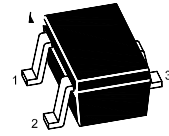


BC817W / BC818W NPN Silicon Epitaxial Planar Transistors

for general purpose and switching applications

These transistors are subdivided into three groups
-16, -25, -40 according to their current gain.



1.Base 2.Emitter 3.Collector
SOT-323 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	BC817W BC818W	V_{CBO}	50 30 V
Collector Emitter Voltage	BC817W BC818W	V_{CEO}	45 25 V
Emitter Base Voltage		V_{EBO}	5 V
Collector Current		I_C	500 mA
Power Dissipation		P_{tot}	200 mW
Junction Temperature		T_J	150 $^\circ\text{C}$
Storage Temperature Range		T_{stg}	-65 to +150 $^\circ\text{C}$

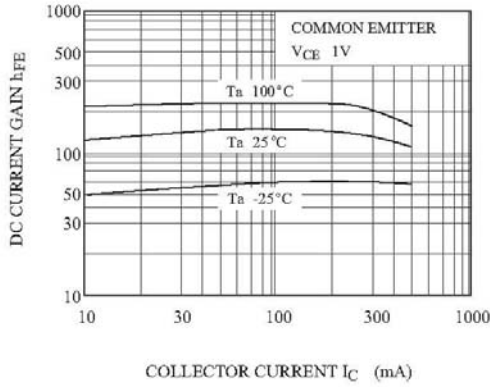
¹⁾ Transistor mounted on an FR4 printed-circuit board.

Characteristics at $T_{amb} = 25^\circ\text{C}$

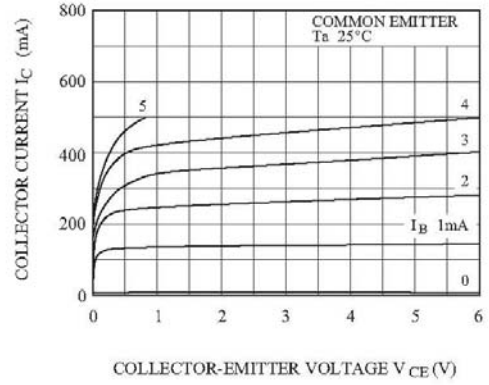
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 1\text{ V}$, $I_C = 100\text{ mA}$				
-16W	h_{FE}	100	250	-
-25W	h_{FE}	160	400	-
-40W	h_{FE}	250	600	-
at $V_{CE} = 1\text{ V}$, $I_C = 500\text{ mA}$	h_{FE}	40	-	-
Collector Cutoff Current at $V_{CB} = 20\text{ V}$	I_{CBO}	-	100	nA
Emitter Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	100	nA
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	BC817W BC818W	$V_{(BR)CBO}$	50 30	- - V
Collector Emitter Breakdown Voltage at $I_C = 10\text{ mA}$	BC817W BC818W	$V_{(BR)CEO}$	45 25	- - V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$		$V_{(BR)EBO}$	5	- V
Collector Emitter Saturation Voltage at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$		V_{CEsat}	-	0.7 V
Base Emitter Voltage at $I_C = 500\text{ mA}$, $V_{CE} = 1\text{ V}$		V_{BE}	-	1.2 V
Transition Frequency at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$, $f = 100\text{ MHz}$		f_T	100	- MHz
Collector Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$		C_c	-	5 pF

BC817W / BC818W

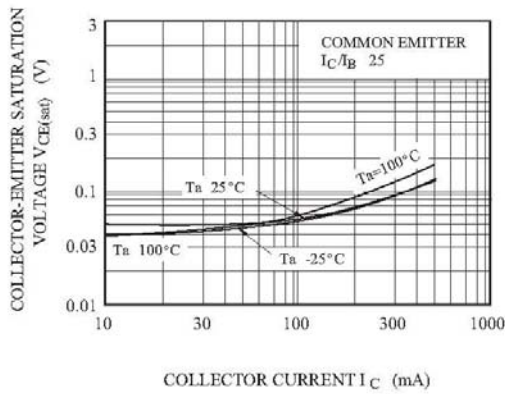
$h_{FE} - I_C$



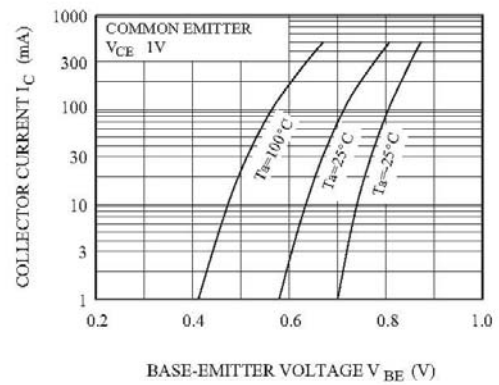
$I_C - V_{CE}$ (LOW VOLTAGE REGION)



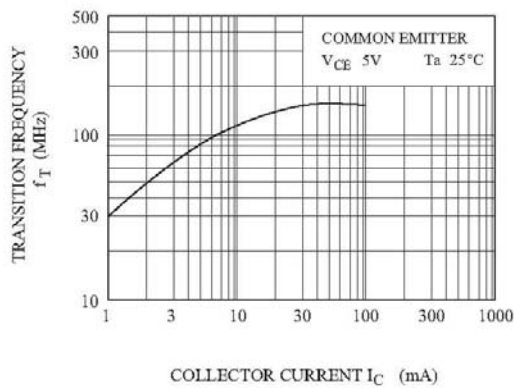
$V_{CE(sat)} - I_C$



$I_C - V_{BE}$



$f_T - I_C$



$P_C - T_a$

