

ABC807-16-HF/25-HF/40-HF (PNP)

RoHS Device

Halogen Free



Features

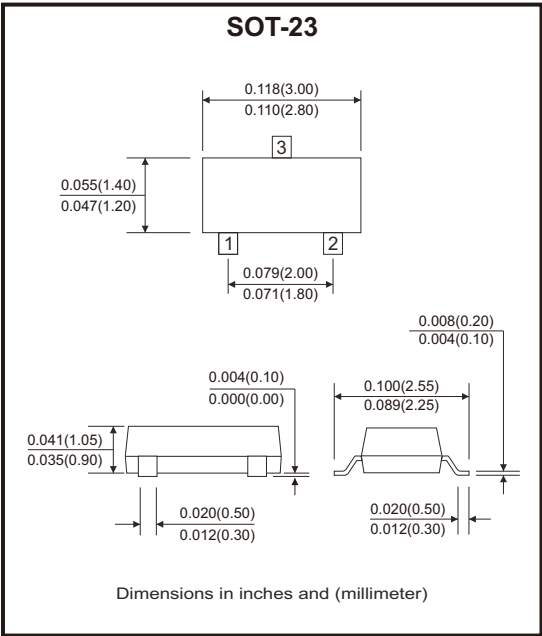
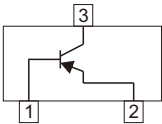
- Epoxy meets UL-94 V-0 flammability rating.
- Moisture sensitivity Level 1.
- AEC-Q101 Qualified

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 $T_A=25^{\circ}\text{C}$ 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	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter		Symbol	Conditions	Min	Max	Unit
Collector-emitter breakdown voltage		V_{CEO}	$I_C = -10\text{mA}$, $I_B = 0$	-45		V
Collector-base breakdown voltage		V_{CBO}	$I_C = -10\mu\text{A}$, $I_E = 0$	-50		V
Emitter-base breakdown voltage		V_{EBO}	$I_E = -1\mu\text{A}$, $I_C = 0$	-5		V
Emitter cut-off current		I_{EBO}	$V_{EB} = -4\text{V}$, $I_C = 0$		-0.1	μA
Collector cut-off current		I_{CBO}	$V_{CB} = -45\text{V}$, $I_E = 0$		-0.1	μA
Collector cut-off current		I_{CEO}	$V_{CE} = -40\text{V}$, $I_E = 0$		-0.2	μA
DC current gain	ABC807-16-HF	h_{FE}	$I_C = -100\text{mA}$, $V_{CE} = -1\text{V}$	100	250	
	ABC807-25-HF	h_{FE}		160	400	
	ABC807-40-HF	h_{FE}		250	600	
DC current gain		h_{FE}	$I_C = -500\text{mA}$, $V_{CE} = -1\text{V}$	40		
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = -500\text{mA}$, $I_B = -50\text{mA}$		-0.7	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = -500\text{mA}$, $I_B = -50\text{mA}$		-1.2	V
Current gain-bandwidth product		f_T	$I_C = -10\text{mA}$, $V_{CE} = -5\text{V}$, $f = 100\text{MHz}$	100		MHz

Rating and Characteristic Curves (ABC807-16-HF/25-HF/40-HF)

