

FEATURE

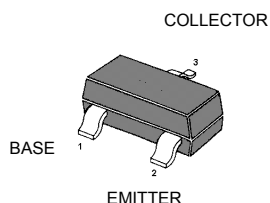
For general AF applications

High collector current

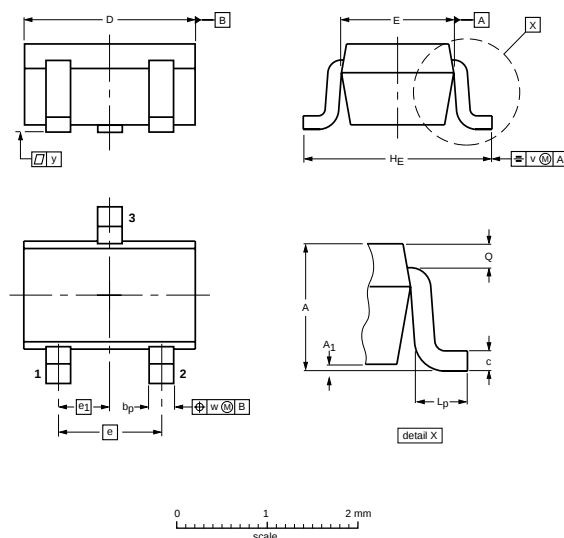
High current gain

Low collector-emitter saturation voltage

Complementary types: BC807 (PNP)



SOT-323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
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	0.5	A
P _C	Collector Power Dissipation	0.3	W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

BC817W

ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

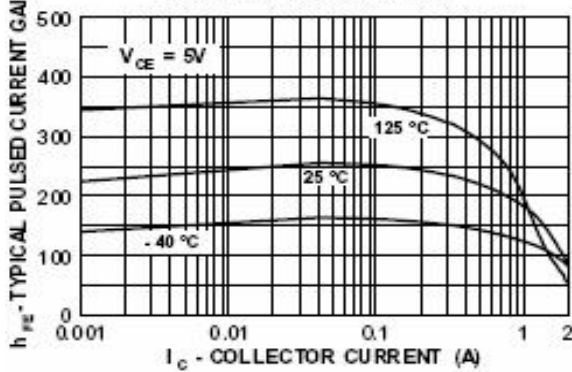
Parameter	Symbol	Test conditions	MIN		MAX	UNIT
Collector-base breakdown voltage	V_{CBO}	$I_C = 10\mu A, I_E = 0$	50			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C = 10mA, I_B = 0$	45			V
Emitter-base breakdown voltage	V_{EBO}	$I_E = 1\mu A, I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 45V, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4V, I_C = 0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 1V, I_C = 100mA$	100		600	
	$h_{FE(2)}$	$V_{CE} = 1V, I_C = 500mA$	40			
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
Base-emitter voltage	V_{BE}	$V_{CE} = 1V, I_C = 500mA$			1.2	V
Collector capacitance	C_{ob}	$V_{CB} = 10V, f = 1MHz$		10		pF
Transition frequency	f_T	$V_{CE} = 5V, I_C = 10mA$ $f = 100MHz$	100			MHz

CLASSIFICATION OF $h_{FE(1)}$

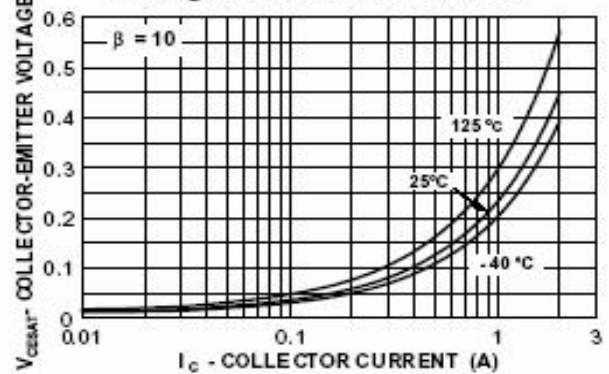
Rank	BC817W -16	BC817W -25	BC817W -40
Range	100-250	160-400	250-600
Marking	6A	6B	6C

RATING AND CHARACTERISTIC CURVES (BC817W)

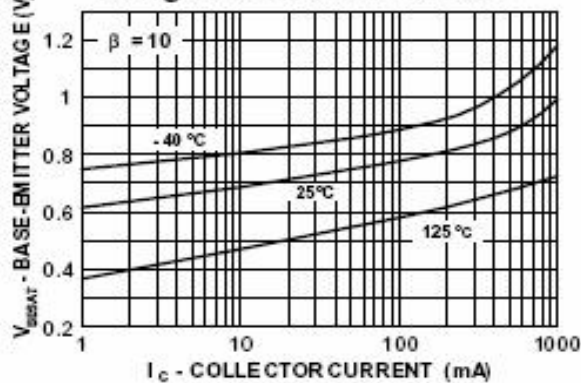
Typical Pulsed Current Gain
vs Collector Current



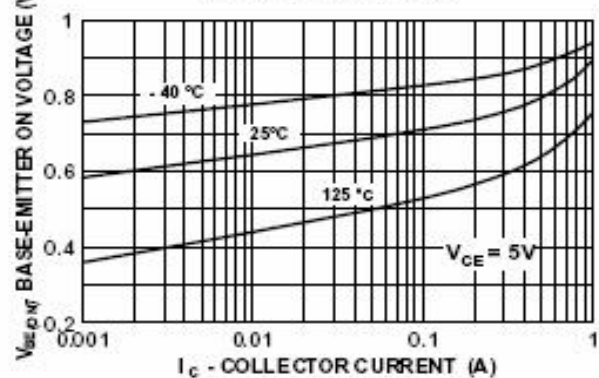
Collector-Emitter Saturation
Voltage vs Collector Current



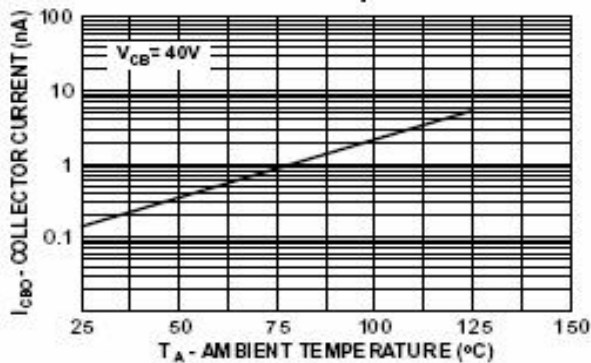
Base-Emitter Saturation
Voltage vs Collector Current



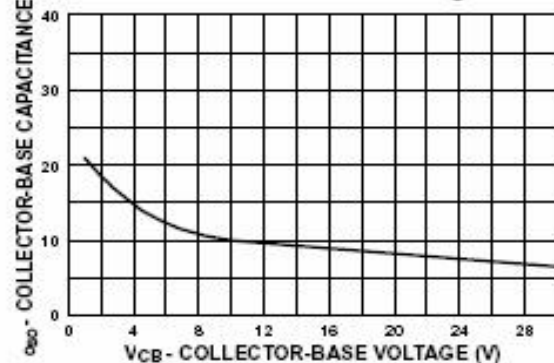
Base-Emitter ON Voltage vs
Collector Current



Collector-Cutoff Current
vs Ambient Temperature



Collector-Base Capacitance
vs Collector-Base Voltage



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