

FEATURES

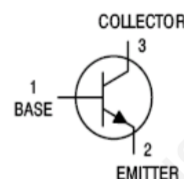
- For general AF application.
- Complementary PNP type available BC807.
- High collector current, high current gain.
- Low collector-emitter saturation voltage.



SOT-23

APPLICATIONS

- General purpose medium power amplifier.
- Switching requiring collector currents up to 1.2mA.



ORDERING INFORMATION

Type No.	Marking	Package Code
BC817-40-QR-JSM	6C	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

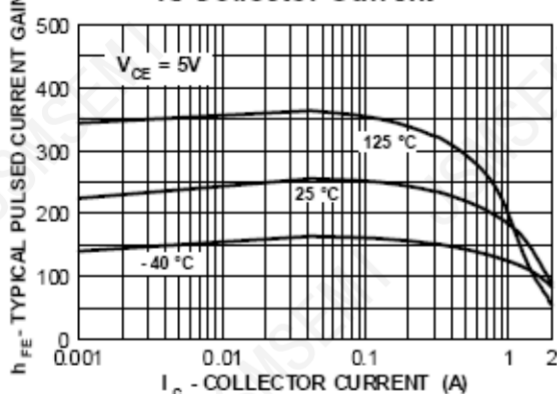
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	500	mA
P_C	Collector Dissipation	300	mW
T_j, T_{stg}	Junction and Storage Temperature	-55to+150	°C

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

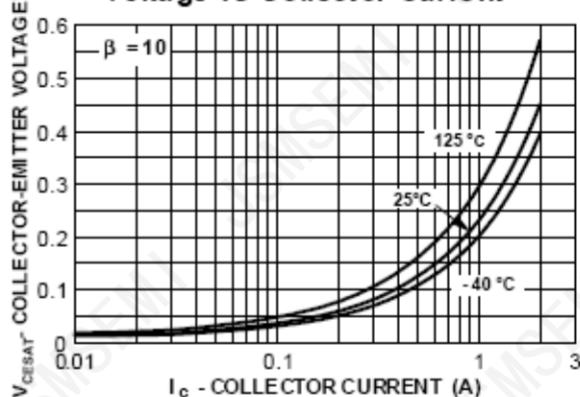
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A$ $I_E=0$	50		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA$ $I_B=0$	45		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\mu A$ $I_C=0$	5		V
Collector cut-off current	I_{CBO}	$V_{CB}=45V$ $I_E=0$		0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=40V$ $I_{BE(off)}=0$		0.2	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V$ $I_C=0$		0.1	μA
DC current gain	h_{FE}	$V_{CE}=10V$ $I_C=150mA$	250	600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA$ $I_B=50mA$		0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500mA$ $I_B=50mA$		1.2	V
Transition frequency	f_T	$V_{CE}=5V$ $I_C=10mA$ $f=100MHz$	100		MHz

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

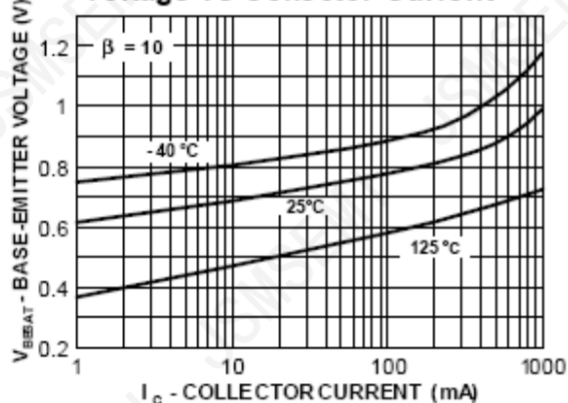
**Typical Pulsed Current Gain
vs Collector Current**



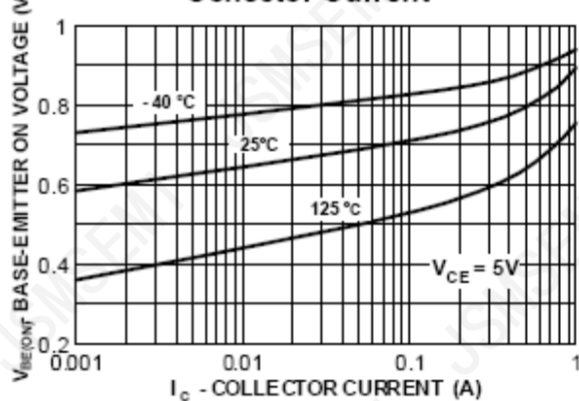
**Collector-Emitter Saturation
Voltage vs Collector Current**



