

PNP general purpose transistor

2PB710; 2PB710A

FEATURES

- Large collector current
- Low collector-emitter saturation voltage.

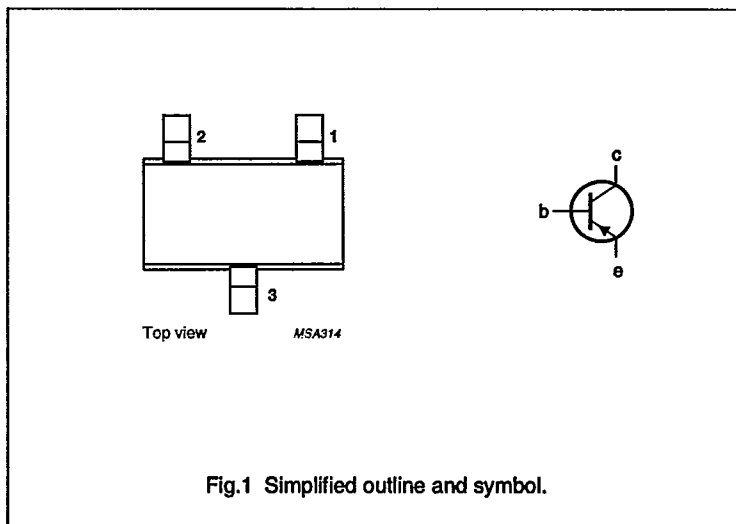
DESCRIPTION

PNP transistor in a plastic SC59 package for general switching or amplification. Complementary pairs are 2PD602 and 2PD602A respectively.

PINNING - SC59

PIN	DESCRIPTION
1	base
2	emitter
3	collector

PIN CONFIGURATION



MARKING CODES

2PB710Q:	CQ
2PB710R:	CR
2PB710S:	CS
2PB710AQ:	DQ
2PB710AR:	DR
2PB710AS:	DS

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter			
	2PB710		-	-30	V
	2PB710A		-	-60	V
V_{CEO}	collector-emitter voltage	open base			
	2PB710		-	-25	V
	2PB710A		-	-50	V
h_{FE}	DC current gain	$I_C = -150 \text{ mA};$ $V_{CE} = -10 \text{ V};$ $T_{amb} = 25 \text{ }^\circ\text{C}$	85	340	
I_{CM}	peak collector current		-	-1	A
P_{tot}	total power dissipation	up to $T_{amb} = 25 \text{ }^\circ\text{C}$	-	200	mW
f_T	transition frequency	$I_E = 50 \text{ mA}; V_{CB} = -10 \text{ V};$ $f = 100 \text{ MHz};$ $T_{amb} = 25 \text{ }^\circ\text{C}$	150	-	MHz

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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			
	2PB710		-	-30	V
	2PB710A		-	-60	V
V_{CEO}	collector-emitter voltage	open base			
	2PB710		-	-25	V
	2PB710A		-	-50	V
V_{EBO}	emitter-base voltage	open collector	-	-5	V
I_C	DC collector current		-	-500	mA
I_{CM}	peak collector current		-	-1	A
P_{tot}	total power dissipation	up to $T_{amb} = 25\text{ °C}$ (note 1) see Fig.2	-	200	mW
T_{stg}	storage temperature		-55	150	°C
T_j	junction temperature		-	150	°C
T_{amb}	operating ambient temperature	see Fig.2	-55	150	°C

Note

1. Refer to SC59 standard mounting conditions.

THERMAL RESISTANCE

SYMBOL	PARAMETER	CONDITIONS	THERMAL RESISTANCE
$R_{th\ j-a}$	thermal resistance from junction to ambient	in free air (note 1)	max. 625 K/W

Note

1. Refer to SC59 standard mounting conditions.

CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	collector-base breakdown voltage	open emitter; $I_C = -10\text{ }\mu\text{A}$; $I_E = 0$			
	2PB710		-30	-	V
	2PB710A		-60	-	V
$V_{(BR)CEO}$	collector-emitter breakdown voltage	open base; $I_C = -2\text{ mA}$; $I_B = 0$ (note 1)			
	2PB710		-25	-	V
	2PB710A		-50	-	V
$V_{(BR)EBO}$	emitter-base breakdown voltage	open collector; $I_E = -10\text{ }\mu\text{A}$; $I_C = 0$	-5	-	V
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C = -300\text{ mA}$; $I_B = -30\text{ mA}$ (note 1)	-	-600	mV
$V_{BE(sat)}$	base-emitter saturation voltage	$I_C = -300\text{ mA}$; $I_B = -30\text{ mA}$ (note 1)	-	-1.5	V

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SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector-base 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-base cut-off current	$I_C = 0; V_{EB} = -4 \text{ V}$	-	-100	nA
h_{FE}	DC current gain	$I_C = -500 \text{ mA}; V_{CE} = -10 \text{ V}$ (note 1)	40	-	
		$I_C = -150 \text{ mA}; V_{CE} = -10 \text{ V}$ (note 1)			
	2PB710; 2PB710A	85	340		
	2PB710Q; 2PB710AQ	85	170		
	2PB710R; 2PB710AR 2PB710S; 2PB710AS	120 170	240 340		
f_T	transition frequency	$I_E = 50 \text{ mA}; V_{CB} = -10 \text{ V}; f = 100 \text{ MHz}$	150	-	MHz
C_{ob}	collector output capacitance	$I_E = 0; V_{CB} = -10 \text{ V}; f = 1 \text{ MHz}$	-	15	pF

Note

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

