

PMBTA64,215 Datasheet



DiGi Electronics Part Number	PMBTA64,215-DG
Manufacturer	Nexperia USA Inc.
Manufacturer Product Number	PMBTA64,215
Description	TRANS PNP DARL 30V 0.5A TO236AB
Detailed Description	Bipolar (BJT) Transistor PNP - Darlington 30 V A 125MHz 250 mW Surface Mount TO-236AB

Inc. RL 30V 0.5A TO236AB ransistor PNP - Darlington 30 V 500 m

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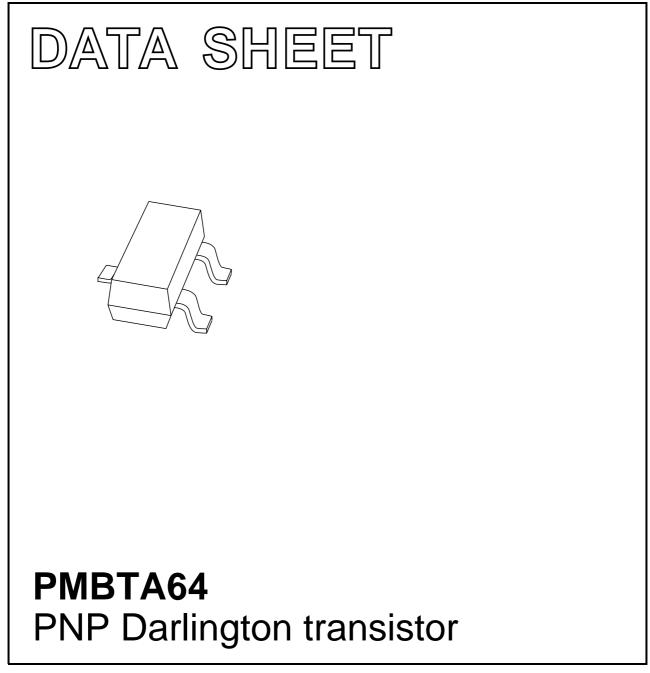
Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
PMBTA64,215	Nexperia USA Inc.
Series:	Product Status:
	Active
Transistor Type:	Current - Collector (Ic) (Max):
PNP - Darlington	500 mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ lb, lc:
30 V	1.5V @ 100μA, 100mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ lc, Vce:
100nA (ICBO)	20000 @ 100mA, 5V
Power - Max:	Frequency - Transition:
250 mW	125MHz
Operating Temperature:	Grade:
150°C (TJ)	Automotive
Qualification:	Mounting Type:
AEC-Q101	Surface Mount
Package / Case:	Supplier Device Package:
TO-236-3, SC-59, SOT-23-3	ТО-236АВ
Base Product Number:	
PMBTA64	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.21.0075	

DISCRETE SEMICONDUCTORS



Product data sheet Supersedes data of 2002 Nov 07 2004 Jan 22



NXP Semiconductors

PNP Darlington transistor

FEATURES

- High current (max. 500 mA)
- Low voltage (max. 30 V)
- High DC current gain (min. 10000).

APPLICATIONS

• High input impedance preamplifiers.

DESCRIPTION

PNP Darlington transistor in a SOT23 plastic package. NPN complement: PMBTA14.

MARKING

TYPE NUMBER	MARKING CODE ⁽¹⁾
PMBTA64	*2V

Note

- 1. * = p : Made in Hong Kong.
 - * = t : Made in Malaysia.

* = W : Made in China.

ORDERING INFORMATION

TYPE		PACKAGE	
NUMBER	NAME	DESCRIPTION	VERSION
PMBTA64	_	plastic surface mounted package; 3 leads	SOT23

LIMITING VALUES

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

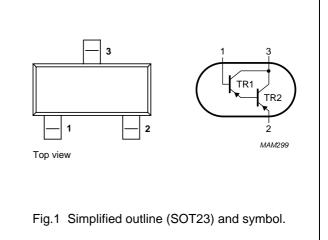
SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CBO}	collector-base voltage	open emitter	-	-30	V
V _{CES}	collector-emitter voltage	$V_{BE} = 0$	-	-30	V
V _{EBO}	emitter-base voltage	open collector	-	-10	V
I _C	collector current (DC)		-	-500	mA
I _{CM}	peak collector current		-	-800	mA
I _B	base current (DC)		-	-200	mA
P _{tot}	total power dissipation	$T_{amb} \le 25 \ ^{\circ}C$; note 1	-	250	mW
T _{stg}	storage temperature		-65	+150	°C
Tj	junction temperature		-	150	°C
T _{amb}	operating ambient temperature		-65	+150	°C

