



Micro Commercial Components



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BC818-16 BC818-25 BC818-40

Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Capable of 0.3Watts of Power Dissipation.
- Collector-current 0.5A
- Collector-base Voltage 30V
- Operating and storage junction temperature range: -55°C to +150°C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Mechanical Data

- Case: SOT-23 Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Weight: 0.008 grams (approx.)
- Device Marking: BC818-16 6E
BC818-25 6F
BC818-40 6G

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=10\text{mA}$, $I_B=0$)	25	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=10\mu\text{A}$, $I_E=0$)	30	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ($I_E=10\mu\text{A}$, $I_C=0$)	5.0	---	Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=25\text{Vdc}$, $I_E=0$)	---	0.1	μA
I_{EBO}	Emitter Cutoff Current ($V_{EB}=4.0\text{Vdc}$, $I_C=0$)	---	0.1	μA

ON CHARACTERISTICS

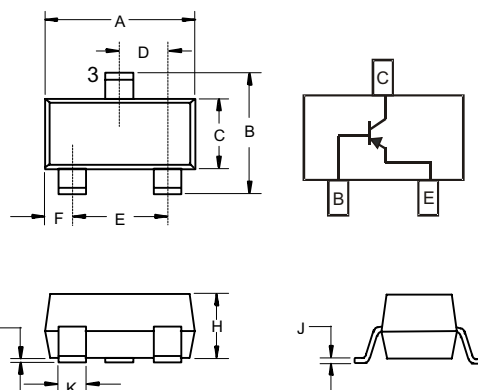
$h_{FE(1)}$	DC Current Gain ($I_C=100\text{mA}$, $V_{CE}=1.0\text{Vdc}$) BC818-16 BC818-25 BC818-40	100 160 250	250 400 630	---
$h_{FE(2)}$	DC Current Gain ($I_C=300\text{mA}$, $V_{CE}=1.0\text{Vdc}$)	60	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=500\text{mA}$, $I_B=50\text{mA}$)	---	0.7	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=500\text{mA}$, $I_B=50\text{mA}$)	---	1.2	Vdc
V_{BE}	Base-Emitter Voltage ($V_{CE}=1\text{Vdc}$, $I_C=500\text{mA}$)	---	1.2	Vdc

SMALL SIGNAL CHARACTERISTICS

f_T	Transition frequency ($V_{CE}=5.0\text{V}$, $f=100\text{MHz}$, $I_C=50\text{mA}$)	170	---	MHz
C_{ob}	Collector output capacitance ($V_{CB}=10\text{V}$, $f=1\text{MHz}$)	6	---	pF

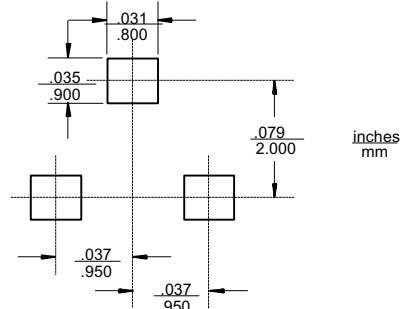
NPN Silicon General Purpose Transistors

SOT-23



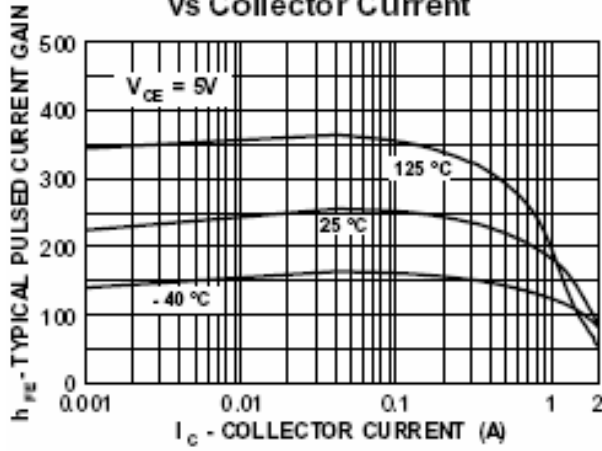
DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

