

BC807-16W-AU / BC807-25W-AU / BC807-40W-AU

Silicon PNP General Purpose Transistors

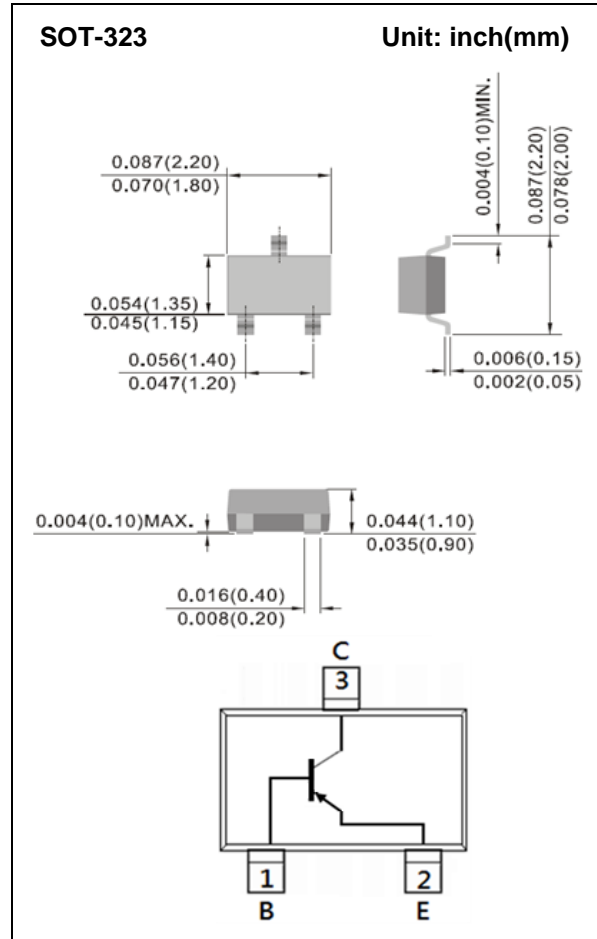
Voltage **-45V** **Current** **-500mA**

Features

- Silicon PNP Epitaxial type
- Excellent DC current gain characteristics
- General purpose amplifier application
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 Standard
- NPN complement: BC817W-AU series

Mechanical Data

- Case: SOT-323 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0001 ounces, 0.005grams
- Marking: BC807-16W-AU: 7S
BC807-25W-AU: 7V
BC807-40W-AU: 7W



Maximum Ratings and Thermal Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Collector-Base Voltage	V _{CBO}	-50	V
Collector-Emitter Voltage	V _{CEO}	-45	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current (DC)	I _c	-500	mA
Collector Current (Pulse)	I _{CP}	-1000	mA
Total Power Dissipation	P _{TOT}	300	mW
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55~150	°C
Thermal Resistance from Junction to Ambient ^(Note)	R _{θJA}	420	°C/W

Note: Mounted on minimum pad mount on FR-4 board.

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS	
OFF Characteristics							
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C = -10mA, I _B = 0A	-45	-	-	V	
Collector-Base Breakdown Voltage	BV _{CBO}	I _C = -10uA, I _E = 0A	-50	-	-	V	
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E = -1uA, I _C = 0A	-5	-	-	V	
Collector-Base Cutoff Current	I _{CBO}	V _{CB} = -20V, I _E = 0A	-	-	-100	nA	
Collector-Base Cutoff Current	I _{CBO}	T _j =125 °C	-	-	-5	uA	
Emitter-Base Cutoff Current	I _{EBO}	V _{EB} = -5V	-	-	-100	nA	
ON characteristics							
DC Current Gain	BC807-16W-AU	h _{FE}	V _{CE} = -1V I _C = -100mA	100	-	250	
	BC807-25W-AU			160	-	400	
	BC807-40W-AU			250	-	600	
DC Current Gain			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 Turn-on voltage	V _{BE(on)}	I _C = -500mA, V _{CE} = -1V	-	-	-1.2	V	
Transition Frequency	f _T	I _C = -10mA, V _{CE} = -5V	100	-	-	MHz	
Collector Output Capacitance	C _{OB}	V _{CB} = -10V, f=1MHz	-	7	-	pF	

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TYPICAL CHARACTERISTIC CURVES

