

Transistor
2SC5807

For Low Frequency Amplify Application
 Silicon NPN Epitaxial Type

DESCRIPTION

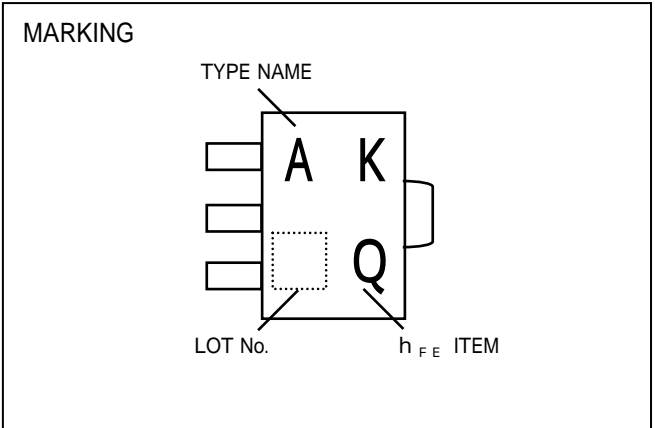
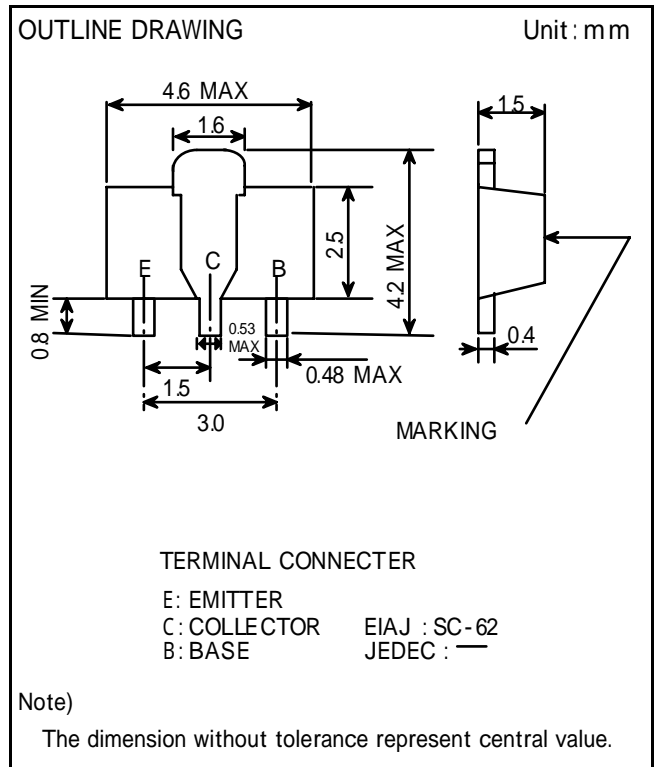
2SC5807 is a silicon NPN epitaxial Transistor.
 It designed with high collector current and high collector dissipation.

FEATURE

- High collector current $I_c=5A$
- Small collector to Emitter saturation voltage
 $V_{CE(sat)}=0.25V$ TYP. (@ $I_c=4A, I_b=100mA$)
- High collector dissipation $P_c=500mW$

APPLICATION

For storobe ,DC/DC convertor,power amplify apprication



MAXIMUM RATINGS (Ta=25)

SYMBOL	PARAMETER	RATINGS	UNIT
V_{CBO}	Collector to Base voltage	50	V
V_{EBO}	Emitter to Base voltage	6	V
V_{CEO}	Collector to Emitter voltage	15	V
I_c	Collector current	5	A
I_{CM}	Peak Collector current *1	10	
P_c	Collector dissipation (Total, Ta=25)	0.5	W
	Collector dissipation (Total, Ta=25) *2	2	
T_j	Junction temperature	+ 150	
T_{stg}	Storage temperature	-55 ~ + 150	

*1 Single Pulse Pw=10msec

*2 Pakkage mounted on 35mm×50mm×0.8mm ceramic board.

