

## NPN Transistors

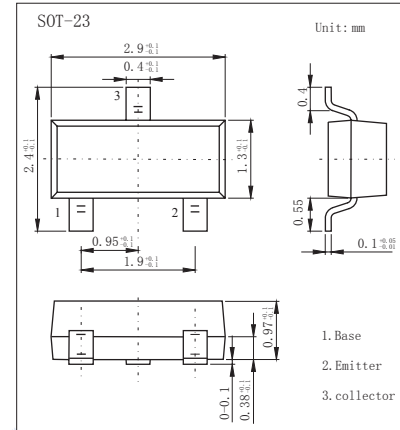
### BC818 (KC818)

#### ■ Features

- For general AF applications.
- High collector current.
- High current gain.
- Low collector-emitter saturation voltage.
- Complementary PNP type available(BC808)

#### ■ 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)	$I_c$	800	mA
power dissipation	$P_D$	300	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	Test conditions	Min	Typ	Max	Unit
Collector to base breakdown voltage	$V_{CB0}$	$I_c = 100\mu\text{A}, V_{BE} = 0$	30			V
Collector to emitter breakdown voltage	$V_{CE0}$	$I_c = 10\text{ mA}, I_B = 0$	25			V
Emitter to base breakdown voltage	$V_{EB0}$	$I_E = 100\mu\text{A}, I_c = 0$	5			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = 25\text{ V}, V_{BE} = 0$			100	nA
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 4\text{ V}, I_c = 0$			100	nA
DC current gain *	$h_{FE}$	$I_c = 100\text{ mA}, V_{CE} = 1\text{ V}$	100		630	
		$I_c = 300\text{ mA}, V_{CE} = 1\text{ V}$	60			
Collector saturation voltage *	$V_{CE(sat)}$	$I_c = 500\text{ mA}, I_B = 50\text{ mA}$			0.7	V
Base emitter on voltage	$V_{BE(on)}$	$V_{CE} = 1\text{ V}, I_c = 300\text{ mA}$			1.2	V
Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{ V}, f = 1\text{ MHz}$			12	pF
Transition frequency	$f_T$	$I_c = 10\text{ mA}, V_{CE} = 5\text{ V}, f = 50\text{ MHz}$		100		MHz

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

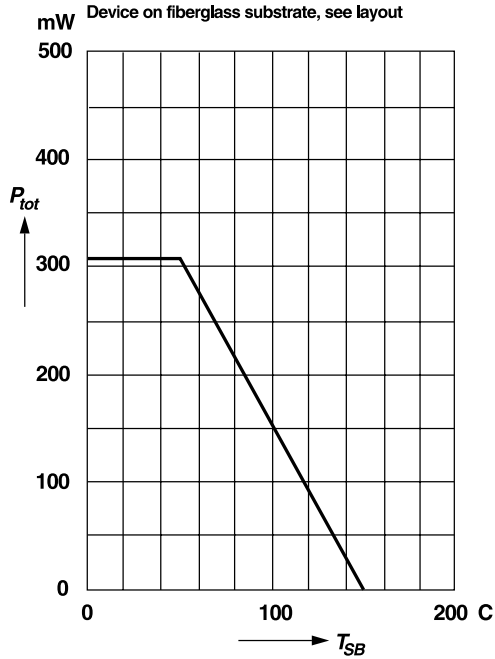
#### ■ Marking

NO.	BC818-16	BC818-25	BC818-40
Marking	6E	6F	6G
$h_{FE}$	100 ~ 250	160 ~ 400	250 ~ 630

