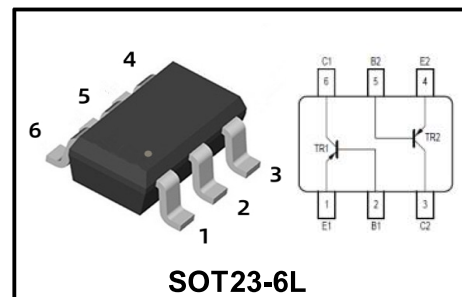


Dual PNP Silicon AF Transistor Array

FEATURES

- ◆Case: SOT23-6L
- ◆Epoxy meets UL-94 V-0 flammability rating and halogen free
- ◆Moisture Sensitivity Level 3
- ◆High temperature soldering guaranteed 260°C/10seconds at terminals



Marking Code

BC807F-25

.5Bs

Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameters	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	-50	V
Collector-emitter voltage	V_{CEO}	-45	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-500	mA
Peak collector current, $t_p \leq 10$ ms	I_{CM}	-1000	mA
Base current	I_B	-100	mA
Peak base current	I_{BM}	-200	mA
Total power dissipation- TS $\leq 115^\circ\text{C}$	P_{tot}	330	mW
Junction temperature	T_J	150	°C
Storage temperature	T_{STG}	-65-+150	°C
Junction - soldering point(1)	R_{thJS}	≤ 105	K/W

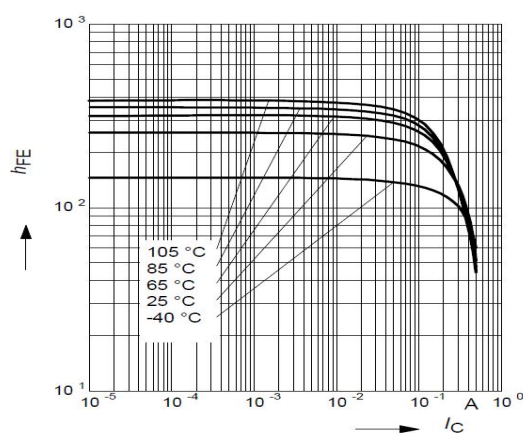
Electrical Characteristics(Ta=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-base breakdown voltage	$I_C = -10\mu\text{A}$, $I_E = 0$	$V_{(BR)CBO}$	-50			V
Collector-emitter breakdown voltage	$I_C = -10\text{mA}$, $I_B = 0$	$V_{(BR)CEO}$	-45			V
Emitter-base breakdown voltage	$I_E = -10\mu\text{A}$, $I_C = 0$	$V_{(BR)EBO}$	-5			V
Collector-base cutoff current	$V_{CB} = -25\text{ V}$, $I_E = 0$	I_{CBO}			-0.1	μA
	$V_{CB} = -25\text{ V}$, $I_E = 0$, $T_A = 150^\circ\text{C}$				-50	
Emitter-base cutoff current	$V_{EB} = -4\text{ V}$, $I_C = 0$	I_{EBO}			-100	nA
DC current gain	$I_C = -100\text{ mA}$, $V_{CE} = -1\text{ V}$	h_{FE}	160	250	400	
	$I_C = -500\text{ mA}$, $V_{CE} = -1\text{ V}$		40			
Collector-emitter saturation voltage	$I_C = -500\text{ mA}$, $I_B = -50\text{ mA}$	$V_{CE(sat)}$			-0.7	V
Base emitter saturation voltage	$I_C = -500\text{ mA}$, $I_B = -50\text{ mA}$	$V_{BE(sat)}$			-1.2	
Transition frequency	$I_C = -50\text{ mA}$, $V_{CE} = -5\text{ V}$, $f = 100\text{ MHz}$	f_T		200		MHz
Collector-base capacitance	$f = 1\text{ MHz}$, $V_{BE} = -10\text{ V}$	C_{ob}		8		pF
Emitter-base capacitance	$V_{EB} = -0.5\text{ V}$, $f = 1\text{ MHz}$	C_{eb}		60		

