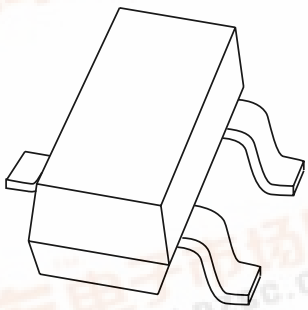
DATA SHEET



BAP63-05
Silicon PIN diode

Objective specification

2000 Feb 17

Silicon PIN diode BAP63-05

FEATURES

- High speed switching for RF signals
- Low diode capacitance
- Low diode forward resistance
- Low series inductance
- For applications up to 3 GHz.

APPLICATIONS

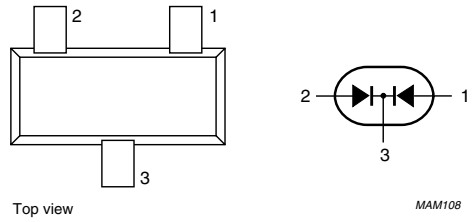
- RF attenuators and switches.

DESCRIPTION

Two planar PIN diodes in common cathode configuration in a SOT23 small plastic SMD package.

PINNING

PIN	DESCRIPTION
1	anode (a1)
2	anode (a2)
3	common cathode



Marking code:

Fig.1 Simplified outline (SOT23) and symbol.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
Per diode					
V_R	continuous reverse voltage		–	50	V
I_F	continuous forward current		–	100	mA
P_{tot}	total power dissipation	T_s = 90 °C	–	250	mW
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–65	+150	°C

ELECTRICAL CHARACTERISTICS

T_j = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
Per diode					
V_F	forward voltage	I_F = 100 mA	0.95	1.2	V
I_R	reverse current	V_R = 35 V	–	10	μA
C_d	diode capacitance	V_R = 0; f = 100 MHz	0.3	–	pF
		V_R = 5 V; f = 1 MHz	0.21	0.3	pF
r_D	diode forward resistance	I_F = 5 mA; f = 100 MHz; note 1	1.2	2	Ω
		I_F = 10 mA; f = 100 MHz; note 1	1	–	Ω
τ_L	charge carrier life time	when switched from I_F = 10 mA to I_R = 6 mA; R_L = 100 Ω; measured at I_R = 3 mA	75	–	ns
L_S	series inductance		1.4	–	nH

Note

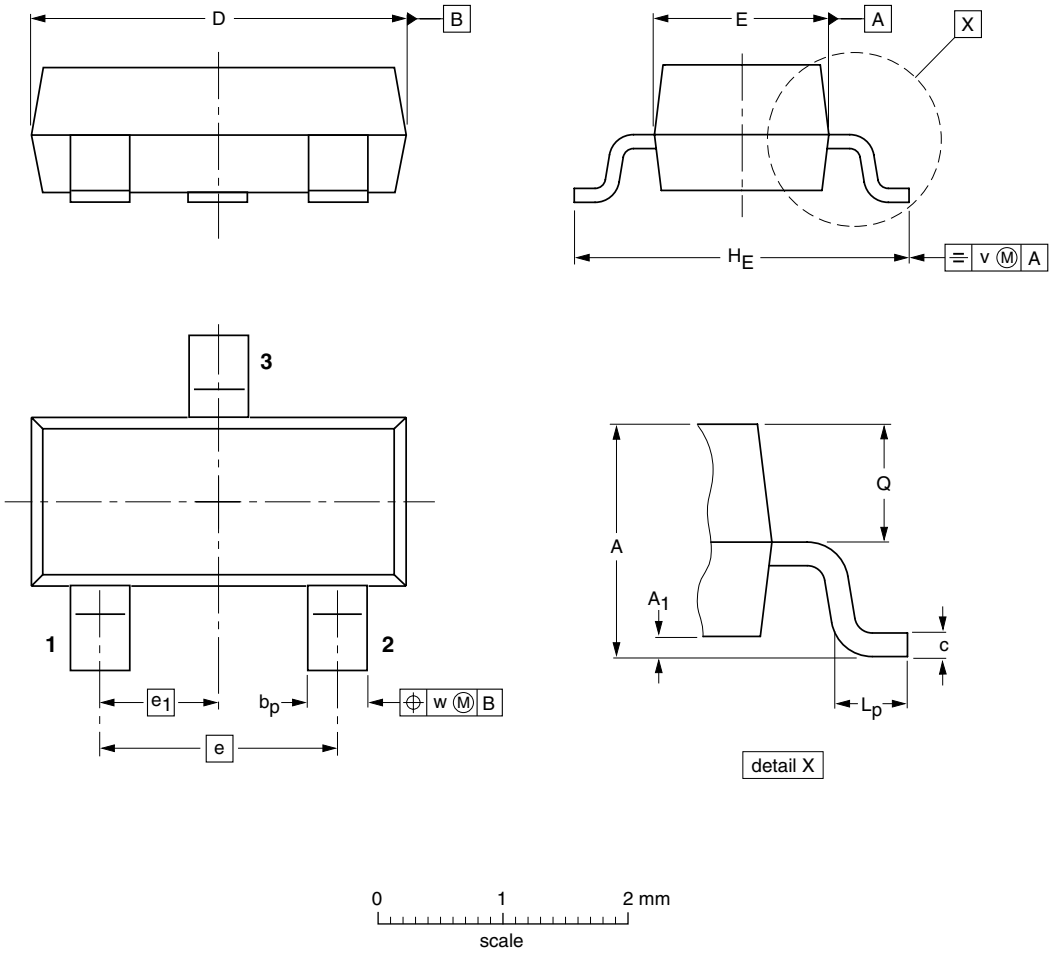
1. Guaranteed on AQL basis: inspection level S4, AQL 1.0.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j\text{-}s}$	thermal resistance from junction to soldering point	220	K/W

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT23**



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1 max.	b_p	c	D	E	e	e_1	H_E	L_p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT23		TO-236AB				~~97-02-28~~ 99-09-13

DEFINITIONS

Data sheet status	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
Limiting values	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.	
Application information	
Where application information is given, it is advisory and does not form part of the specification.	

LIFE SUPPORT APPLICATIONS

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