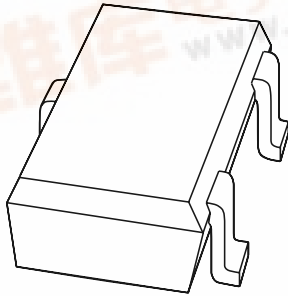


DISCRETE SEMICONDUCTORS

DATA SHEET



PMSTA55; PMSTA56 PNP general purpose transistors

Product specification
File under Discrete Semiconductors, SC04

1997 Jun 02

PNP general purpose transistors

PMSTA55; PMSTA56

FEATURES

- High current (max. 500 mA)
- Low voltage (max. 80 V).

APPLICATIONS

- Intended for telephony and professional communication equipment.

DESCRIPTION

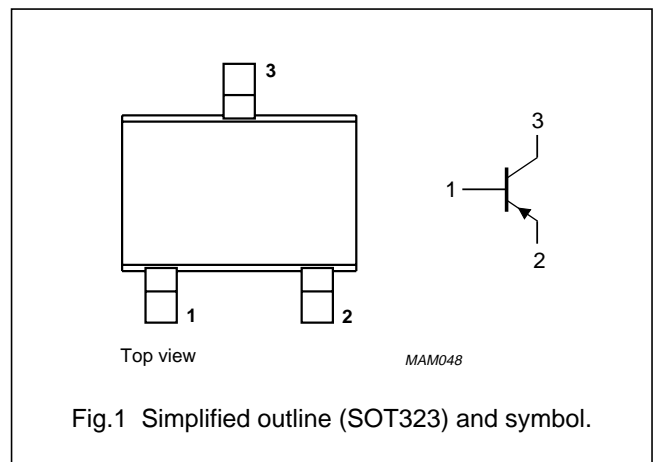
PNP transistor in a SOT323 plastic package.
NPN complements: PMSTA05 and PMSTA06.

MARKING

TYPE NUMBER	MARKING CODE
PMSTA55	t2H
PMATA56	t2G

PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector



QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CBO}	collector-base voltage	open emitter			
	PMSTA55		–	–60	V
	PMSTA56		–	–80	V
V _{CEO}	collector-emitter voltage	open base			
	PMSTA55		–	–60	V
	PMSTA56		–	–80	V
I _{CM}	peak collector current		–	–500	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C	–	200	mW
h _{FE}	DC current gain	I _C = –100 mA; V _{CE} = –1 V	50	–	
f _T	transition frequency	I _C = –100 mA; V _{CE} = –1 V	50	–	MHz

PNP general purpose transistors

PMSTA55; PMSTA56

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CBO}	collector-base voltage	open emitter			
	PMSTA55		–	–60	V
	PMSTA56		–	–80	V
V _{CEO}	collector-emitter voltage	open base			
	PMSTA55		–	–60	V
	PMSTA56		–	–80	V
V _{EBO}	emitter-base voltage	open collector	–	–4	V
I _C	collector current (DC)		–	–500	mA
I _{CM}	peak collector current		–	–500	mA
I _{BM}	peak base current		–	–500	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	–	200	mW
T _{stg}	storage temperature		–65	+150	°C
T _j	junction temperature		–	150	°C
T _{amb}	operating ambient temperature		–65	+150	°C

Note

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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-a}	thermal resistance from junction to ambient	note 1	625	K/W

Note

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

CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I _{CBO}	collector cut-off current				
	PMSTA55	I _E = 0; V _{CB} = –60 V	–	–100	nA
	PMSTA56	I _E = 0; V _{CB} = –80 V	–	–100	nA
I _{EBO}	emitter cut-off current	I _C = 0; V _{EB} = –4 V	–	–500	nA
h _{FE}	DC current gain	I _C = –10 mA; V _{CE} = –1 V	50	–	
		I _C = –100 mA; V _{CE} = –1 V; note 1	50	–	
V _{CEsat}	collector-emitter saturation voltage	I _C = –100 mA; I _B = –10 mA	–	–250	mV
V _{BE}	base-emitter voltage	I _C = –100 mA; V _{CE} = –1 V; note 1	–	–1.2	mV
f _T	transition frequency	I _C = –100 mA; V _{CE} = –1 V; f = 100 MHz	50	–	MHz

Note

1. Pulse test: t_p ≤ 300 μs; δ ≤ 0.02.

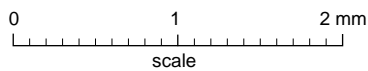
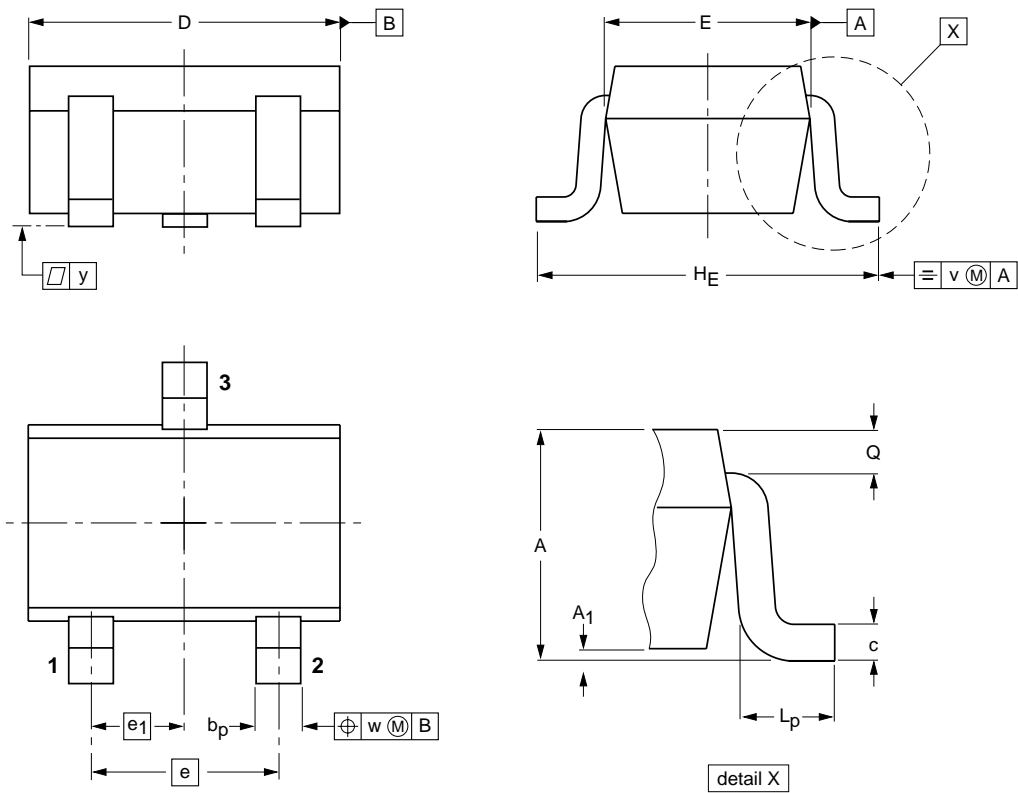
PNP general purpose transistors

PMSTA55; PMSTA56

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT323



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 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

OUTLINE VERSION	REFERENCES			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ		
SOT323			SC-70		97-02-28

PNP general purpose transistors

PMSTA55; PMSTA56

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

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Philips customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Philips for any damages resulting from such improper use or sale.

PNP general purpose transistors

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NOTES

PNP general purpose transistors

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NOTES

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