



Micro Commercial Components

Micro Commercial Components  
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**BC818-16**  
**BC818-25**  
**BC818-40**

## Features

- 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
<b>OFF CHARACTERISTICS</b>				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=10\text{mAdc}$ , $I_B=0$ )	25	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=10\text{uAdc}$ , $I_E=0$ )	30	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ( $I_E=10\text{uAdc}$ , $I_C=0$ )	5.0	---	Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=25\text{Vdc}$ , $I_E=0$ )	---	0.1	$\text{uAdc}$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=4.0\text{Vdc}$ , $I_C=0$ )	---	0.1	$\text{uAdc}$

## ON CHARACTERISTICS

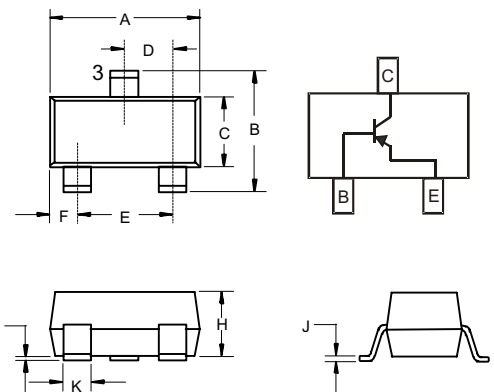
$h_{FE(1)}$	DC Current Gain ( $I_C=100\text{mAdc}$ , $V_{CE}=1.0\text{Vdc}$ )			
	BC818-16	100	250	---
	BC818-25	160	400	---
	BC818-40	250	630	---
$h_{FE(2)}$	DC Current Gain ( $I_C=300\text{mAdc}$ , $V_{CE}=1.0\text{Vdc}$ )	60	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=500\text{mAdc}$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

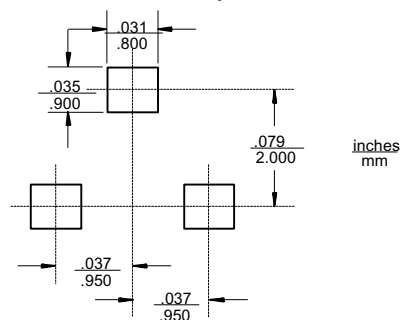
## NPN Silicon General Purpose Transistors

### SOT-23



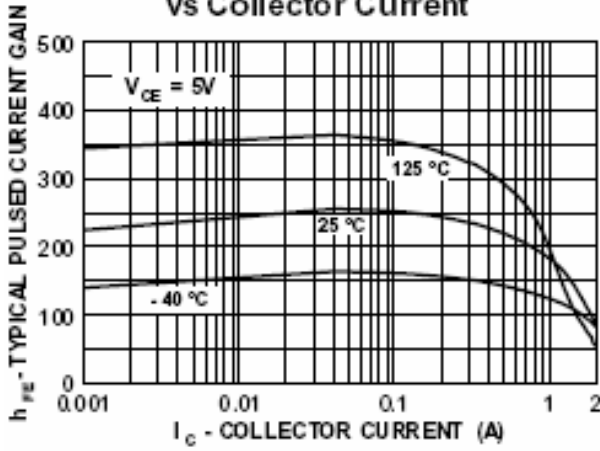
DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

