

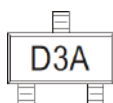
SOT-23 Plastic-Encapsulate Diodes

SCHOTTKY BARRIER DIODE

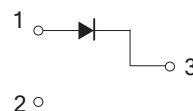
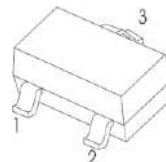
Features:

- Small surface mounting type
- Low reverse current and low forward voltage
- High reliability

MARKING: D3A



SOT-23



Maximum Ratings @Ta=25°C

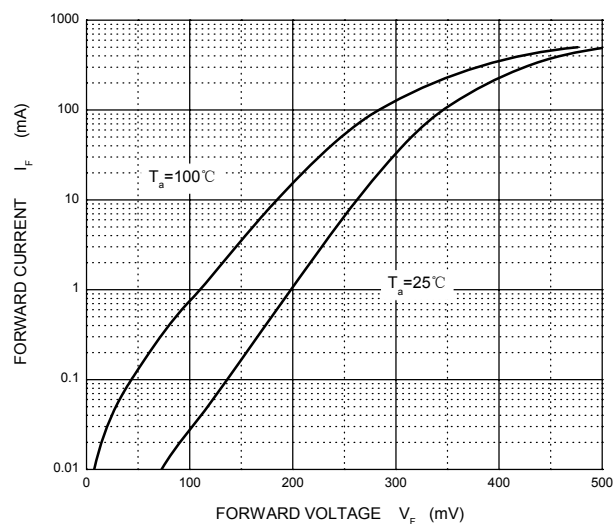
Parameter	Symbol	Limit	Unit
Peak reverse voltage	V_{RM}	40	V
DC reverse	V_R	40	V
Non-repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	3	A
Mean rectifying current	I_o	0.5	A
Power dissipation	P_D	250	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	400	°C/W
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-55~+150	°C

Electrical Ratings (Ta=25°C unless otherwise specified)

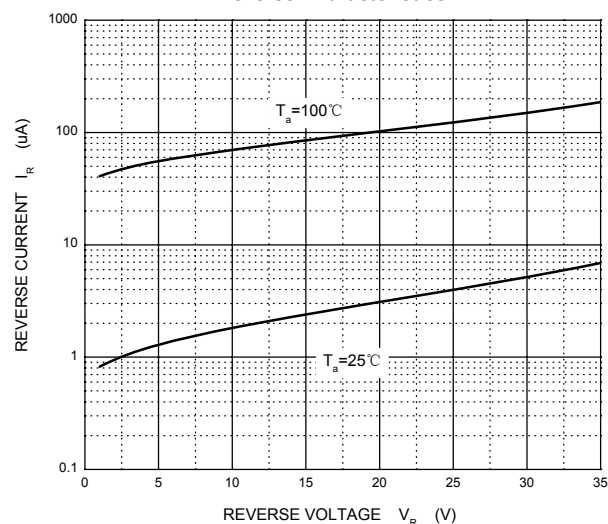
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage	V_R	40			V	$I_R=100\mu A$
Forward voltage	V_F			0.55	V	$I_F=0.5A$
Reverse current	I_{R1}			50	μA	$V_R=30V$
	I_{R2}			30	μA	$V_R=10V$
Capacitance between terminals	C_{T1}		125		pF	$V_R=0V, f=1MHz$
	C_{T2}		20		pF	$V_R=10V, f=1MHz$