Note

1. Transistor mounted on an FR4 printed-circuit board.

PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector



PMBTA64

PNP Darlington transistor

PMBTA64

THERMAL CHARACTERISTICS

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

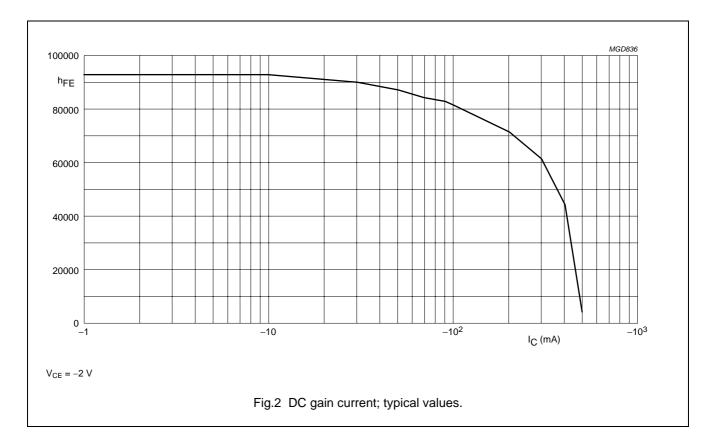
Note

1. Transistor mounted on an FR4 printed-circuit board.

CHARACTERISTICS

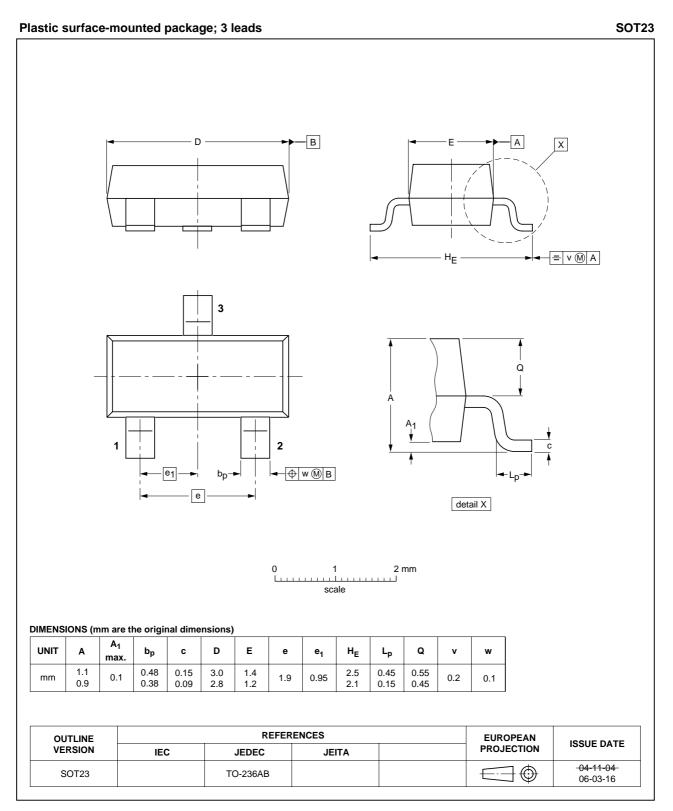
 $T_i = 25 \ ^{\circ}C$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I _{CBO}	collector cut-off current	$I_E = 0; V_{CB} = -30 V$	-	-100	nA
I _{EBO}	emitter cut-off current	$I_{C} = 0; V_{EB} = -10 V;$	-	-100	nA
h _{FE}	DC current gain	$I_{C} = -10 \text{ mA}; V_{CE} = -5 \text{ V}; \text{ (see Fig.2)}$	10000	-	
		$I_{C} = -100 \text{ mA}; V_{CE} = -5 \text{ V}; \text{ (see Fig.2)}$	20000	-	
V _{CEsat}	collector-emitter saturation voltage	$I_{\rm C} = -100 \text{ mA}; I_{\rm B} = -0.1 \text{ mA}$	-	-1.5	V
V _{BEon}	base-emitter on-state voltage	$I_{C} = -100 \text{ mA}; V_{CE} = -5 \text{ V}$	-	-2	V
f _T	transition frequency	$I_{C} = -50 \text{ mA}; V_{CE} = -5 \text{ V}; f = 100 \text{ MHz}$	125	-	MHz



PNP Darlington transistor

PACKAGE OUTLINE



PMBTA64

PNP Darlington transistor

PMBTA64

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.
- 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, including new legal definitions and disclaimers. No changes were made to the technical content, except for package outline drawings which were updated to the latest version.

Contact information

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