### Suggested Solder Pad Layout

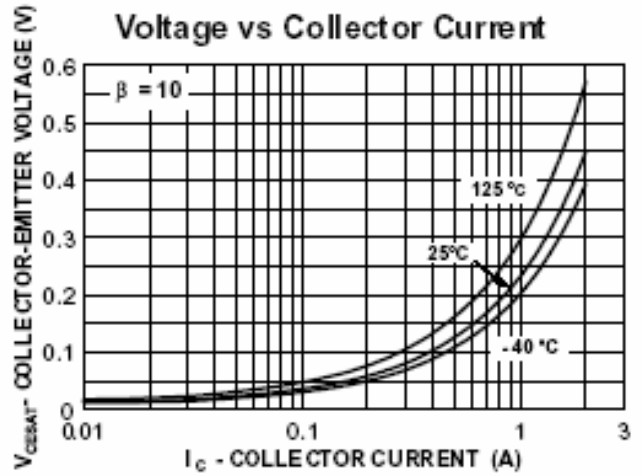


# BC818-16 thru BC818-40

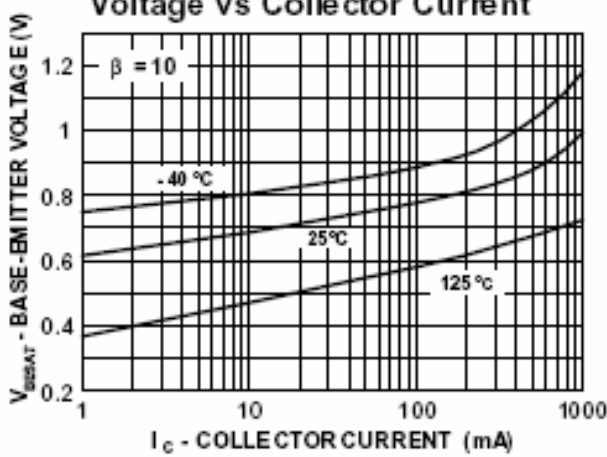
**Typical Pulsed Current Gain vs Collector Current**



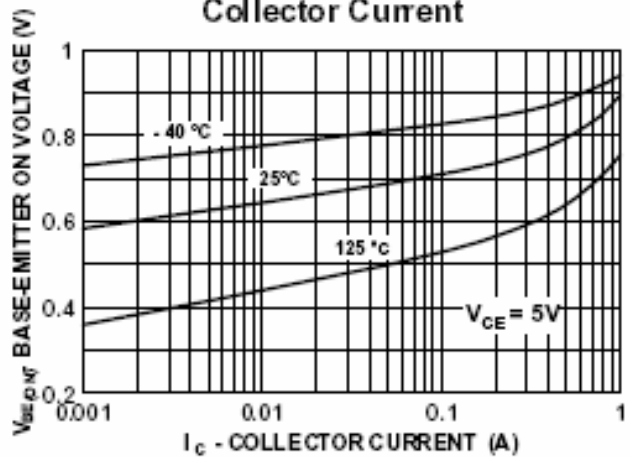
**Collector-Emitter Saturation Voltage vs Collector Current**



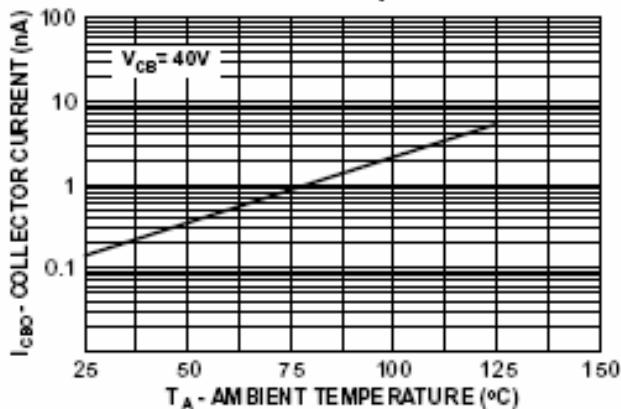
**Base-Emitter Saturation Voltage vs Collector Current**



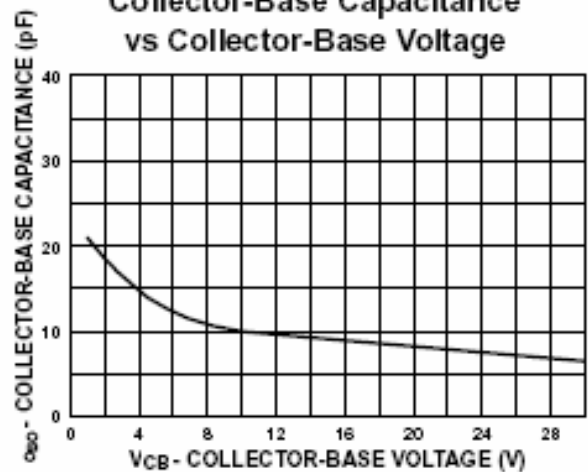
**Base-Emitter ON Voltage vs Collector Current**



**Collector-Cutoff Current vs Ambient Temperature**



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





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## Ordering Information :

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

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