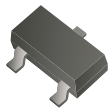
ABC817-16-HF/25-HF/40-HF (NPN)

RoHS Device

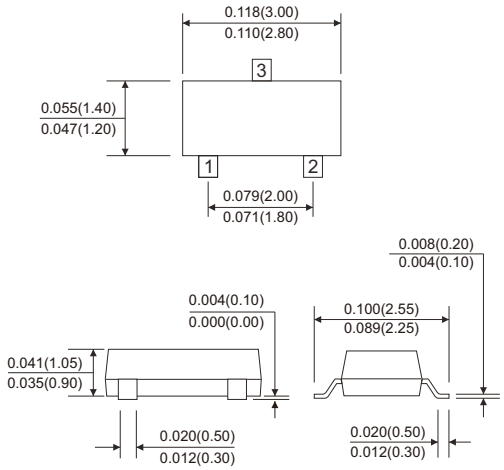
Halogen Free



Features

- Epoxy meets UL-94 V-0 flammability rating.
- Moisture sensitivity Level 1.
- AEC-Q101 Qualified

SOT-23



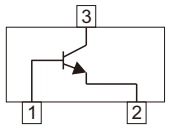
Dimensions in inches and (millimeter)

Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102.

Circuit diagram

1. Base
2. Emitter
3. Collector



Maximum Ratings (at T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-emitter voltage	V_{CEO}	45	V
Collector-base voltage	V_{CBO}	50	V
Emitter-base voltage	V_{EBO}	5	V
Collector current-continuous	I_C	500	mA
Total device dissipation	P_D	300	mW
Junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Electrical Characteristics (at T_A=25°C unless otherwise noted)

Parameter		Symbol	Conditions	Min	Max	Unit
Collector-emitter breakdown voltage		V_{CEO}	I_C = 10mAdc, I_B = 0	45		V
Collector-base breakdown voltage		V_{CBO}	I_C = 10μAdc, I_E = 0	50		V
Emitter-base breakdown voltage		V_{EBO}	I_E = 1μAdc, I_C = 0	5		V
Emitter cut-off current		I_{EBO}	V_{EB} = 4Vdc, I_C = 0		0.1	μAdc
Collector cut-off current		I_{CBO}	V_{CB} = 45Vdc, I_E = 0		0.1	μAdc
DC current gain	ABC817-16-HF	h_{FE}	I_C = 100mAdc, V_{CE} = 1Vdc	100	250	
	ABC817-25-HF	h_{FE}		160	400	
	ABC817-40-HF	h_{FE}		250	600	
DC current gain		h_{FE}	I_C = 500mAdc, V_{CE} = 1Vdc	40		
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C = 500mAdc, I_B = 50mAdc		0.7	V
Base-emitter saturation voltage		$V_{BE(sat)}$	I_C = 500mAdc, I_B = 50mAdc		1.2	V
Current gain-bandwidth product		f_T	I_C = 10mAdc, V_{CE} = 5Vdc, f = 100MHz	100		MHz

Rating and Characteristic Curves (ABC817-16-HF/25-HF/40-HF)