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ELECTRICAL CHARACTERISTICS (Ta=25)

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B break down voltage	$I_C=50 \mu A, I_E=0mA$	50			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=50 \mu A, I_C=0mA$	6			V
$V_{(BR)CEO}$	C to E break down voltage	$I_C=1mA, R_{BE}=\infty$	15			V
I_{CBO}	Collector cut off current	$V_{CB}=40V, I_E=0mA$			0.5	μA
I_{EBO}	Emitter cut off current	$V_{EB}=5V, I_C=0mA$			0.5	μA
h_{FE}	DC forward current gain	$V_{CE}=2V, I_C=0.5A$	120		390	-
$V_{CE(sat)}$	C to E saturation voltage	$I_C=4A, I_B=100mA$		0.25	1.0	V
f_T	Gain band width product	$V_{CE}=6V, I_E=-50mA$		150		MHz
C_{ob}	Collector output capacitance	$V_{CB}=20V, I_E=0mA, f=1MHz$		30		pF

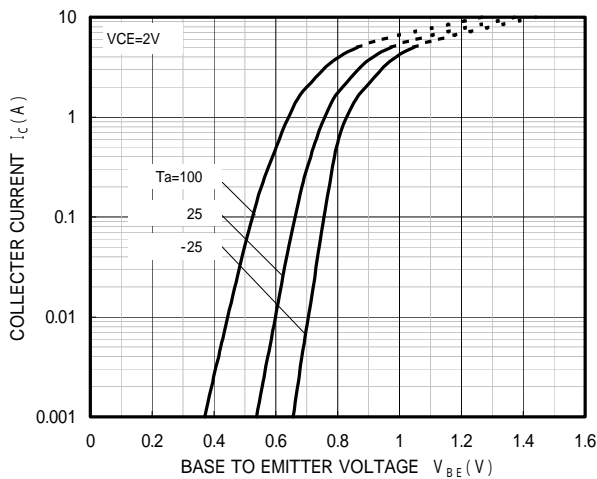
* Measured using pulse current.

* It shows h_{FE} classification in right table.

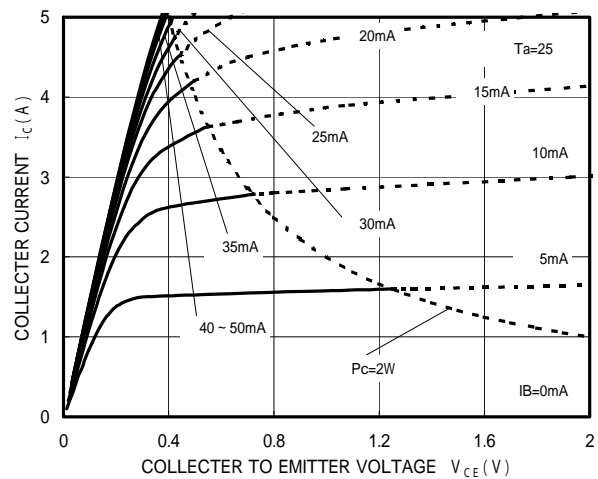
Marking	Q	R
h_{FE}	120 to 270	180 to 390

