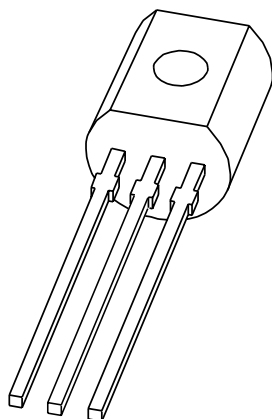


DATA SHEET



JC327; JC327A; JC328 PNP general purpose transistors

Product specification
Supersedes data of September 1994
File under Discrete Semiconductors, SC04

1997 Mar 10

PNP general purpose transistors

JC327; JC327A; JC328

FEATURES

- High current (max. 500 mA)
- Low voltage (max. 60 V).

APPLICATIONS

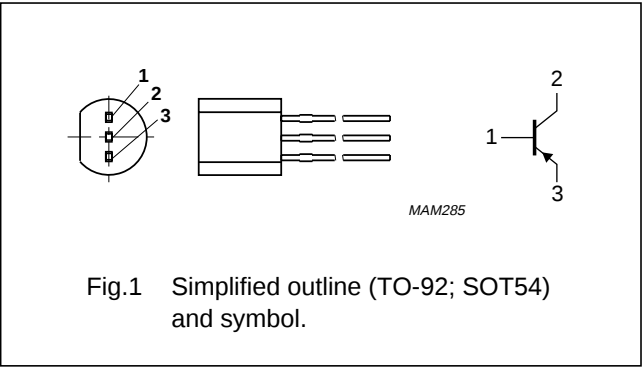
- General purpose switching and amplification, e.g. driver and output stages of audio amplifiers.

DESCRIPTION

PNP transistor in a TO-92; SOT54 plastic package.
NPN complements: JC337, JC337A and JC338.

PINNING

PIN	DESCRIPTION
1	base
2	collector
3	emitter



QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter			
	JC327		–	–50	V
	JC327A		–	–60	V
	JC328		–	–30	V
V_{CEO}	collector-emitter voltage	open base			
	JC327		–	–45	V
	JC327A		–	–60	V
	JC328		–	–25	V
I_{CM}	peak collector current		–	–1	A
P_{tot}	total power dissipation	$T_{amb} \leq 25\text{ }^{\circ}\text{C}$	–	625	mW
h_{FE}	DC current gain	$I_C = -100\text{ mA}; V_{CE} = -1\text{ V}$			
	BC327; BC328		100	600	
	BC327A		100	400	
f_T	transition frequency	$I_C = -10\text{ mA}; V_{CE} = -5\text{ V}; f = 100\text{ MHz}$	80	–	MHz

PNP general purpose transistors

JC327; JC327A; JC328

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			
	JC327		–	–50	V
	JC327A		–	–60	V
	JC328		–	–30	V
V_{CEO}	collector-emitter voltage	open base; $I_C = -10$ mA			
	JC327		–	–45	V
	JC327A		–	–60	V
	JC328		–	–25	V
V_{EBO}	emitter-base voltage	open collector	–	–5	V
I_C	collector current (DC)		–	–500	mA
I_{CM}	peak collector current		–	–1	A
I_{BM}	peak base current		–	–200	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25$ °C; note 1	–	625	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	0.2	K/mW

Note

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

PNP general purpose transistors

JC327; JC327A; JC328

CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_{CBO}	collector cut-off current	$I_E = 0; V_{CB} = -20\text{ V}$	–	–	–100	nA
		$I_E = 0; V_{CB} = -20\text{ V}; T_j = 150\text{ }^{\circ}\text{C}$	–	–	–5	μA
I_{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = -5\text{ V}$	–	–	–100	nA
h_{FE}	DC current gain	$I_C = -100\text{ mA}; V_{CE} = -1\text{ V}$				
	JC327; JC328		100	–	600	
	JC327A		100	–	400	
	JC327-16; JC328-16		100	–	250	
	JC327-25; JC328-25		160	–	400	
	JC327-40; JC328-40		250	–	600	
h_{FE}	DC current gain	$I_C = -500\text{ mA}; V_{CE} = -1\text{ V}$	40	–	–	
V_{CEsat}	collector-emitter saturation voltage	$I_C = -500\text{ mA}; I_B = -50\text{ mA}$	–	–	–700	mV
V_{BE}	base-emitter voltage	$I_C = -500\text{ mA}; V_{CE} = -1\text{ V}; \text{note 1}$	–	–	–1.2	V
C_c	collector capacitance	$I_E = i_e = 0; V_{CB} = -10\text{ V}; f = 1\text{ MHz}$	–	8	–	pF
f_T	transition frequency	$I_C = -10\text{ mA}; V_{CE} = -5\text{ V}; f = 100\text{ MHz}$	80	–	–	MHz

Note

- V_{BE} decreases by about -2 mV/K with increasing temperature.