Fig.1 - V_{BEsat} — I_C

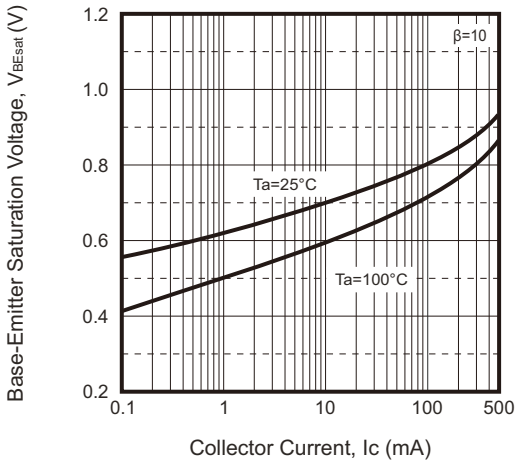


Fig.2 - V_{CEsat} — I_C

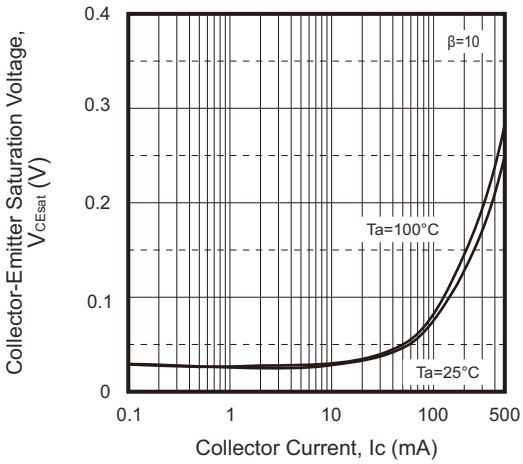


Fig.3 - Static Characteristic

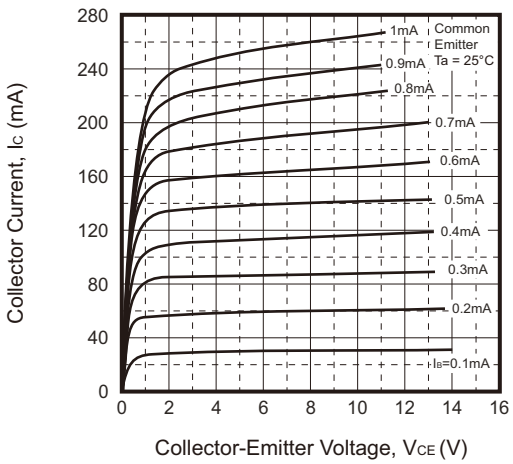
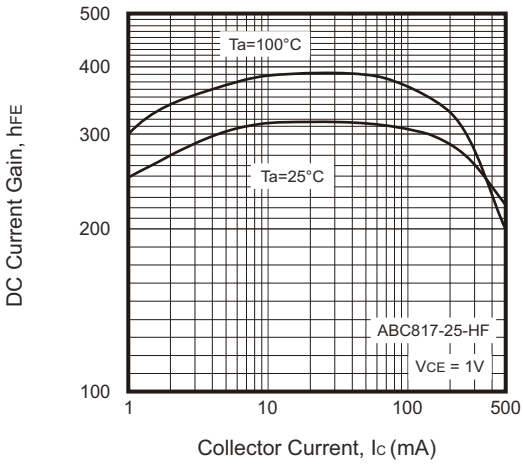
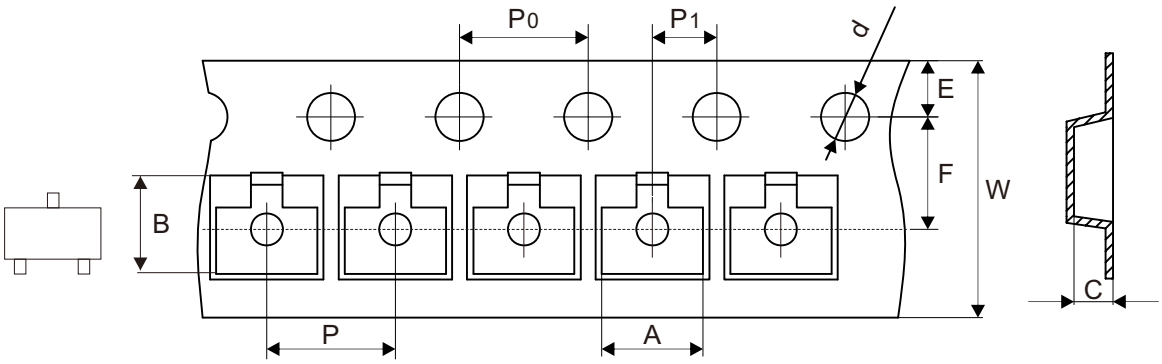
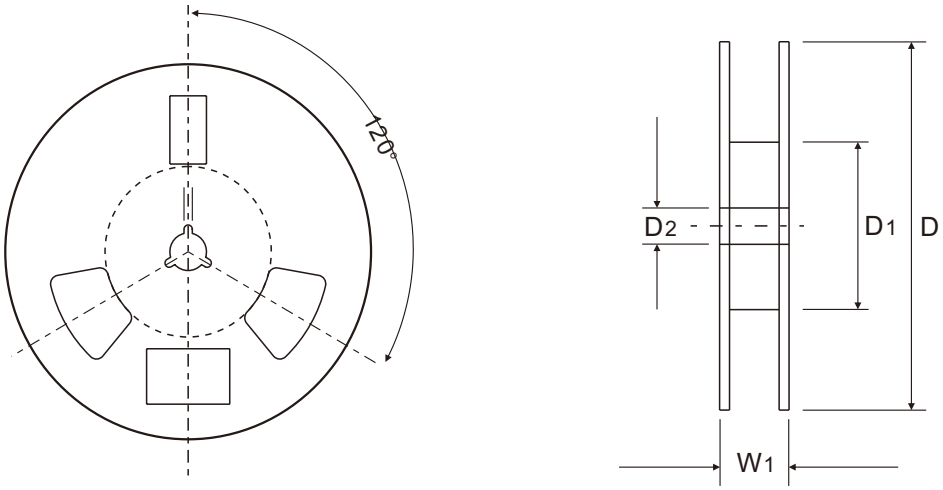