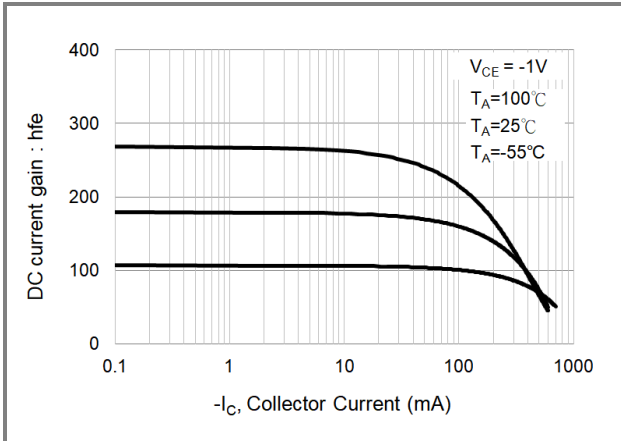


Fig.1 DC Current Gain(-16)

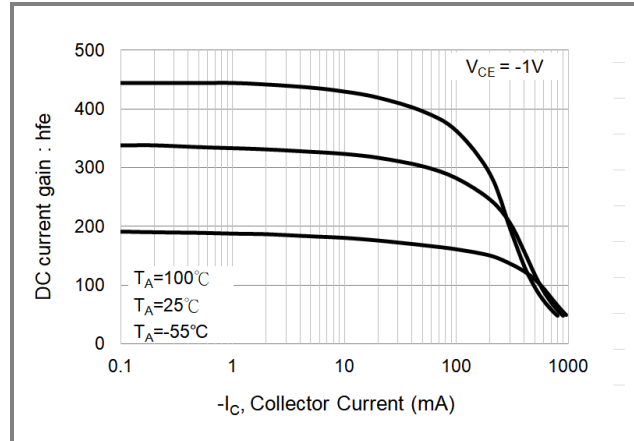


Fig.2 DC Current Gain (-25)

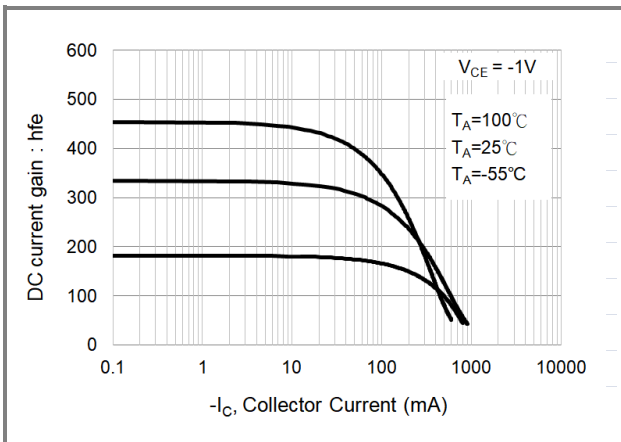


Fig.3 DC Current Gain (-40)

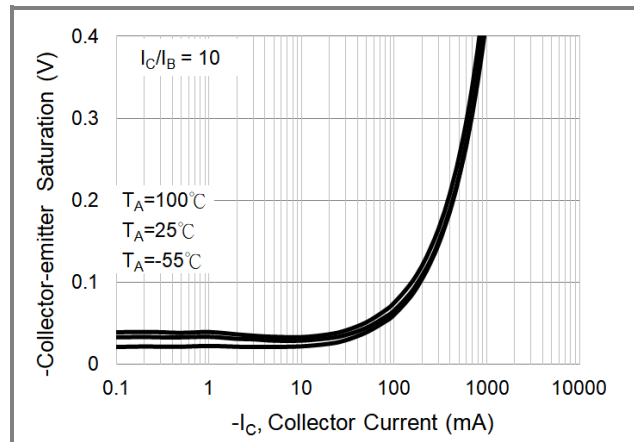


Fig.4 Collector-Emitter Saturation Voltage (-16)

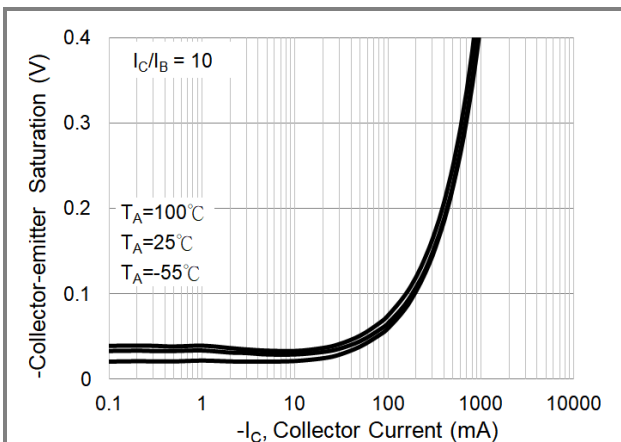


Fig.5 Collector-Emitter Saturation Voltage (-25)