Typical Characteristics

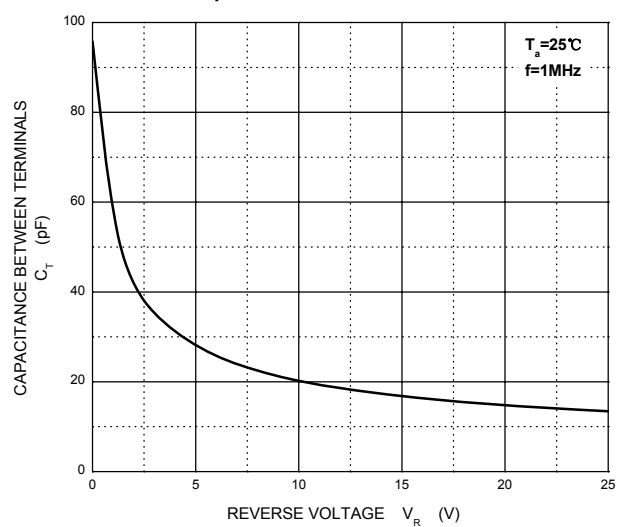
Forward Characteristics



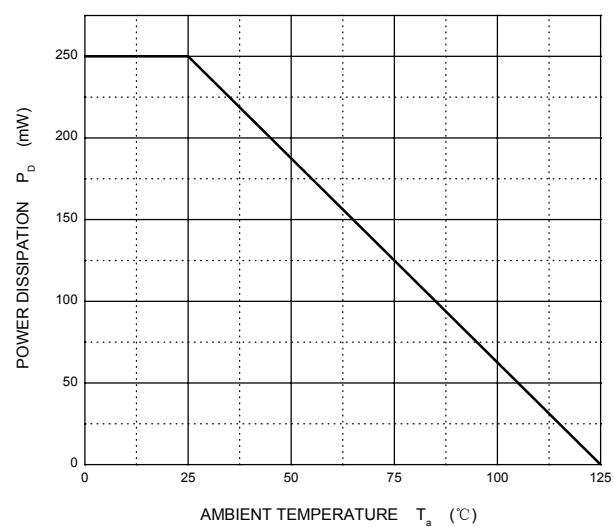
Reverse Characteristics



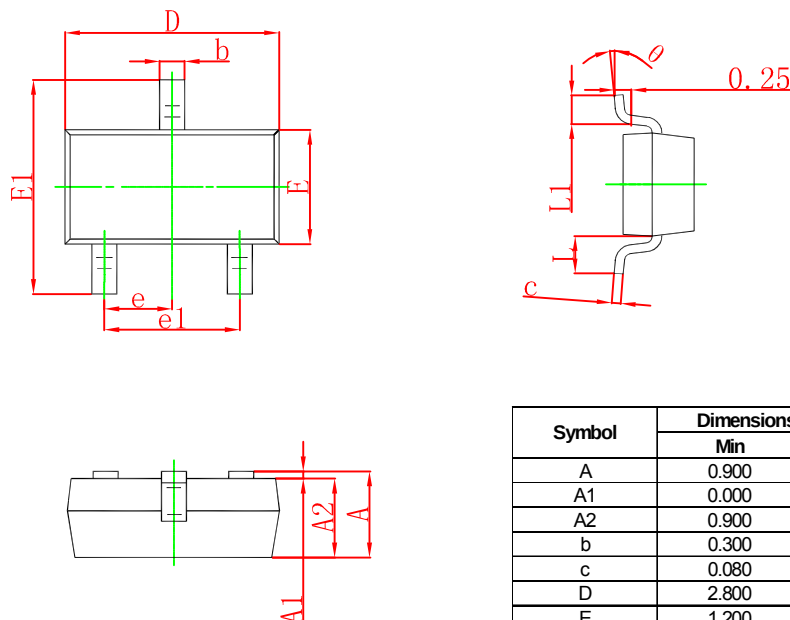
Capacitance Characteristics



Power Derating Curve

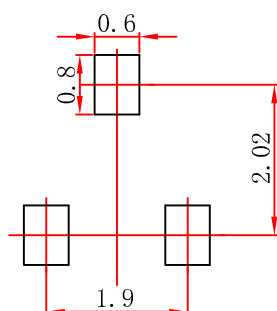


SOT-23 Package Outline Dimensions



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

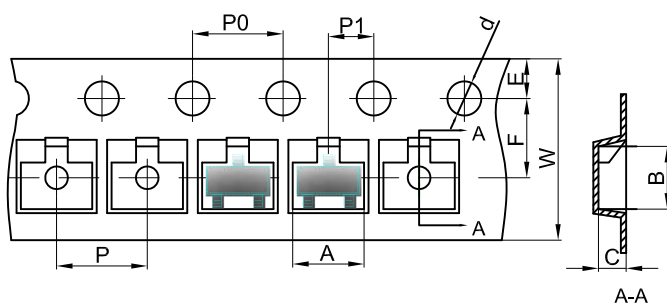


Note:

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

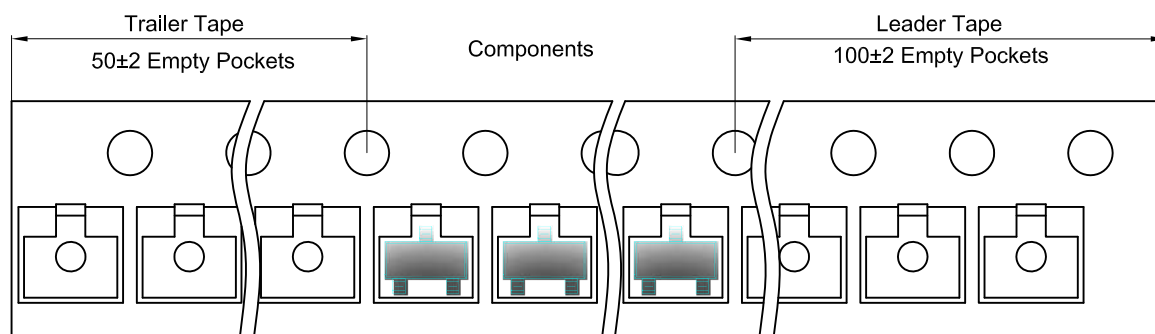


Packaging Description:

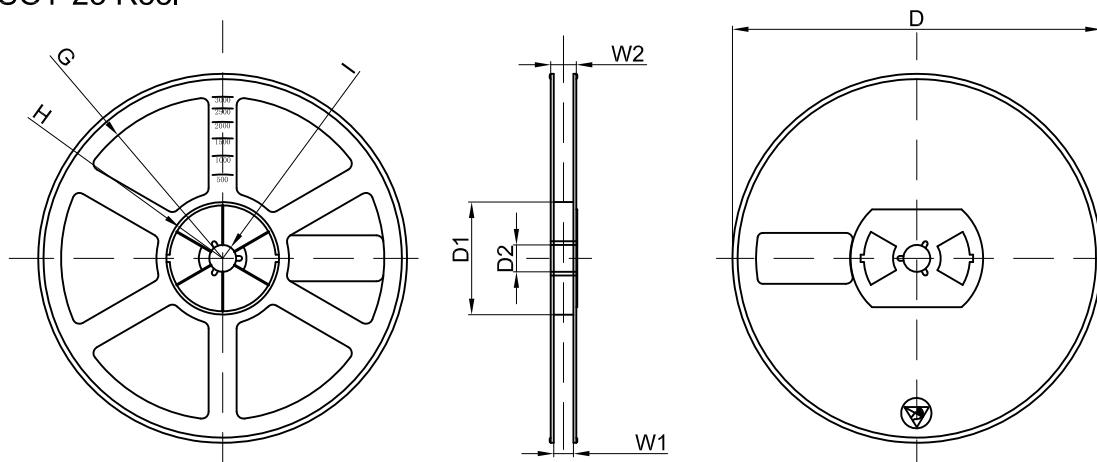
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in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