TYPICAL CHARACTERISTICS

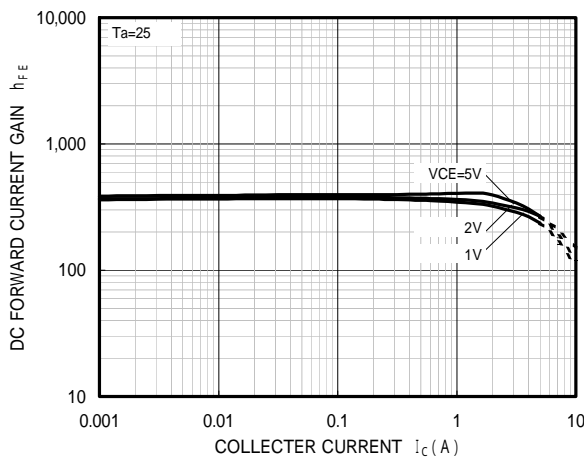
COMMON EMITTER TRANSFER



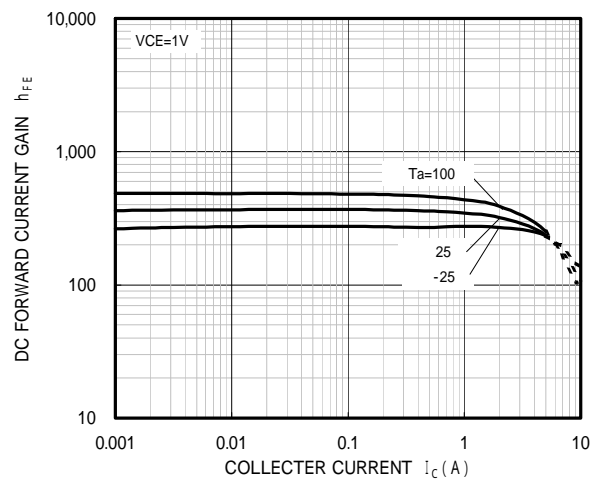
COMMON EMITTER OUTPUT



DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT ()



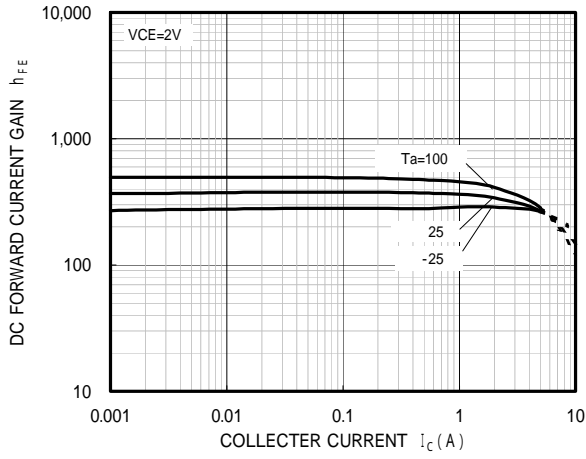
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT ()



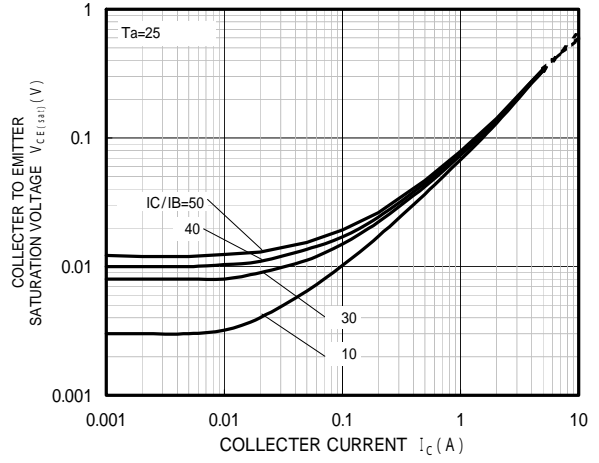
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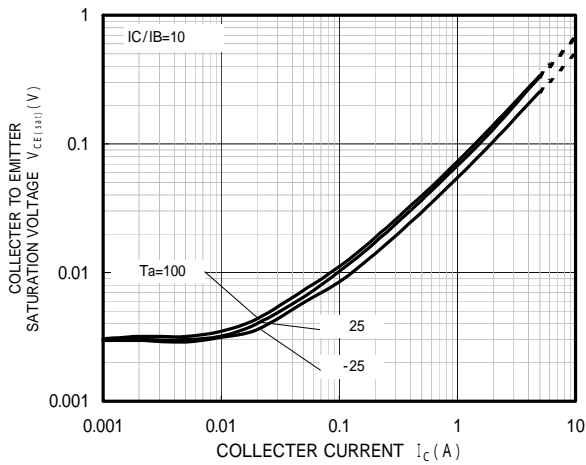
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT()