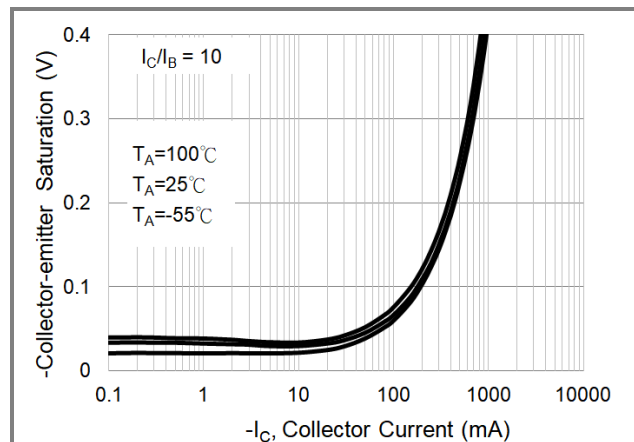


Fig.6 Collector-Emitter Saturation Voltage (-40)

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TYPICAL CHARACTERISTIC CURVES

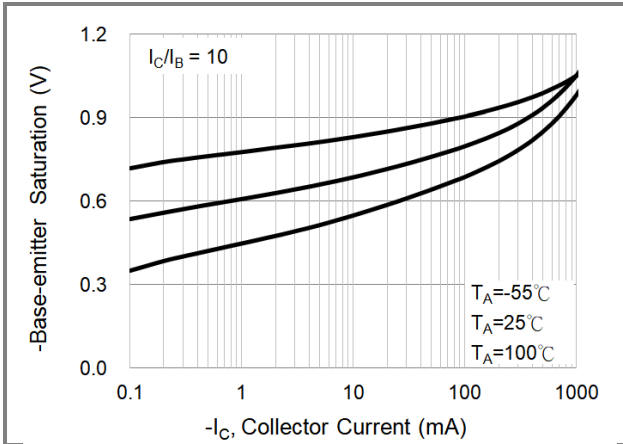


Fig.7 Base-Emitter Saturation Voltage (-16)

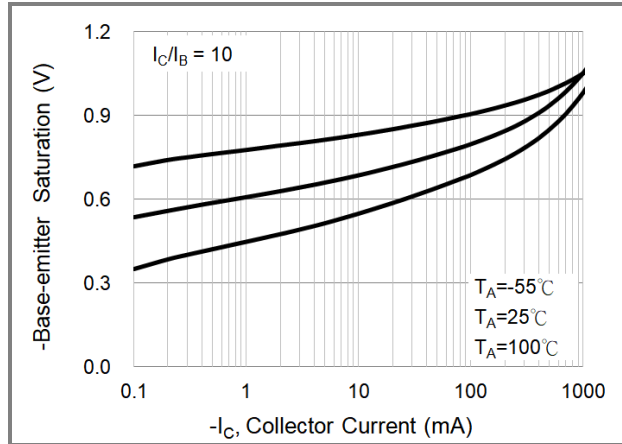


Fig.8 Base-Emitter Saturation Voltage (-25)

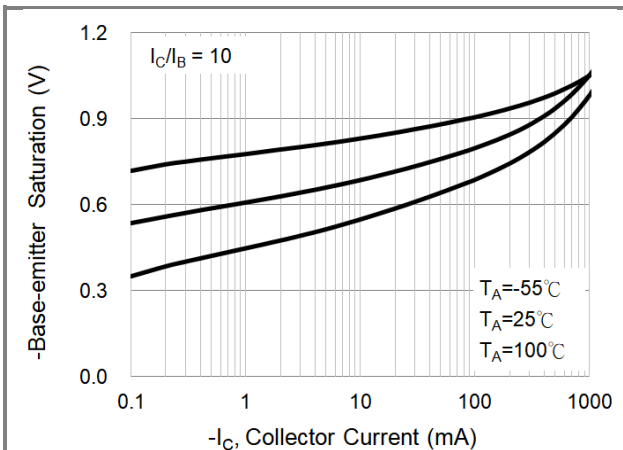


Fig.9 Base-Emitter Saturation Voltage (-40)

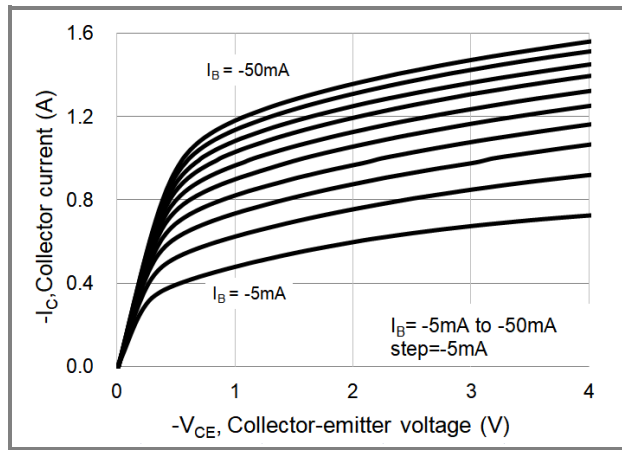


Fig.10 Collector Current (-16)