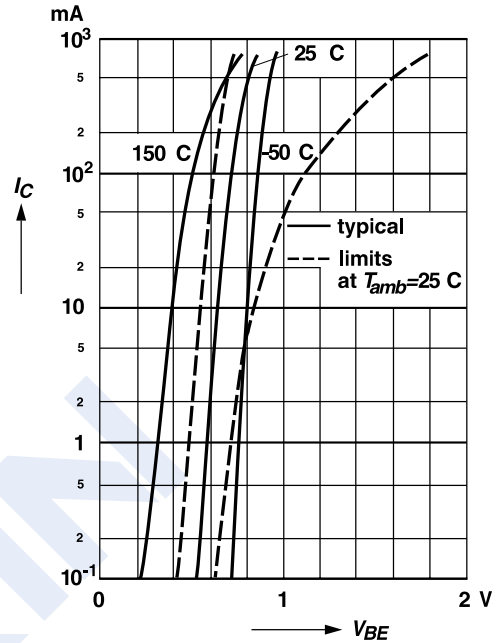
BC818 (KC818)

■ Typical Characteristics

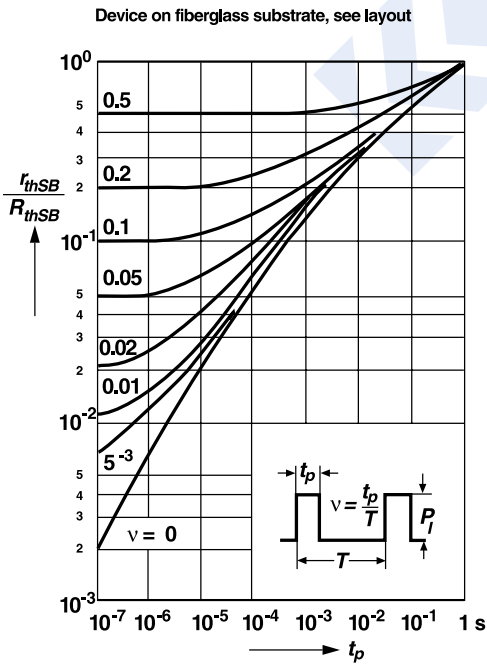
Admissible power dissipation versus temperature of substrate backside



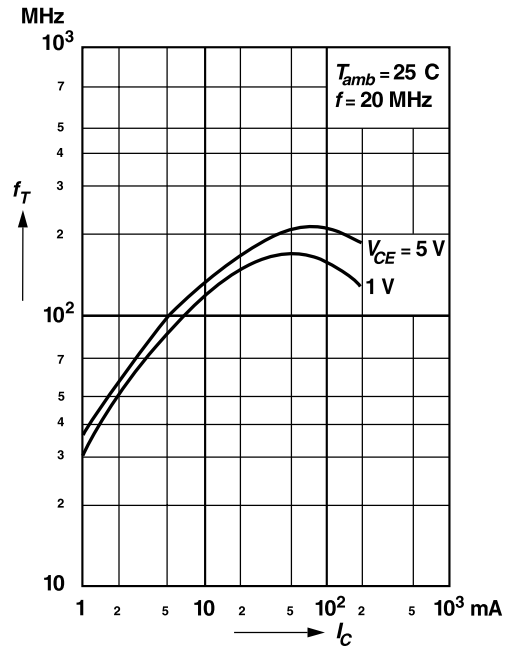
Collector current versus base-emitter voltage



Pulse thermal resistance versus pulse duration (normalized)

