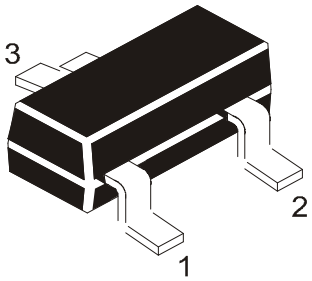
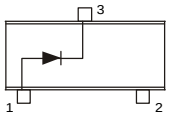
SILICON PLANAR HIGH SPEED DIODES

BAS19, BAS20, BAS21

SOT-23
Formed SMD Package





Pin Configuration
1 = ANODE
2 = NC
3 = CATHODE

Marking
BAS19 = A8
BAS20 = A81
BAS21 = A82

High-Speed Switching Diodes in a Microminiature Plastic Envelope.

ABSOLUTE MAXIMUM RATINGS (Ta=25ºC)

DESCRIPTION	SYMBOL	BAS19	BAS20	BAS21	UNIT
Continuous Reverse Voltage	V_R	100	150	200	V
Repetitive Peak Reverse Voltage	V_{RRM}	120	200	250	V
Non Repetitive Peak Forward Current t=1ms t=1s	 I_{FSM} I_{FSM}	 2.5 0.5			 A A
Average Rectified Forward Current (averaged over any 20 ms period)	$I_{F(AV)}$	200			mA
Forward Current (DC)	*I_F	200			mA
Repetitive Peak Forward Current	I_{FRM}	625			mA
Total Power Dissipation	P_D	250			mW
Storage Temperature Range	T_{stg}	- 55 to +150			ºC
Junction Temperature	T_j	150			ºC

Thermal Resistance

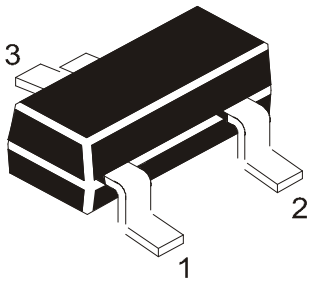
Junction to Ambient in free air	$R_{th\ (j-a)}$	500	K/W

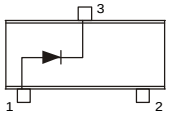
ELECTRICAL CHARACTERISTICS (T_a=25º C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Forward Voltage	V_F	I_F=100mA I_F=200mA			1.00 1.25	V V
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R=100µA ****BAS19** **BAS20** *****BAS21**	 120 200 250			 V V V

***Mounted on a ceramic substrate 0f 8mm x 10mm x 0.7mm**
****Measured under pulse conditions; pulse time = t_p=0.3ms.**
*****At zero life time measured under pulse conditions to avoid excessive dissipation and voltage limited to 275V**