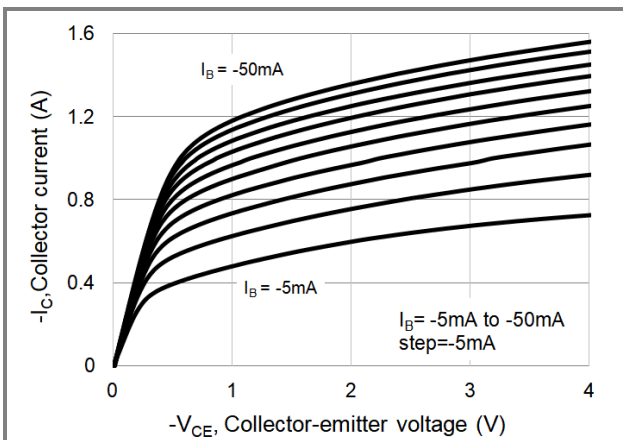


Fig.11 Collector Current (-25)

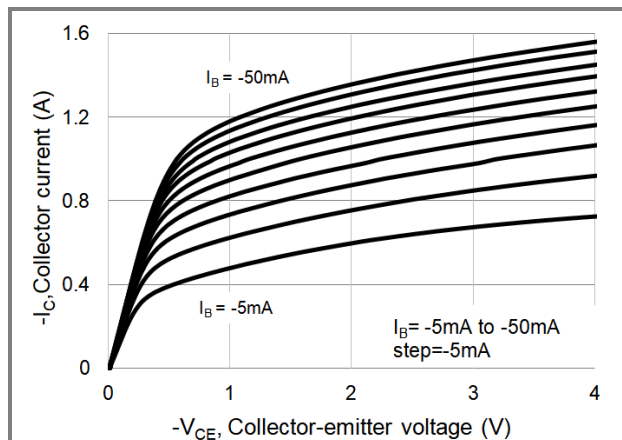


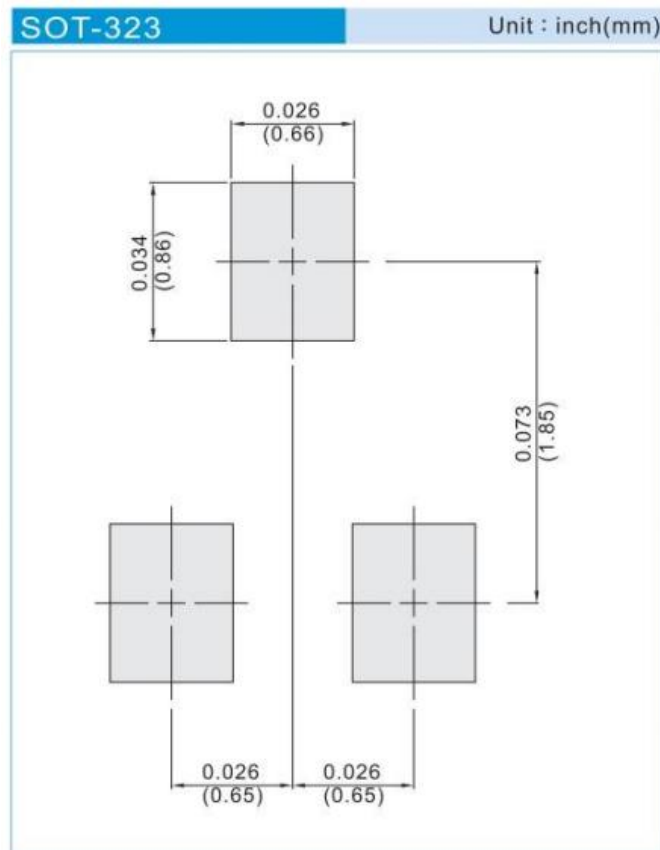
Fig.12 Collector Current (-40)

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
BC807-16W-AU	SOT-323	3K pcs / 7" reel	7S
BC807-25W-AU	SOT-323	3K pcs / 7" reel	7V
BC807-40W-AU	SOT-323	3K pcs / 7" reel	7W

Mounting Pad Layout



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