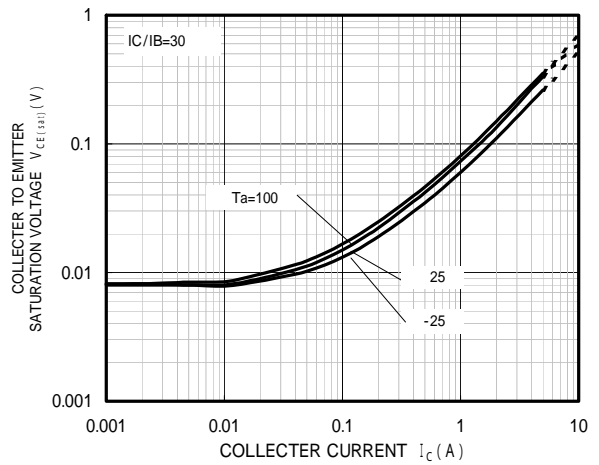
COLLECTOR TO EMITTER SATURATION
VOLTAGE VS. COLLECTOR CURRENT()



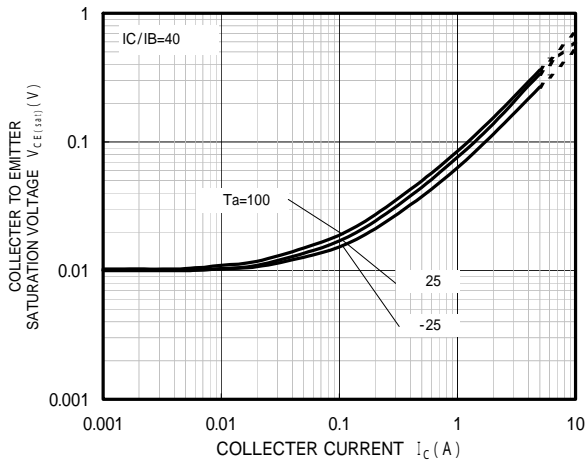
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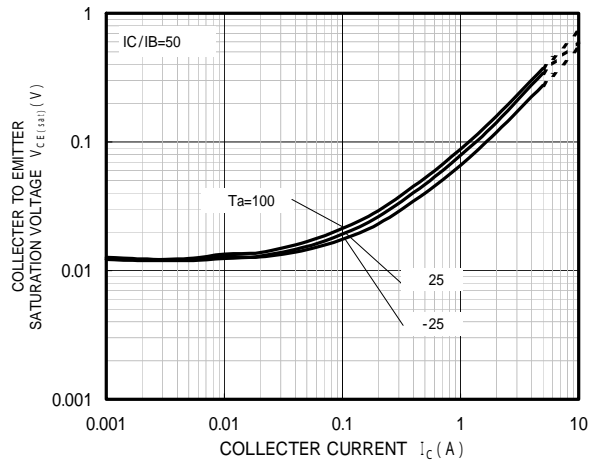
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COLLECTOR TO EMITTER SATURATION
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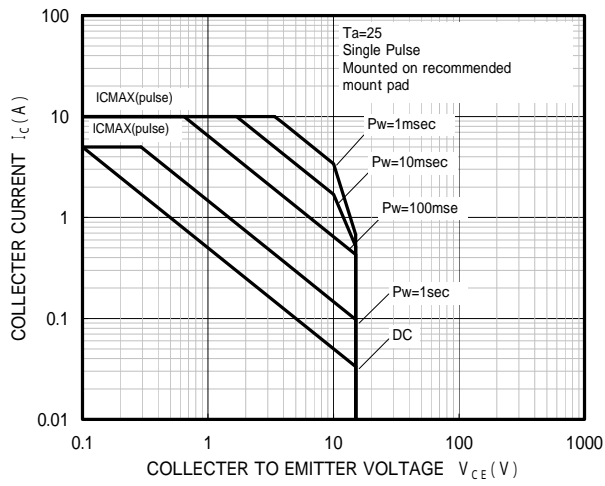
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AREA OF SAFETY OPERATION





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