

## PNP general purpose transistors

## 2PB1219; 2PB1219A

## FEATURES

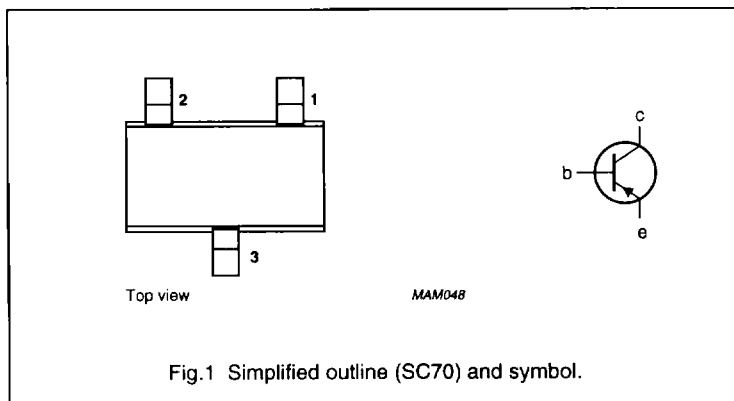
- Large collector current
- Low collector-emitter saturation voltage
- S-mini package.

## APPLICATIONS

Intended for general amplification.

## DESCRIPTION

PNP transistor in a plastic SC70 package.



## MARKING

TYPE NUMBER	MARKING CODE
2PB1219Q	CQ
2PB1219R	CR
2PB1219S	CS
2PB1219AQ	DQ
2PB1219AR	DR
2PB1219AS	DS

## PINNING SC70

PIN	DESCRIPTION
1	base
2	emitter
3	collector

## QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{CBO}$	collector-base voltage	open emitter			
	2PB1219		–	–30	V
	2PB1219A		–	–60	V
$V_{CEO}$	collector-emitter voltage	open base			
	2PB1219		–	–25	V
	2PB1219A		–	–50	V
$I_{CM}$	peak collector current		–	–1	A
$P_{tot}$	total power dissipation	up to $T_{amb} = 25\text{ °C}$	–	200	mW
$h_{FE}$	DC current gain	$I_C = -150\text{ mA};$ $V_{CE} = -10\text{ V}$	85	340	
$f_T$	transition frequency	$I_E = 50\text{ mA};$ $V_{CB} = -10\text{ V}$			
	2PB1219S		140	–	MHz
	2PB1219AS		140	–	MHz

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**LIMITING VALUES**

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V <sub>CBO</sub>	collector-base voltage	open emitter			
	2PB1219		--	-30	V
	2PB1219A		--	60	V
V <sub>CEO</sub>	collector-emitter voltage	open base			
	2PB1219		--	-25	V
	2PB1219A		--	-50	V
V <sub>EB0</sub>	emitter-base voltage	open collector	--	-5	V
I <sub>C</sub>	collector current (DC)		--	-500	mA
I <sub>CM</sub>	peak collector current		--	-1	A
P <sub>tot</sub>	total power dissipation	up to T <sub>amb</sub> = 25 °C; note 1		200	mW
T <sub>stg</sub>	storage temperature		-65	+150	°C
T <sub>j</sub>	junction temperature		--	150	°C
T <sub>amb</sub>	operating ambient temperature		-65	+150	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R <sub>th j-a</sub>	thermal resistance from junction to ambient	in free air; note 1	625	K/W

**Note to the "Limiting values" and "Thermal characteristics"**

1. Refer to SC70 standard mounting conditions.

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**CHARACTERISTICS**

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	collector-base breakdown voltage	open emitter; $I_C = -10\text{ }\mu\text{A}$ ; $I_E = 0$			
	2PB1219		-30	--	V
	2PB1219A		-60	--	V
$V_{(BR)CEO}$	collector-emitter breakdown voltage	open base; $I_C = -2\text{ mA}$ ; $I_B = 0$ ; note 1			
	2PB1219		-25	--	V
	2PB1219A		-50	--	V
$V_{(BR)EBO}$	emitter-base breakdown voltage	open collector; $I_E = -10\text{ }\mu\text{A}$ ; $I_C = 0$	-5	--	V
$V_{CEsat}$	collector-emitter saturation voltage	$I_C = -300\text{ mA}$ ; $I_B = -30\text{ mA}$ ; note 1	--	-600	mV
$V_{BEsat}$	base-emitter saturation voltage	$I_C = -300\text{ mA}$ ; $I_B = -30\text{ mA}$ ; note 1	--	-1.5	V
$I_{CBO}$	collector cut-off current	$V_{CB} = -20\text{ V}$ ; $I_E = 0$	--	-100	nA
		$V_{CB} = -20\text{ V}$ ; $I_E = 0$ ; $T_j = 150\text{ }^{\circ}\text{C}$	--	-5	$\mu\text{A}$
$I_{EBO}$	emitter cut-off current	$V_{EB} = -4\text{ V}$ ; $I_C = 0$	--	-100	nA
$h_{FE}$	DC current gain	$V_{CE} = -10\text{ V}$ ; $I_C = -500\text{ mA}$ ; note 1	40	--	
$h_{FE}$	DC current gain	$V_{CE} = -10\text{ V}$ ; $I_C = -150\text{ mA}$ ; note 1			
	2PB1219Q; 2PB1219AQ		85	170	
	2PB1219R; 2PB1219AR		120	240	
	2PB1219S; 2PB1219AS		170	340	
$f_T$	transition frequency	$V_{CB} = -10\text{ V}$ ; $I_E = 50\text{ mA}$ ; $f = 100\text{ MHz}$ ; note 1			
	2PB1219Q; 2PB1219AQ		100	--	MHz
	2PB1219R; 2PB1219AR		120	--	MHz
	2PB1219S; 2PB1219AS		140	--	MHz
$C_C$	collector capacitance	$V_{CB} = -10\text{ V}$ ; $I_E = I_C = 0$ ; $f = 1\text{ MHz}$	--	15	pF

**Note**

1. Pulse test:  $t_p \leq 300\text{ }\mu\text{s}$ ;  $\delta \leq 0.02$ .