Typical characteristics

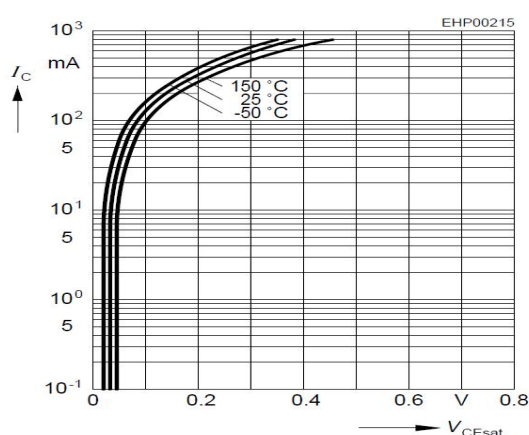
DC current gain $h_{FE} = f(I_C)$

$V_{CE} = 1\text{ V}$



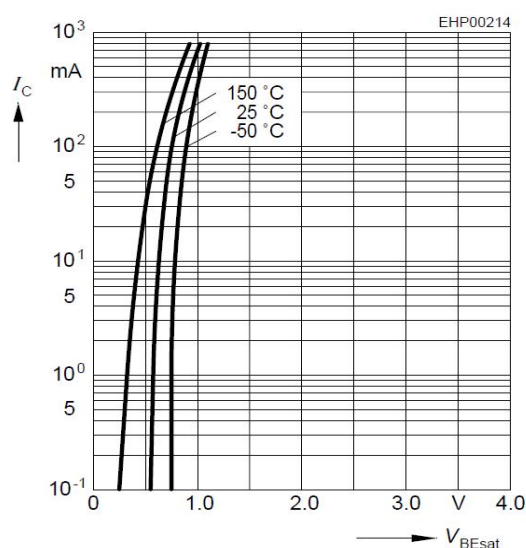
Collector-emitter saturation voltage

$I_C = f(V_{CEsat}), h_{FE} = 10$



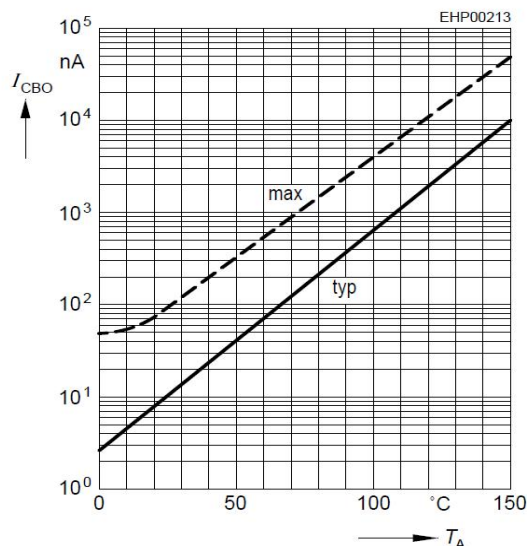
Base-emitter saturation voltage

$I_C = f(V_{BEsat}), h_{FE} = 10$



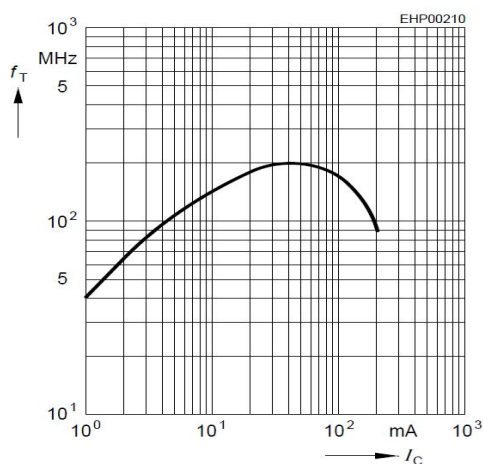
Collector cutoff current $I_{CBO} = f(T_A)$

