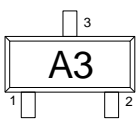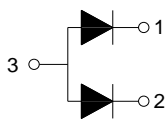SuperDiode – 100mA, 80V, 150mW SOT-23 Plastic-Encapsulate Diode

1. Features

- Low forward voltage
- Fast reverse recovery time: trr=1.6ns(typ.)

2. Marking and Circuit

Marking	Circuit

3. Specification

Absolute Maximum Rating & Thermal Characteristics

Ratings at 25 ℃ ambient temperature unless otherwise specified.

| Parameters	Symbol	Limit	Unit
DC blocking voltage	V_R	80	V
Non-Repetitive Peak reverse voltage	V_{RM}	85	V
Forward continuous current	I_{FM}	300	mA
Average Rectified Output Current	I_O	100	mA
Power Dissipation	P_D	150	mW
Operating junction temperature	T_j	125	℃
Storage temperature range	T_{STG}	-55~150	℃

Electrical Characteristics

At TA = 25℃ unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Forward voltage	V_F	I_F=1mA		0.61		V
		I_F=10mA		0.74		
		I_F=100mA		0.92		
Reverse breakdown voltage	V_{BR}	I_R=100uA	80			V
Reverse leakage current	I_R	V_R=30V			100	nA
		V_R=80V			500	
Type junction capacitance	C_j	V_R=0V, f=1MHz		2.2	4.0	pF
Reverse recovery time	T_{RR}	I_F=I_R=10mA Irr=0.1 x I_R		1.6	4.0	ns

4. Typical Characteristic

ElecSuper
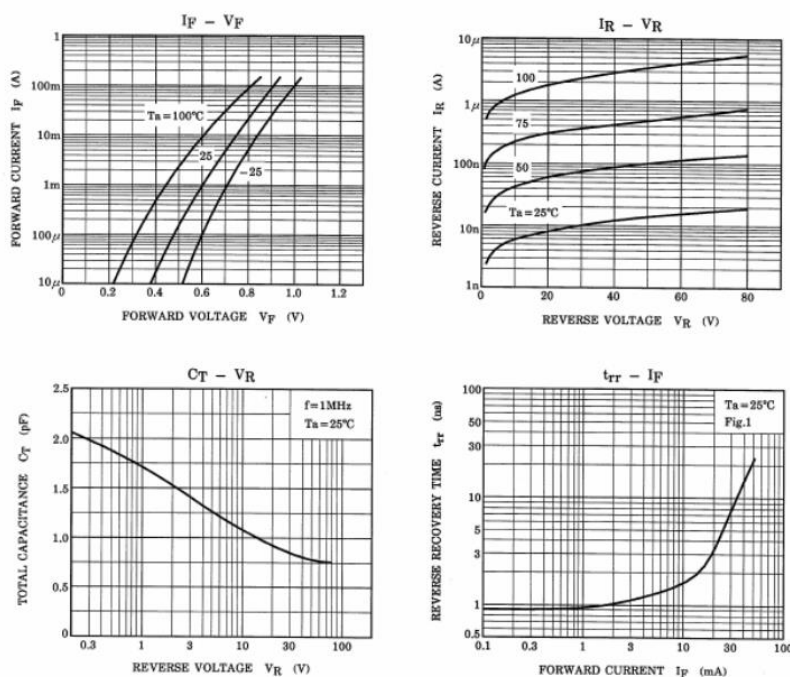
5. Dimension and Patterns (SOT-23)
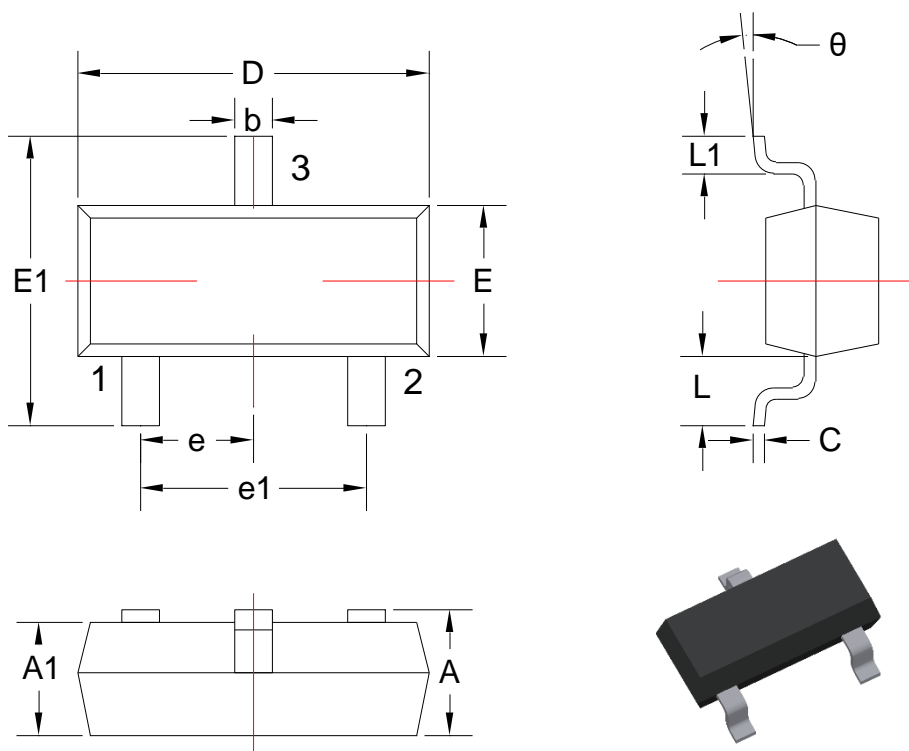
Units: mm

Symbol	Dimensions		Symbol	Dimensions	
	Min.	Max.		Min.	Max.
A	0.900	1.150	E1	2.250	2.550
A1	0.900	1.050	e	0.950TYP	
b	0.300	0.500	e1	1.800	2.000
c	0.080	0.150	L	0.550REF	
D	2.800	3.00	L1	0.300	0.500
E	1.200	1.400	θ	0°	8°
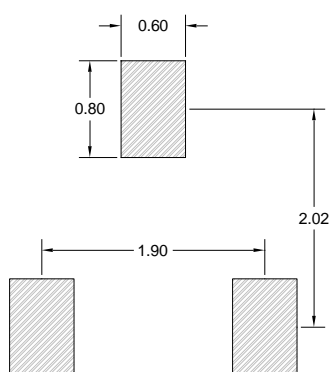
Note:

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

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