0.38	V	I _{F1} =1 mA
	V _{F2}		1	V	I _{F2} =40mA
Diode capacitance	C _D		5	pF	V _R =0V, f=1MHz
Reverse recovery time	T _{rr}		5	nS	I _F =I _R =10mA I _{rr} =0.1×I _R R _L =100Ω

Typical Characteristics

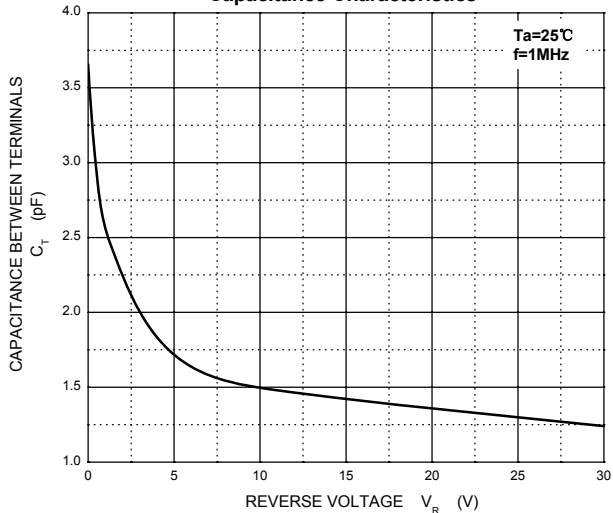
Forward Characteristics



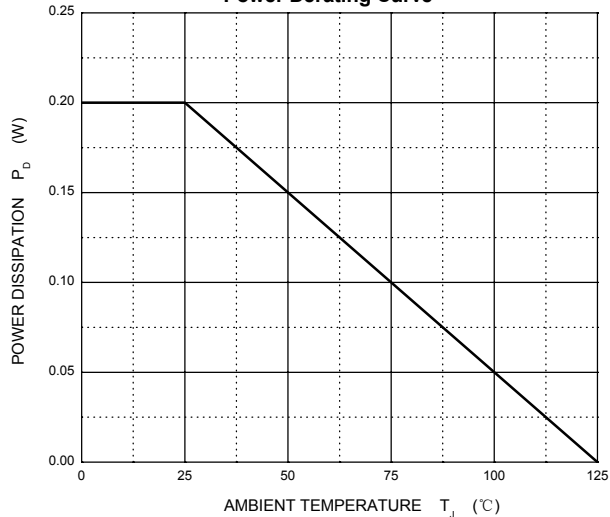
Reverse Characteristics



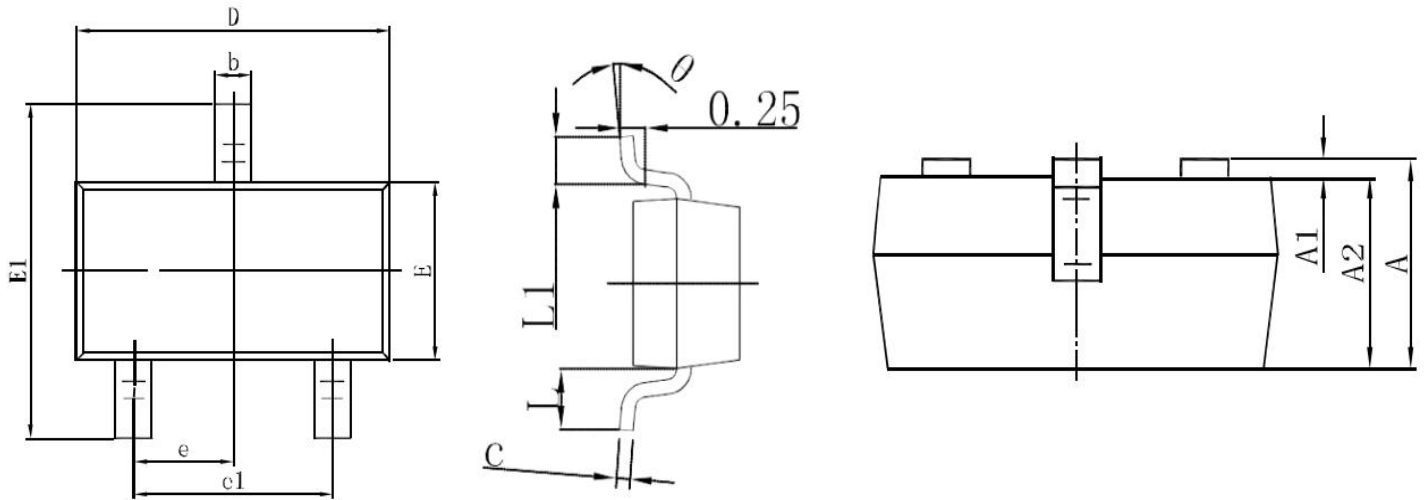
Capacitance Characteristics



Power Derating Curve

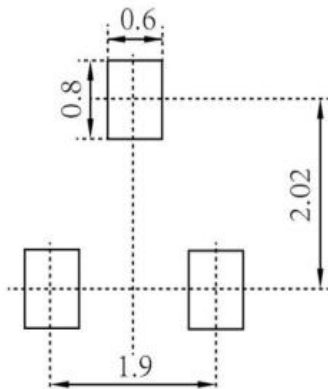


SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.354	0.453
A1	0.000	0.100	0.000	0.039
A2	0.900	1.050	0.354	0.413
b	0.300	0.500	0.118	0.197
