

PNP general purpose transistor

BC807W; BC808W

FEATURES

- High current
- S- mini package.

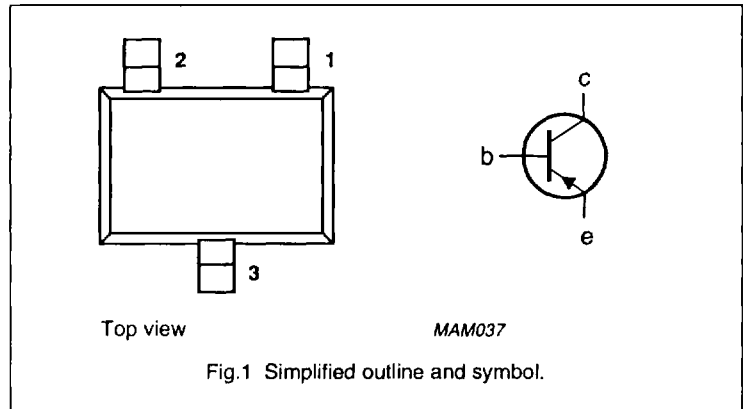
DESCRIPTION

PNP transistor in a plastic SOT323 package, for general switching and amplification.

PINNING - SOT323

PIN	DESCRIPTION
1	base
2	emitter
3	collector

PIN CONFIGURATION



MARKING CODES

BC807W:	5D
BC807-16W:	5A
BC807-25W:	5B
BC807-40W:	5C
BC808W:	5H
BC808-16W:	5E
BC808-25W:	5F
BC808-40W:	5G

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CES}	collector-emitter voltage	$V_{BE} = 0$			
	BC807W		-	-50	V
	BC808W		-	-30	V
V_{CEO}	collector-emitter voltage	open base			
	BC807W		-	-45	V
	BC808W		-	-25	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	$I_C = -100\text{ mA}; V_{CE} = -1\text{ V}; T_{amb} = 25\text{ °C}$	100	600	
f_T	transition frequency	$I_C = -10\text{ mA}; V_{CE} = -5\text{ V}; T_{amb} = 25\text{ °C}$	80	-	MHz

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LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CES}	collector-emitter voltage	$V_{BE} = 0$	-	-50	V
	BC807W			-30	V
V_{CEO}	collector-emitter voltage	open base; $I_C = -10$ mA	-	-45	V
	BC808W			-25	V
V_{EBO}	emitter-base voltage	open collector	-	-5	V
I_C	DC collector current		-	-500	mA
I_{CM}	peak collector current		-	-1	A
I_{EM}	peak emitter current		-	1	A
I_B	DC base current		-	-100	mA
I_{BM}	peak base current		-	-200	mA
P_{tot}	total power dissipation	up to $T_{amb} = 25$ °C (note 1) see Fig.2	-	200	mW
T_{stg}	storage temperature		-65	150	°C
T_j	junction temperature		-	150	°C
T_{amb}	operating ambient temperature	see Fig.2	-65	150	°C

Note

1. Refer to SOT323 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 SOT323 standard mounting conditions.

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CHARACTERISTICS

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

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 cut-off current	$I_C = 0; V_{EB} = -5\text{ V}$	-	-100	nA
V_{BE}	base-emitter voltage	$I_C = -500\text{ mA}; V_{CE} = -1\text{ V}$ (note 1)	-	-1.2	V
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C = -500\text{ mA}; I_B = -50\text{ mA}$ (note 1)	-	-700	mV
C_C	collector capacitance	$I_E = I_B = 0; V_{CB} = -10\text{ V}; f = 1\text{ MHz}$	-	10	pF
f_T	transition frequency	$I_C = -10\text{ mA}; V_{CE} = -5\text{ V}; f = 100\text{ MHz}$	80	-	MHz
h_{FE}	DC current gain	$I_C = -500\text{ mA}; V_{CE} = -1\text{ V}$ (note 1)	40	-	
		$I_C = -100\text{ mA}; V_{CE} = -1\text{ V}$ (note 1)			
	BC807W; BC808W	100	600		
	BC807-16W; BC808-16W	100	250		
	BC807-25W; BC808-25W	160	400		
BC807-40W; BC808-40W	250	600			

Note

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

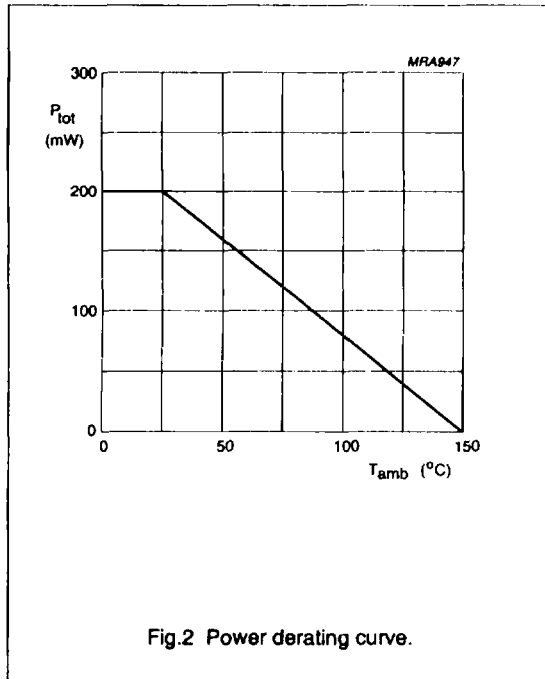


Fig.2 Power derating curve.