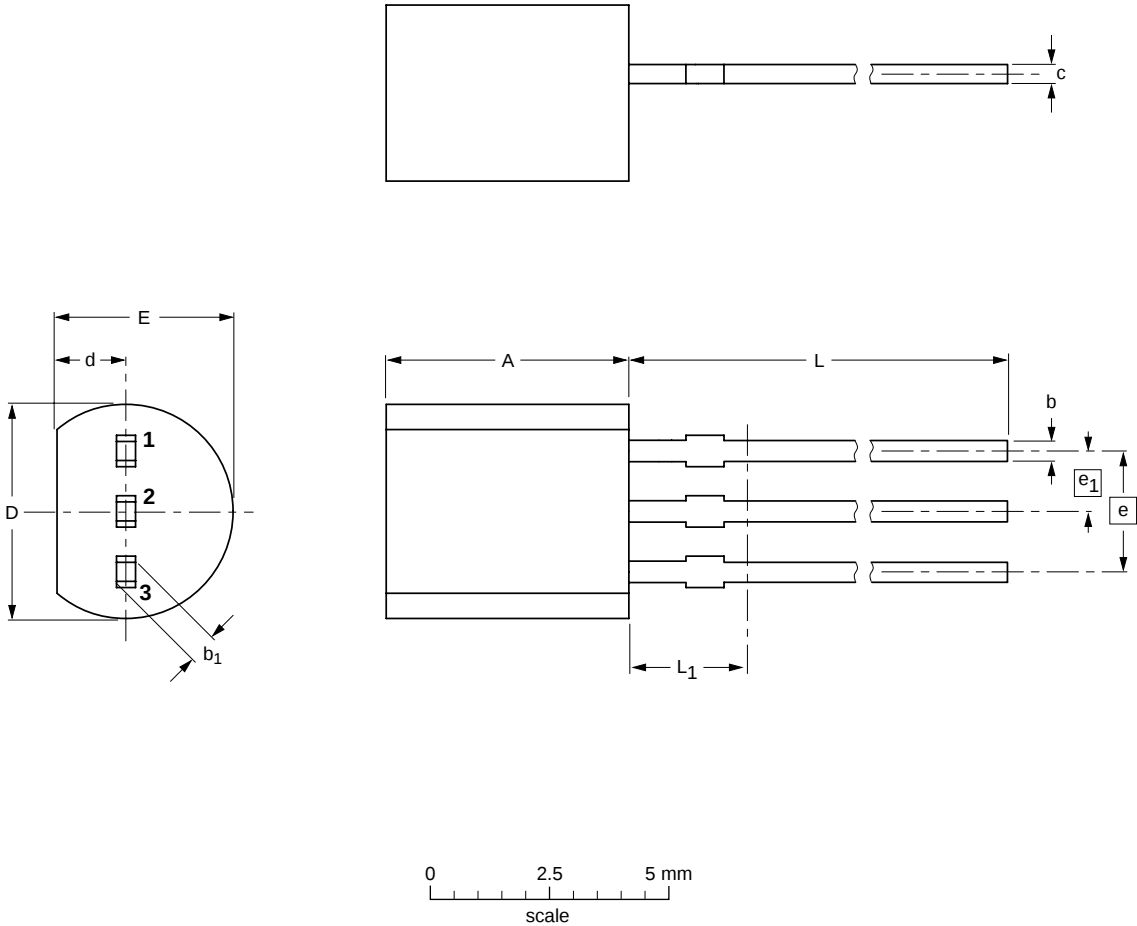
PNP general purpose transistors

JC327; JC327A; JC328

PACKAGE OUTLINE

Plastic single-ended leaded (through hole) package; 3 leads

SOT54



DIMENSIONS (mm are the original dimensions)

UNIT	A	b	b ₁	c	D	d	E	e	e ₁	L	L ₁ ⁽¹⁾
mm	5.2 5.0	0.48 0.40	0.66 0.56	0.45 0.40	4.8 4.4	1.7 1.4	4.2 3.6	2.54	1.27	14.5 12.7	2.5

Note

1. Terminal dimensions within this zone are uncontrolled to allow for flow of plastic and terminal irregularities.

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT54		TO-92	SC-43			97-02-28

PNP general purpose transistorsJC327; JC327A; JC328

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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PNP general purpose transistors

JC327; JC327A; JC328

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