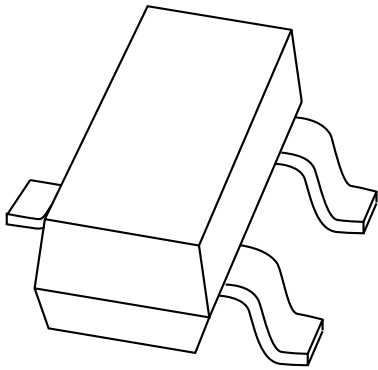


DATA SHEET



PSSI3120CA PECL termination

Product data sheet

2001 Jul 19

PECL termination

PSSI3120CA

FEATURES

- Single channel PECL termination in a three pin SOT23 package
- ESD protection >2 kV
- Undershoot protection
- High capacitance range.

APPLICATIONS

Enhanced high speed clock line signal integrity for the following:

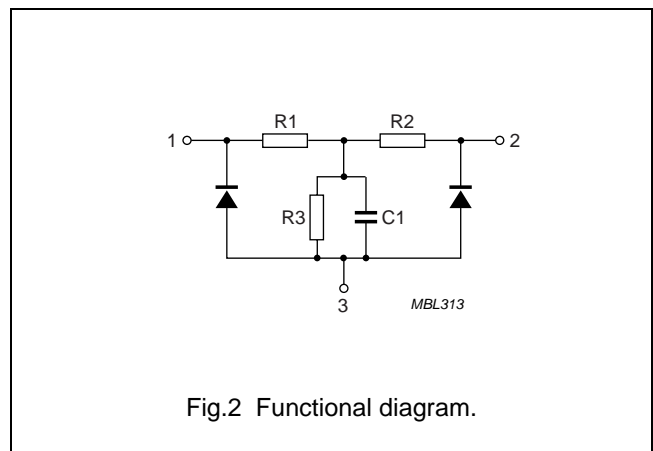
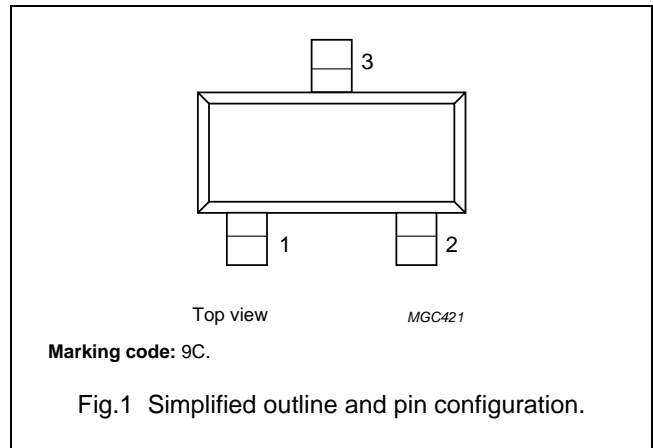
- Workstations
- Desktop PCs
- Notebook PCs.

DESCRIPTION

Single channel, RC-type positive emitter-coupled logic (PECL) clock termination with integrated diodes, providing electrostatic discharge (ESD) protection up to 2 kV. Using thin film-on-silicon technology the PSSI3120CA integrates three resistors, one capacitor and two diodes in a SOT23 package. The capacitor is protected from damage due to ESD by the diodes. The product is designed to enhance signal integrity in clock distribution networks. Additionally, it can be used as a termination in digital transmission lines where its inherent ESD protection helps maintain signal integrity by reducing undershoots.

PINNING - SOT23

PIN	DESCRIPTION
1	input/output
2	input/output
3	ground



PECL termination

PSSI3120CA

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
V	operating voltage	0	5	V
I _F	continuous forward current	–	10	mA
I _{FRM}	repetitive peak forward current	–	50	mA
T _{stg}	storage temperature	–65	+150	°C
T _j	junction temperature	–	150	°C

ELECTRICAL CHARACTERISTICS

T_{amb} = 25 °C unless other specified.

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
R1, R2	resistance	45	55	Ω
R3	resistance	41.7	51	Ω
C1	capacitance	120	180	pF

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-a}	thermal resistance from junction to ambient	note 1	500	K/W

Note

1. Refer to SOT23 standard mounting conditions.

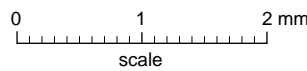
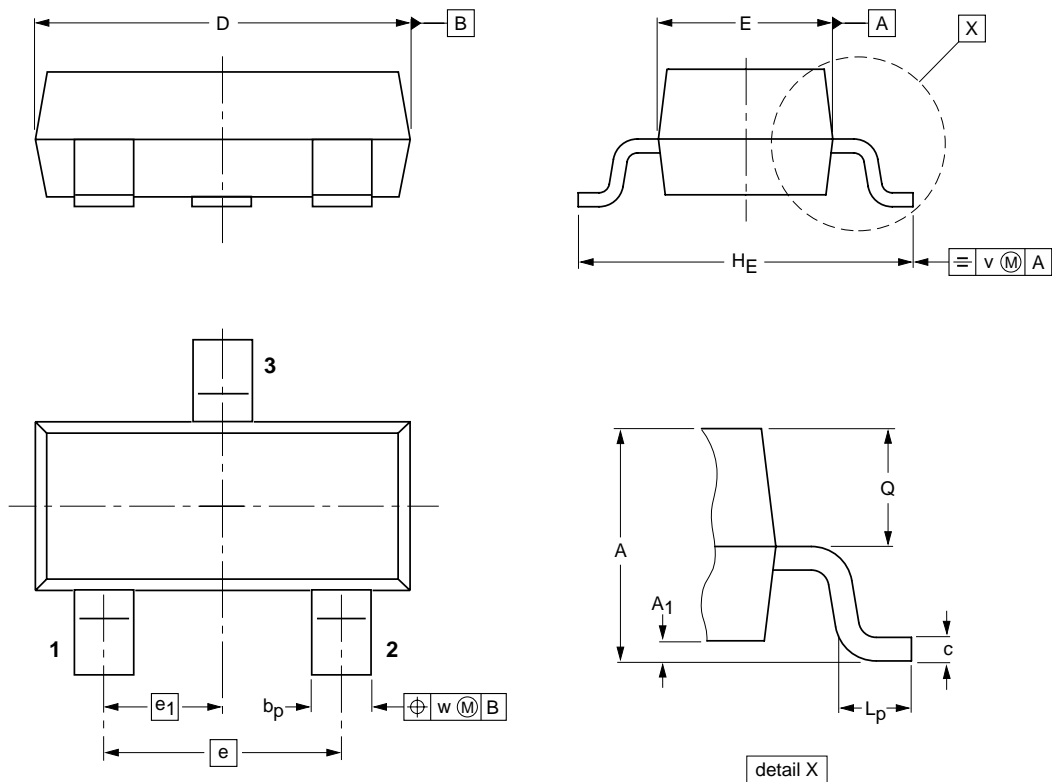
PECL termination

PSSI3120CA

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

PECL termination

PSSI3120CA

DATA SHEET STATUS

DOCUMENT STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITION
Objective data sheet	Development	This document contains data from the objective specification for product development.
Preliminary data sheet	Qualification	This document contains data from the preliminary specification.
Product data sheet	Production	This document contains the product specification.

Notes

1. Please consult the most recently issued document before initiating or completing a design.
2. The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the Internet at URL <http://www.nxp.com>.

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Customer notification

This data sheet was changed to reflect the new company name NXP Semiconductors. No changes were made to the content, except for the legal definitions and disclaimers.

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