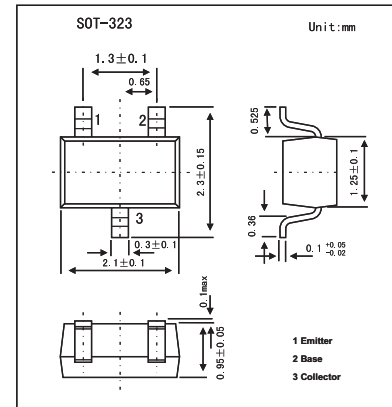


NPN Silicon AF Transistors

KC818W(BC818W)



Features

- For general AF applications.
- High collector current.
- High current gain.
- Low collector-emitter saturation voltage.

Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	30	V
Collector-emitter voltage	V_{CE0}	25	V
Emitter-base voltage	V_{EB0}	5	V
Collector current (DC)	I_C	500	mA
Peak collector current	I_{CM}	1	A
Base current	I_B	100	mA
power dissipation	P_D	250	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-65 to +150	$^\circ\text{C}$

Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-to-base breakdown voltage	V_{CB0}	$I_C = 10 \mu\text{A}, I_E = 0$	30			V
Collector-to-emitter breakdown voltage	V_{CE0}	$I_C = 10 \text{mA}, I_B = 0$	25			V
Emitter-to-base breakdown voltage	V_{EB0}	$I_E = 10 \mu\text{A}, I_C = 0$	5			V
Collector cutoff current	I_{CBO}	$V_{CB} = 25 \text{V}, I_E = 0$			100	nA
		$V_{CB} = 25 \text{V}, I_E = 0, T_A = 150^\circ\text{C}$			50	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4 \text{V}, I_C = 0$			100	nA
DC current gain *	KC818-16W	$I_C = 100 \text{mA}, V_{CE} = -1 \text{V}$	100	160	250	
	KC818-25W		160	250	400	
	KC818-40W		250	350	630	
Collector saturation voltage *	$V_{CE(sat)}$	$I_C = 500 \text{mA}, I_B = 50 \text{mA}$			0.7	V
Base to emitter voltage *	$V_{BE(sat)}$	$I_C = 500 \text{mA}, I_B = 50 \text{mA}$			1.2	V
Collector-base capacitance	C_{cb}	$V_{CB} = 10 \text{V}, f = 1 \text{MHz}$		6		pF
Emitter-base capacitance	C_{eb}	$V_{EB} = 0.5 \text{V}, f = 1 \text{MHz}$		60		pF
Transition frequency	f_T	$I_C = 50 \text{mA}, V_{CE} = 5 \text{V}, f = 100 \text{MHz}$		170		MHz

* Pulsed: $PW \leq 350 \mu\text{s}$, duty cycle $\leq 2\%$

Marking

NO.	KC818-16W	KC818-25W	KC818-40W
Marking	6E	6F	6G