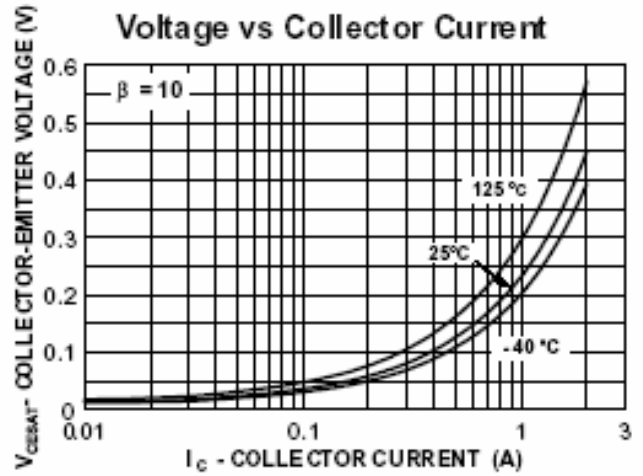


BC818-16 thru BC818-40

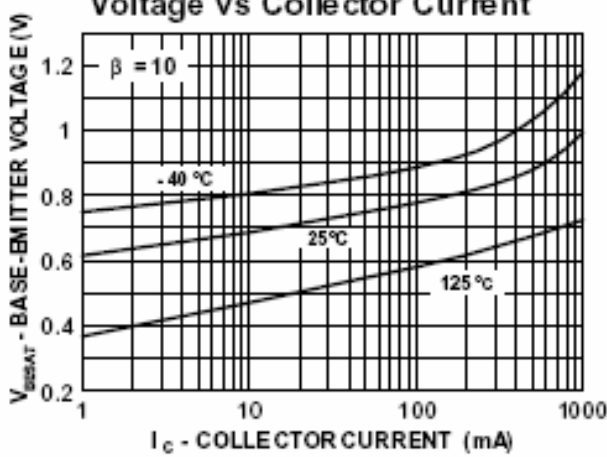
**Typical Pulsed Current Gain
vs Collector Current**



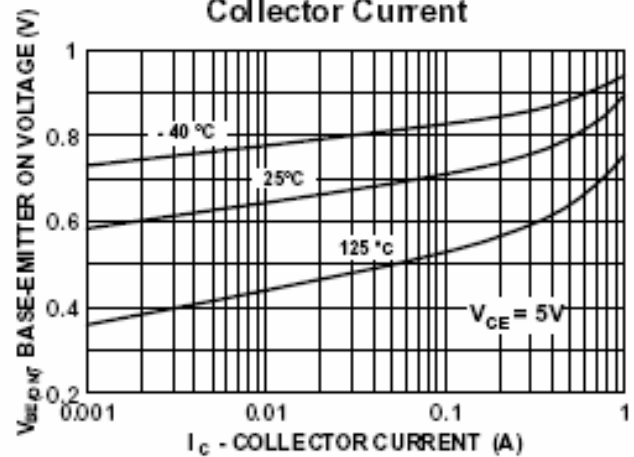
**Collector-Emitter Saturation
Voltage vs Collector Current**



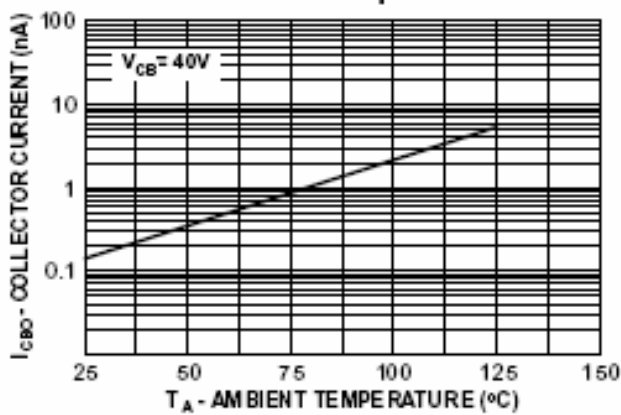
**Base-Emitter Saturation
Voltage vs Collector Current**



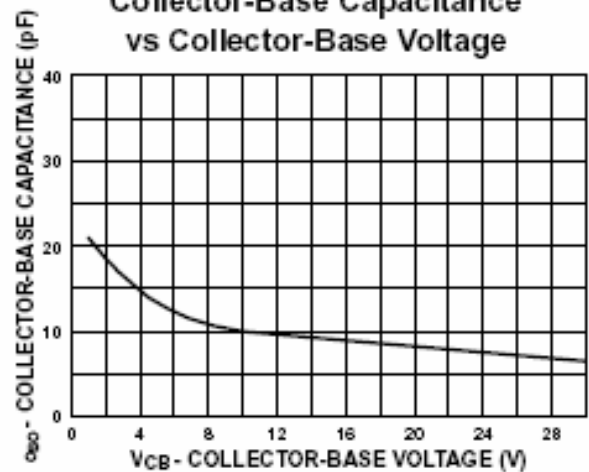
**Base-Emitter ON Voltage vs
Collector Current**



**Collector-Cutoff Current
vs Ambient Temperature**



**Collector-Base Capacitance
vs Collector-Base Voltage**



Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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