$V_{CBO} = 25\text{ V}$



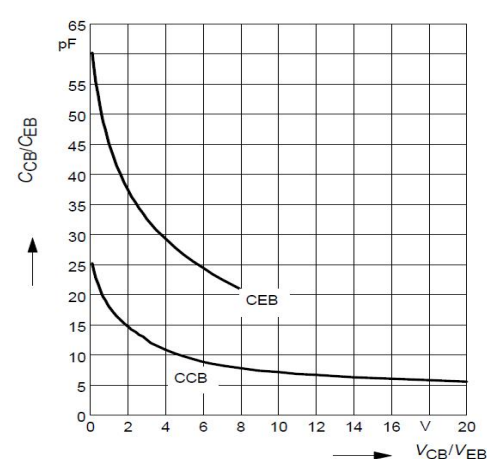
Transition frequency $f_T = f(I_C)$

$V_{CE} = 5\text{ V}$



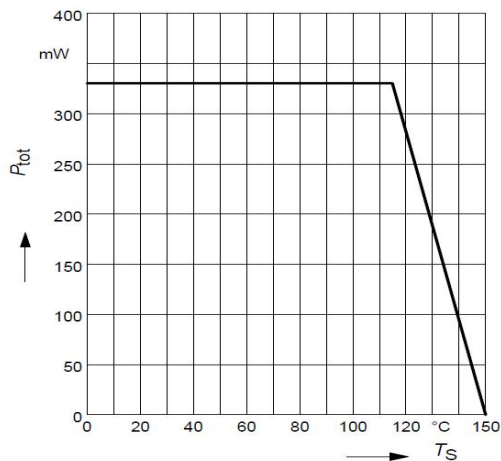
Collector-base capacitance $C_{cb} = f(V_{CB})$

Emitter-base capacitance $C_{eb} = f(V_{EB})$

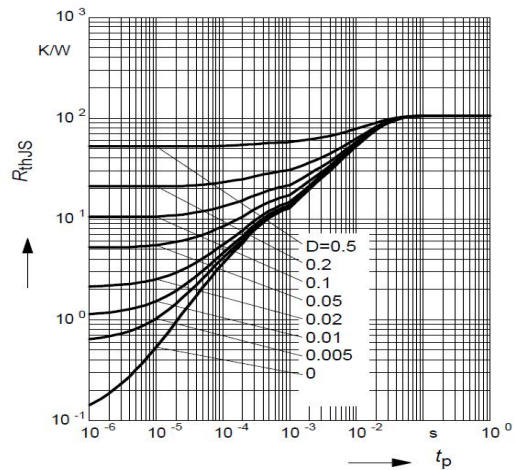


Typical characteristics

Total power dissipation $P_{\text{tot}} = f(T_S)$

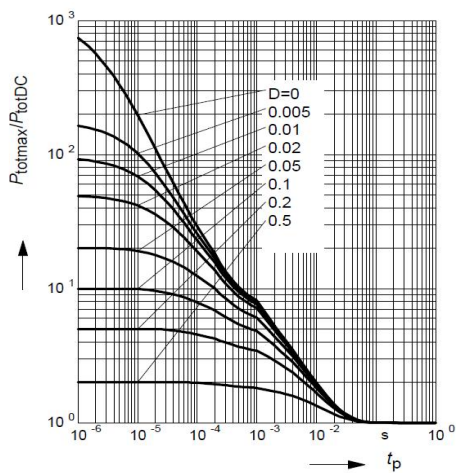


Permissible Pulse Load $R_{\text{thJS}} = f(t_p)$



Permissible Pulse Load

$$P_{\text{totmax}}/P_{\text{totDC}} = f(t_p)$$



Ordering information

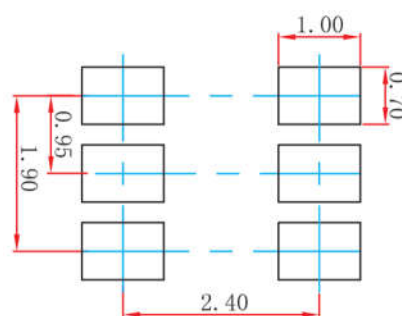
Package	Packing Description	Packing Quantity
SOT23-6L	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

SOT23-6L

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	1.05	1.25	41	49
A1	0	0.10	0	3.9
A2	1.05	1.15	41	45
b	0.30	0.50	11.8	19.7
c	0.10	0.20	3.9	7.9
D	2.82	3.02	111	119
E1	1.50	1.70	45	67
E	2.65	2.95	104	116
e	0.950(BSC)		37(BSC)	
e1	1.80	2.00	71	79
L	0.30	0.60	11.8	23.6
θ	0°	8°	0°	8°

The recommended mounting pad size



Disclaimer

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