BC817-40W

TRANSISTOR (NPN)

FEATURE

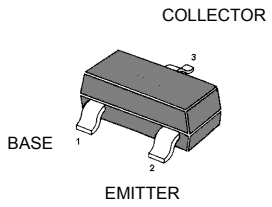
For general AF applications

High collector current

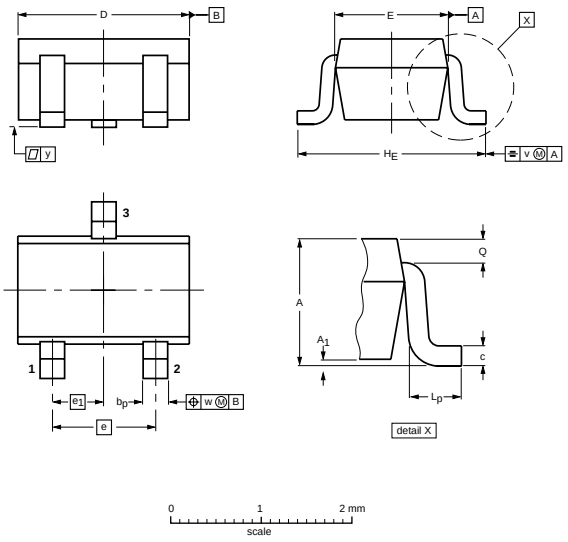
High current gain

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℃ 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
Tj	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

BC817W

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN		MAX	UNIT
Collector-base breakdown voltage	V_{CBO}	I_C= 10μA, 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= 1μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}= 45 V, 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}= 1 V, I_C= 500mA			1.2	V
Collecter capactiance	C_{ob}	V_{CB}=10V, f=1MHz		10		pF
Transition frequency	f_T	V_{CE}= 5 V, 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)