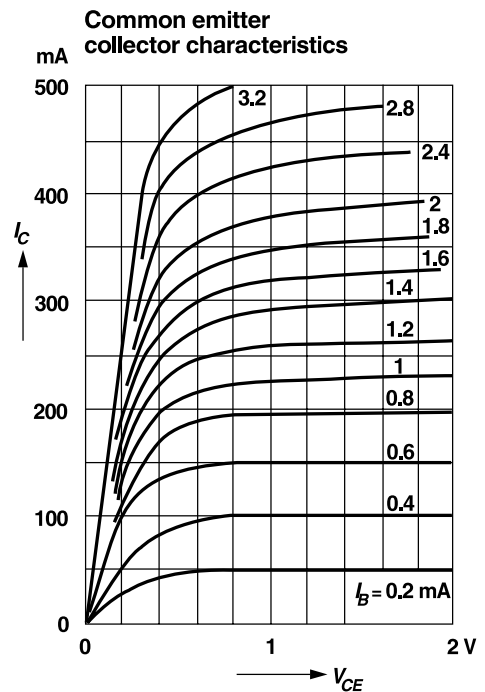
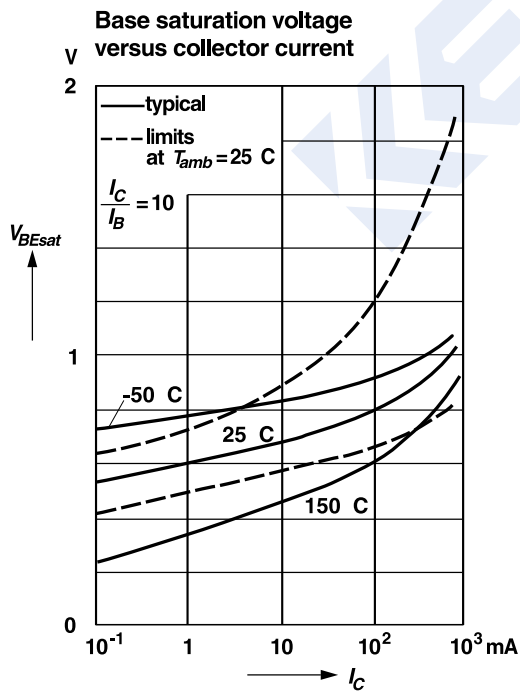
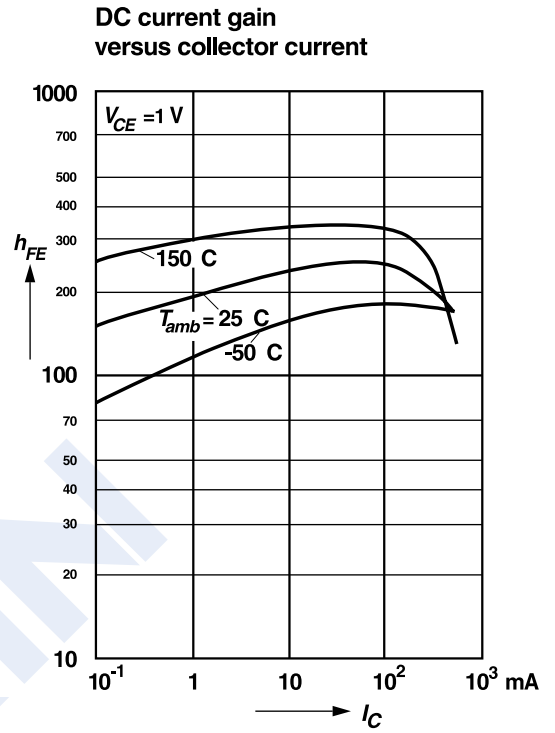
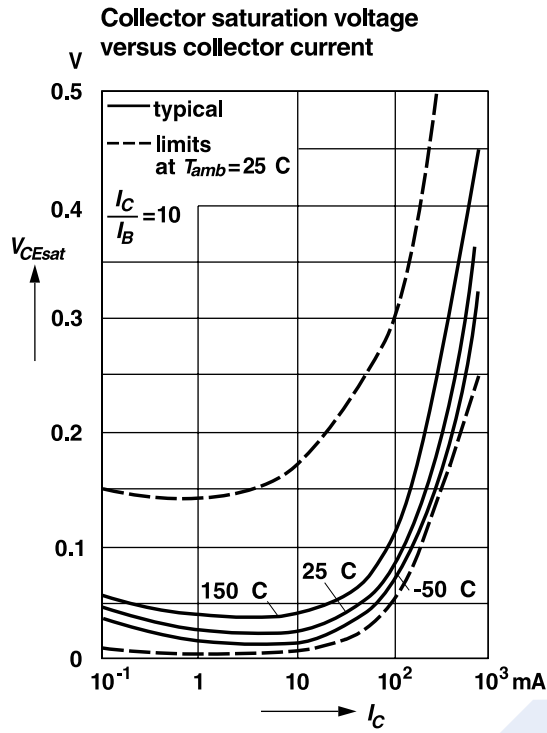


Gain-bandwidth product versus collector current



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■ Typical Characteristics



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