Fig.1 - $V_{BEsat} - I_c$

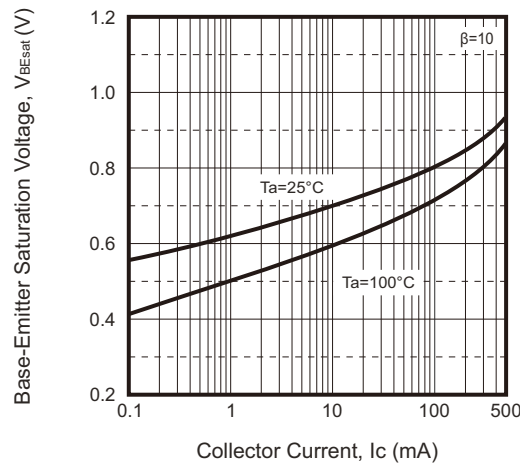


Fig.2 - $V_{CEsat} - I_c$

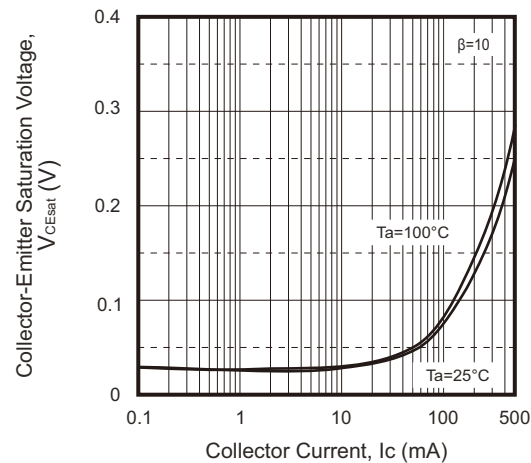


Fig.3 - Static Characteristic

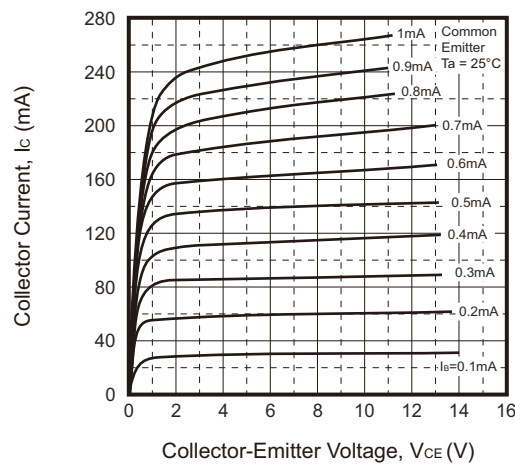
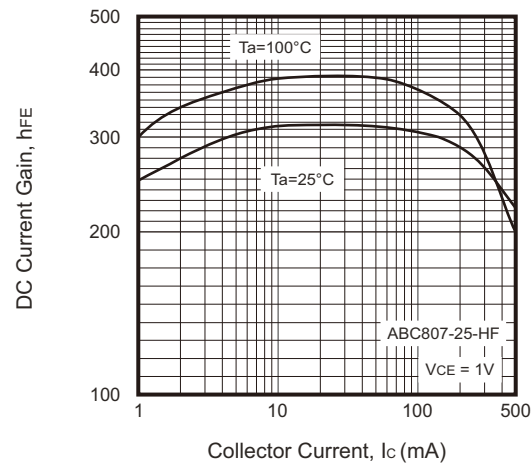
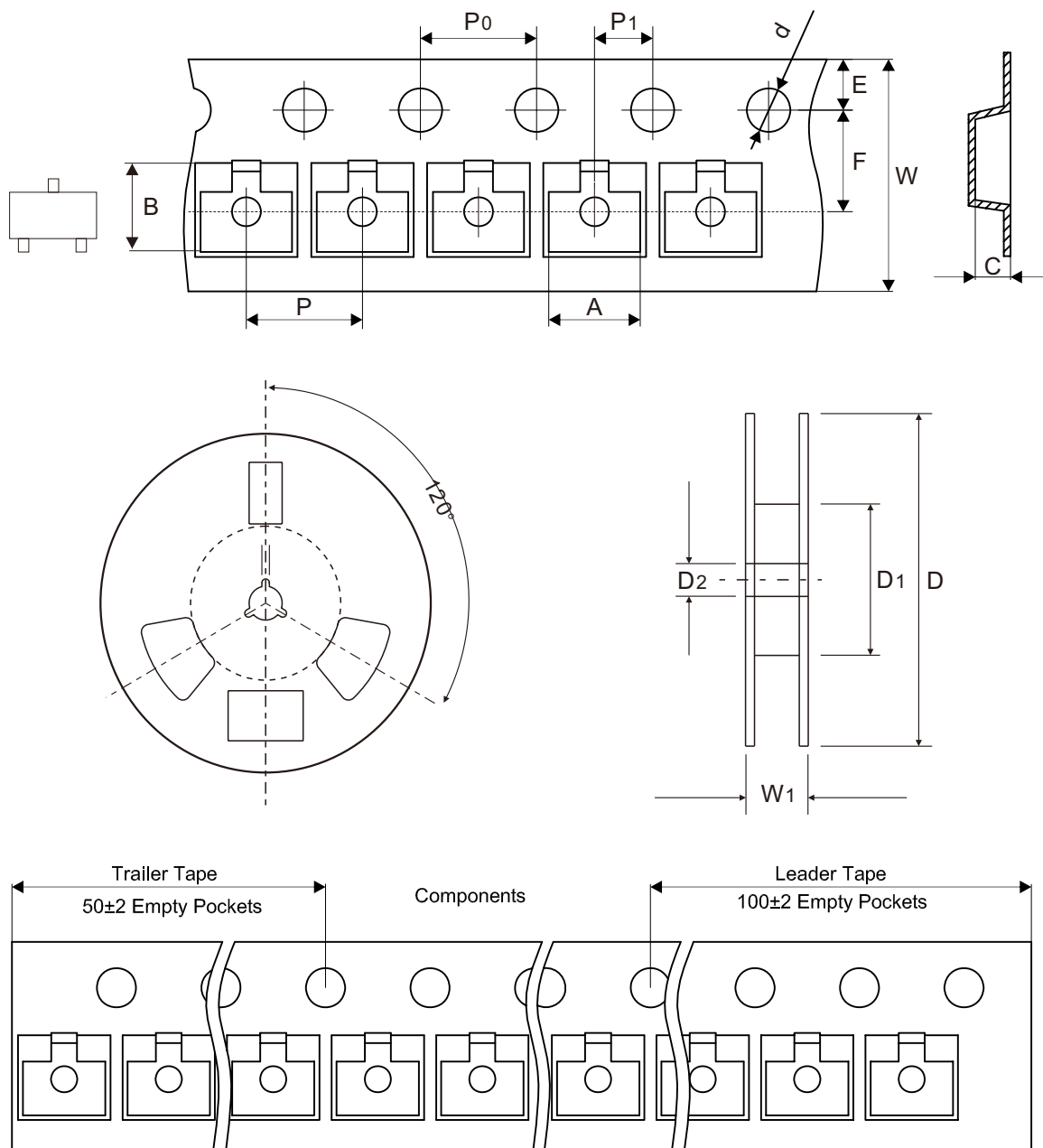