SOT-23
Formed SMD Package



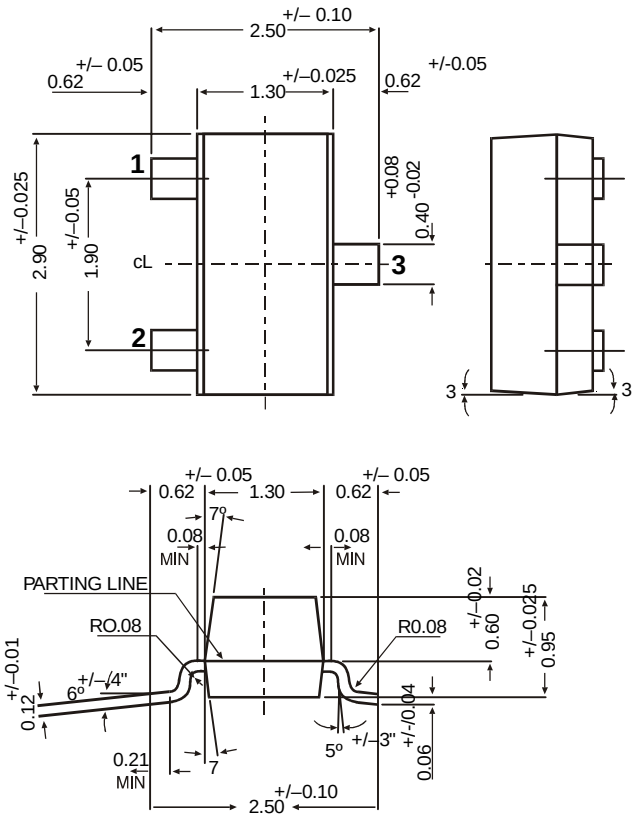


Pin Configuration
1 = ANODE
2 = NC
3 = CATHODE

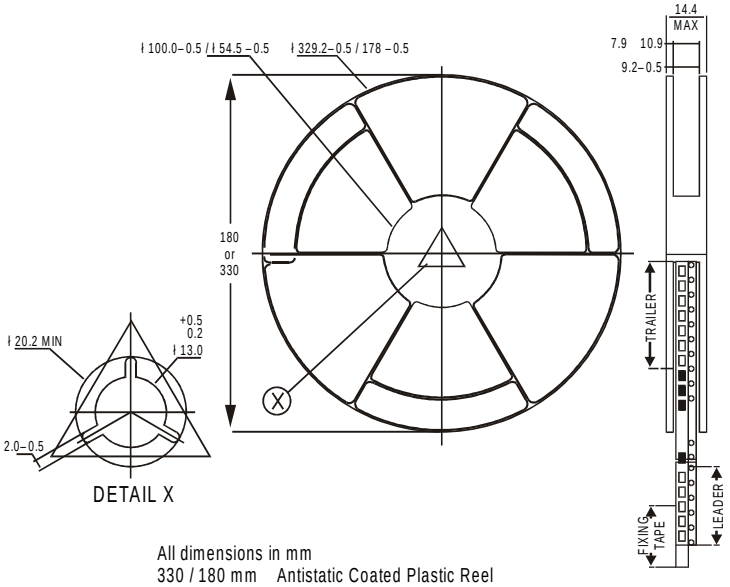
ELECTRICAL CHARACTERISTICS (T_a=25° C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Reverse Voltage Leakage Current	I_R	V_R= $V_R$max			100	nA
		VR=$V_R$max T_j=150°C			100	µA
Differential Resistance	r_{diff}	I_F=10mA		5		Ω
Reverse Recovery Time When Switched from	t_{rr}	I_F=30mA to I_R=30mA, R_L100 Ω, measured at I_R=3mA			50	ns

SOT-23 Formed SMD Package



SOT-23 Package Reel Information
Reel specifications for Packing (13"/7" reels)

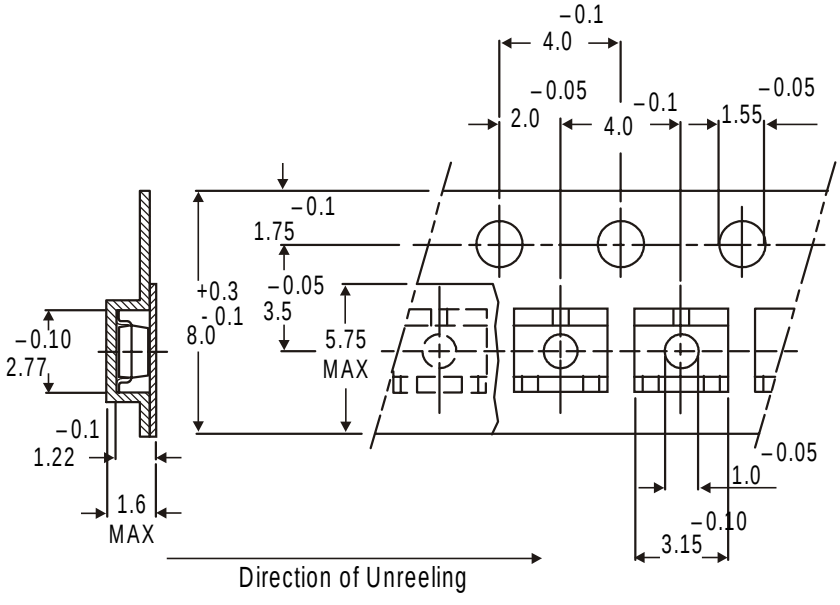


All dimensions in mm
330 / 180 mm Antistatic Coated Plastic Reel

NOTES:	8mm Tape Size of Reel 330 mm (13")	8mm Tape Size of Reel 180 mm (7")
No. of Devices	10,000 Pcs	3,000 Pcs

1. The bandolier of 330 mm reel contains at least 10,000 devices.
2. The bandolier of 180 mm reel contains at least 3,000 devices.
3. No more than 0.5% missing devices / reel. 50 empty compartments for 330 mm reel. 15 empty compartments for 180 mm reel.
4. Three consecutive empty places might be found provided this gap is followed by 6 consecutive devices.
5. The carrier tape (leader) starts with at least 75 empty positions (equivalent to 330 mm). In order to fix the carrier tape a self adhesive tape of 20 to 50 mm is applied. At the end of the bandolier at least 40 empty positions (equivalent to 160 mm) are there.

Tape Specification for SOT-23 Surface Mount Device



All dimensions in mm

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
SOT-23 T&R	3K/reel	136 gm/3K pcs	3" x 7.5" x 7.5"	12.0K	17" x 15" x 13.5"	192.0K	12 kgs
			9" x 9" x 9"	51.0K	19" x 19" x 19"	408.0K	28 kgs
	10K/reel	415 gm/10K pcs	13" x 13" x 0.5"	10.0K	17" x 15" x 13.5"	300.0K	16 kgs

Customer Notes

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

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