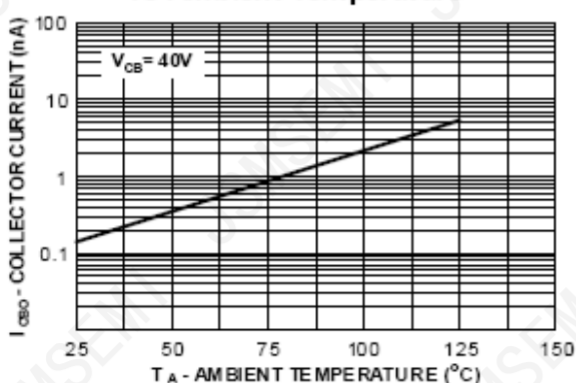
**Base-Emitter Saturation
Voltage vs Collector Current**



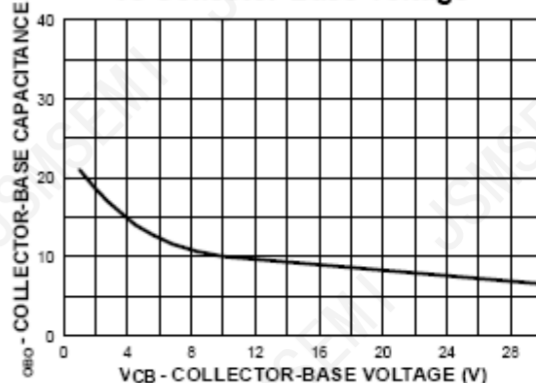
**Base-Emitter ON Voltage vs
Collector Current**



**Collector-Cutoff Current
vs Ambient Temperature**

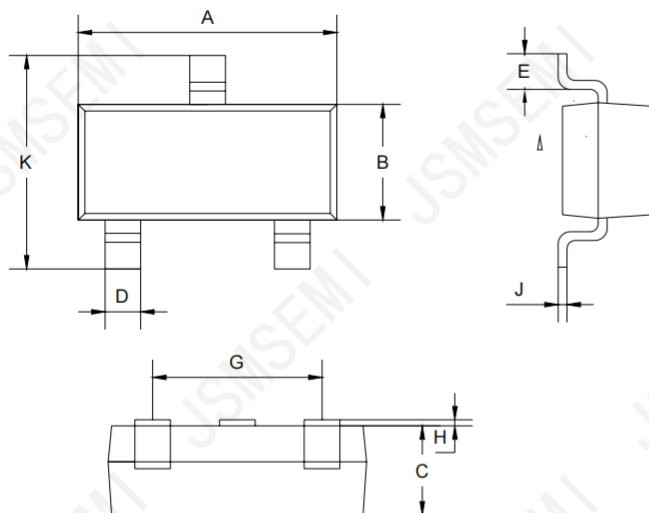


**Collector-Base Capacitance
vs Collector-Base Voltage**



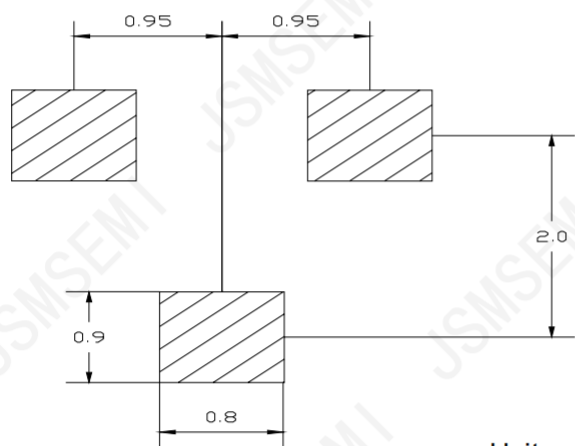
PACKAGE OUTLINE

Plastic surface mounted package



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit: mm

Revision History

Rev.	Change	Date
V1.0	Initial version	2/23/2024

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