c	0.080	1.150	0.031	0.453
D	2.900	3.100	1.142	1.220
E	1.200	1.400	0.472	0.551
E1	2.250	2.550	0.886	1.004
e	0.95REF		0.374REF	
e1	1.800	2.000	0.709	0.787
L	0.55REF		0.215REF	
L1	0.300	0.500	0.118	0.197

SOT-23 Suggested Pad Layout

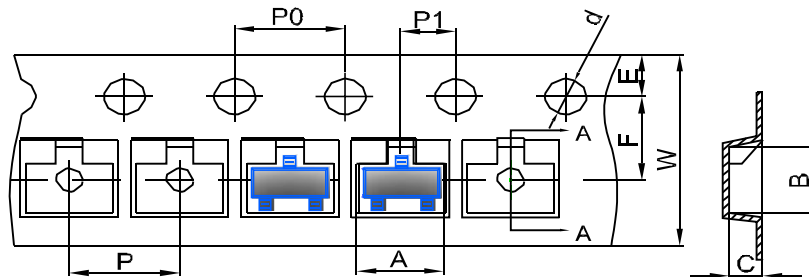


Note:

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

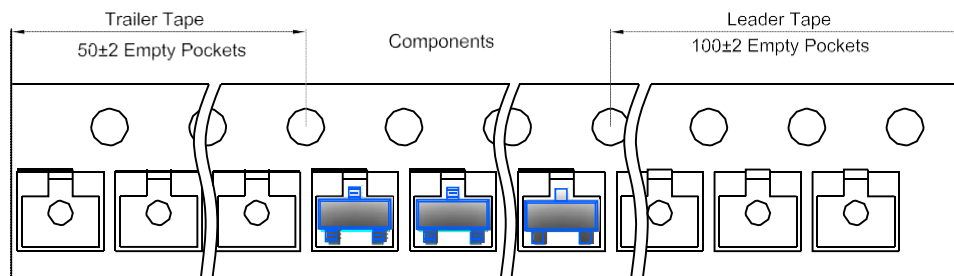
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

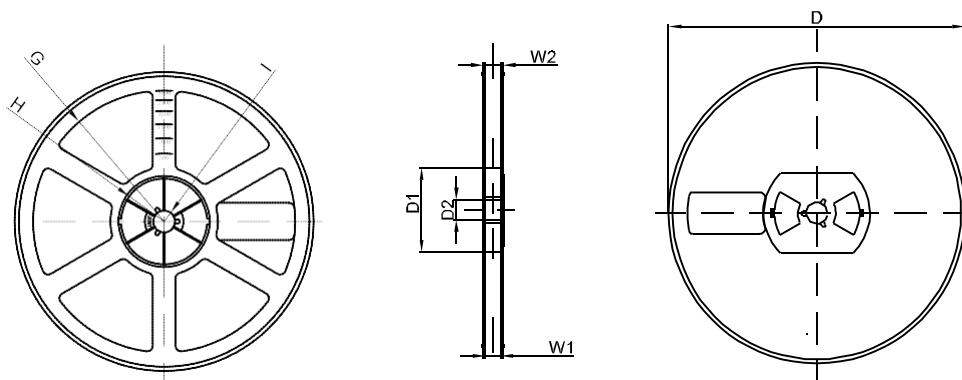


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

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	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1