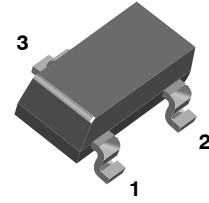
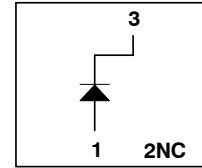


Small Signal Diode

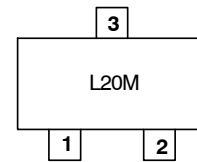
BAS29



SOT-23 (TO-236)
CASE 318



MARKING DIAGRAM



L20 = Specific Device Code
M = Data Code

ORDERING INFORMATION

Device	Package	Shipping [†]
BAS29	SOT-23-3 (Pb-Free / Halide Free)	3000 / Tape & Reel

[†]For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, [BRD8011/D](#).

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

Symbol	Parameter	Value	Unit
V _{RRM}	Maximum Repetitive Reverse Voltage	120	V
I _{F(AV)}	Average Rectified Forward Current	200	mA
I _{FSM}	Non-Repetitive Peak Forward Current Pulse Width = 1.0 Second Pulse Width = 1.0 Second	1.0	A
		2.0	A
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _J	Operating Junction Temperature	150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. These ratings are based on a maximum junction temperature of 150°C.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

THERMAL CHARACTERISTICS

Symbol	Parameter	Value	Unit
P _D	Power Dissipation	350	mW
R _{θJA}	Thermal Resistance, Junction to Ambient	357	°C/W

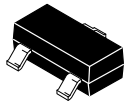
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Symbol	Parameter	Test Conditions	Min	Max	Unit
V _R	Breakdown Voltage	I _R = 1.0 mA	120	-	V
V _{F*}	Forward Voltage	I _F = 10 mA I _F = 50 mA I _F = 100 mA I _F = 200 mA I _F = 400 mA	-	0.75 0.84 0.90 1.00 1.25	V
I _{R*}	Reverse Current	V _R = 90 V V _R = 90 V, T _A = 150°C	-	100 100	nA μA
C _T	Total Capacitance	V _R = 0, f = 1.0 MHz	-	2.0	pF
t _{rr}	Reverse Recovery Time	I _F = I _R = 30 mA, I _{RR} = 3.0 mA, R _L = 100 Ω	-	50	ns

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

*Pulse test: Pulse width = 300 μs, Duty Cycle = 2%

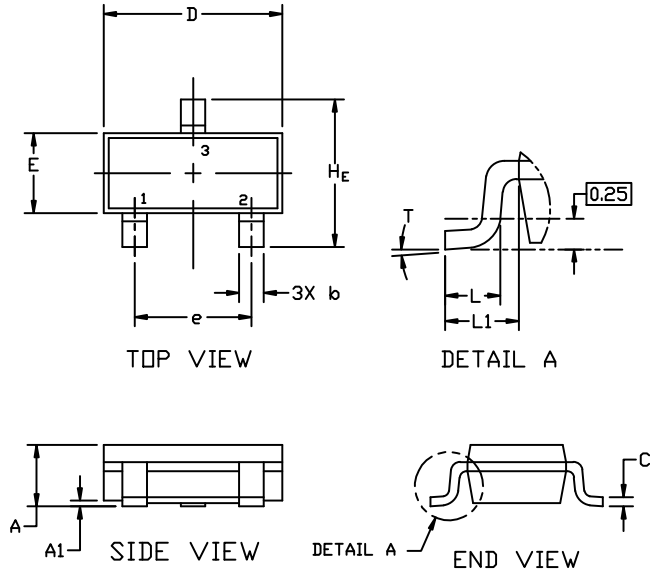
MECHANICAL CASE OUTLINE PACKAGE DIMENSIONS



SOT-23 (TO-236)
CASE 318
ISSUE AT

DATE 01 MAR 2023

SCALE 4:1

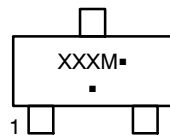


NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M,1994.
2. CONTROLLING DIMENSION: MILLIMETERS
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF THE BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

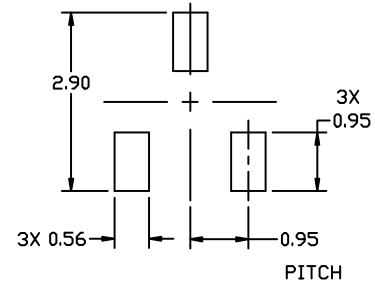
DIM	MILLIMETERS			INCHES		
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
A	0.89	1.00	1.11	0.035	0.039	0.044
A1	0.01	0.06	0.10	0.000	0.002	0.004
b	0.37	0.44	0.50	0.015	0.017	0.020
c	0.08	0.14	0.20	0.003	0.006	0.008
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.080
L	0.30	0.43	0.55	0.012	0.017	0.022
L1	0.35	0.54	0.69	0.014	0.021	0.027
H _E	2.10	2.40	2.64	0.083	0.094	0.104
T	0°	---	10°	0°	---	10°

GENERIC MARKING DIAGRAM*



- XXX = Specific Device Code
- M = Date Code
- = Pb-Free Package

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.



RECOMMENDED MOUNTING FOOTPRINT

* For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

STYLES ON PAGE 2

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MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS



SOT-23 (TO-236)
CASE 318
ISSUE AT

DATE 01 MAR 2023

STYLE 1 THRU 5:
 CANCELLED

STYLE 6:
 PIN 1. BASE
 2. EMITTER
 3. COLLECTOR

STYLE 7:
 PIN 1. EMITTER
 2. BASE
 3. COLLECTOR

STYLE 8:
 PIN 1. ANODE
 2. NO CONNECTION
 3. CATHODE

STYLE 9:
 PIN 1. ANODE
 2. ANODE
 3. CATHODE

STYLE 10:
 PIN 1. DRAIN
 2. SOURCE
 3. GATE

STYLE 11:
 PIN 1. ANODE
 2. CATHODE
 3. CATHODE-ANODE

STYLE 12:
 PIN 1. CATHODE
 2. CATHODE
 3. ANODE

STYLE 13:
 PIN 1. SOURCE
 2. DRAIN
 3. GATE

STYLE 14:
 PIN 1. CATHODE
 2. GATE
 3. ANODE

STYLE 15:
 PIN 1. GATE
 2. CATHODE
 3. ANODE

STYLE 16:
 PIN 1. ANODE
 2. CATHODE
 3. CATHODE

STYLE 17:
 PIN 1. NO CONNECTION
 2. ANODE
 3. CATHODE

STYLE 18:
 PIN 1. NO CONNECTION
 2. CATHODE
 3. ANODE

STYLE 19:
 PIN 1. CATHODE
 2. ANODE
 3. CATHODE-ANODE

STYLE 20:
 PIN 1. CATHODE
 2. ANODE
 3. GATE

STYLE 21:
 PIN 1. GATE
 2. SOURCE
 3. DRAIN

STYLE 22:
 PIN 1. RETURN
 2. OUTPUT
 3. INPUT

STYLE 23:
 PIN 1. ANODE
 2. ANODE
 3. CATHODE

STYLE 24:
 PIN 1. GATE
 2. DRAIN
 3. SOURCE

STYLE 25:
 PIN 1. ANODE
 2. CATHODE
 3. GATE

STYLE 26:
 PIN 1. CATHODE
 2. ANODE
 3. NO CONNECTION

STYLE 27:
 PIN 1. CATHODE
 2. CATHODE
 3. CATHODE

STYLE 28:
 PIN 1. ANODE
 2. ANODE
 3. ANODE

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