Fig.4 - $h_{FE} - I_c$



Reel Taping Specification

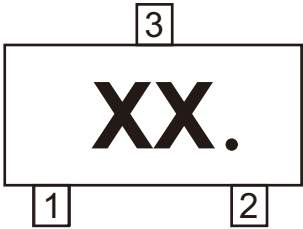


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	$1.50 + 0.10 - 0.00$	178.00 ± 1.00	54.60 ± 1.00	13.30 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	$0.059 + 0.004 - 0.000$	7.008 ± 0.039	2.150 ± 0.039	0.524 ± 0.039

SOT-23	SYMBOL	E	F	P	P0	P1	W	W1
	(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
ABC807-16-HF	5A.
ABC807-25-HF	5B.
ABC807-40-HF	5C.

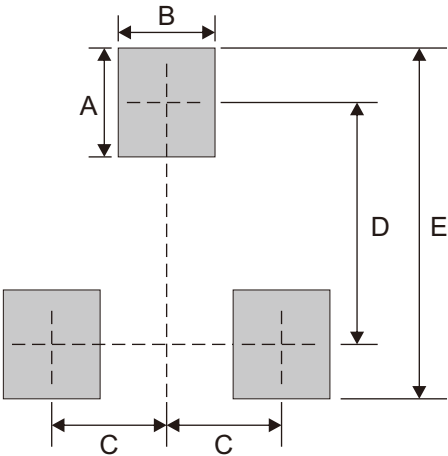


xx = Product type marking code

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

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