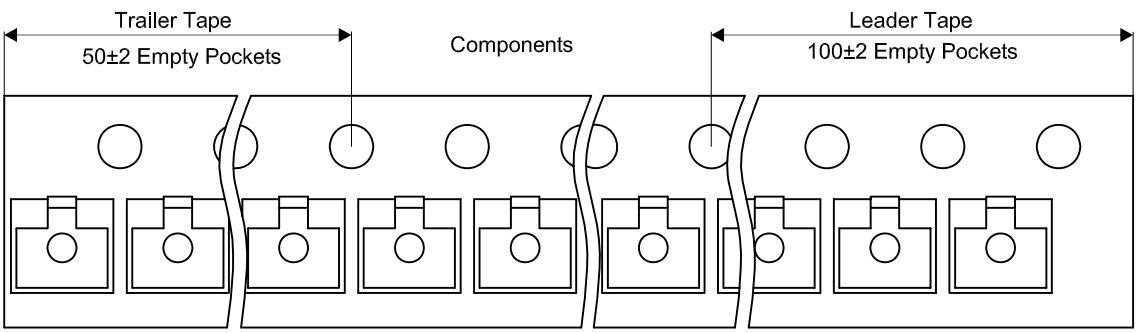
Fig.4 - h_{FE} — I_C



Reel Taping Specification





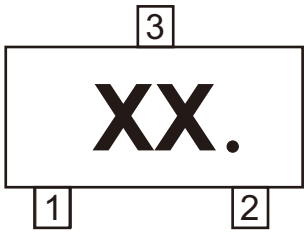


	SYMBOL	A	B	C	d	D	D1	D2
SOT-23	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 + 0.10 − 0.00	178.00 ± 1.00	54.60 ± 1.00	13.30 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 + 0.004 − 0.000	7.008 ± 0.039	2.150 ± 0.039	0.524 ± 0.039

	SYMBOL	E	F	P	P0	P1	W	W1
SOT-23	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 + 0.30 − 0.10	11.10 ± 0.20
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.315 + 0.012 − 0.004	0.437 ± 0.008

Marking Code

Part Number	Marking Code
ABC817-16-HF	6A.
ABC817-25-HF	6B.
ABC817-40-HF	6C.

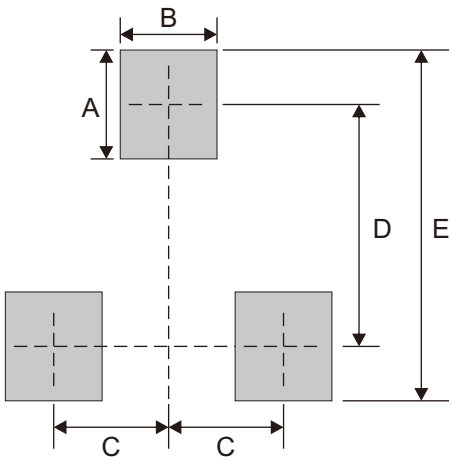


xx = Product type marking code

Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.90	0.035
B	0.80	0.031
C	0.95	0.037
D	2.00	0.079
E	2.90	0.114

Note: 1. The pad layout is for reference purposes only.



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-23	3,000	7

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Comchip Technology:

ABC817-16-HF ABC817-25-HF ABC817-40-HF