

DESCRIPTION

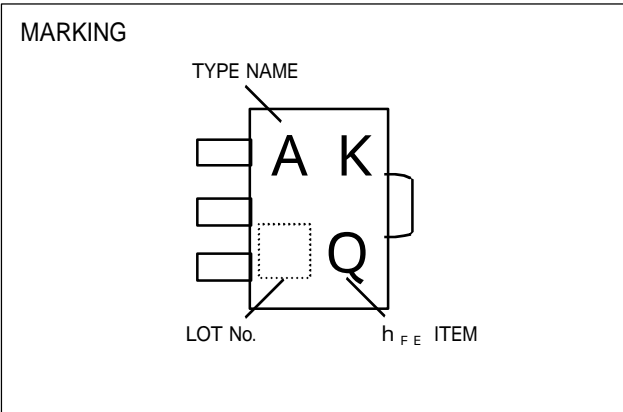
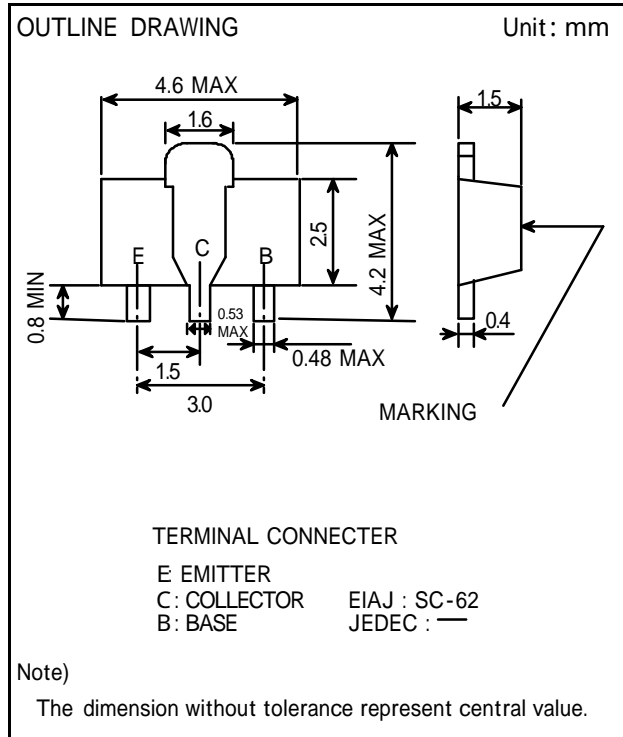
2SC5807 is a silicon NPN epitaxial Transistor.
It designed with high collector current and high collector dissipation.

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 ($T_a=25^\circ C$)

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	20	V
I_C	Collector current	5	A
I_{CM}	Peak Collector current *1	10	
P_C	Collector dissipation (Total $T_a=25^\circ C$)	0.5	W
	Collector dissipation (Total $T_a=25^\circ C$) *2	2	
T_j	Junction temperature	+ 150	
T_{sig}	Storage temperature	-55 ~ + 150	

*1 Single Pulse $P_w=10msec$

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

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	$I_C=1mA, R_{BE}=\infty$	20			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

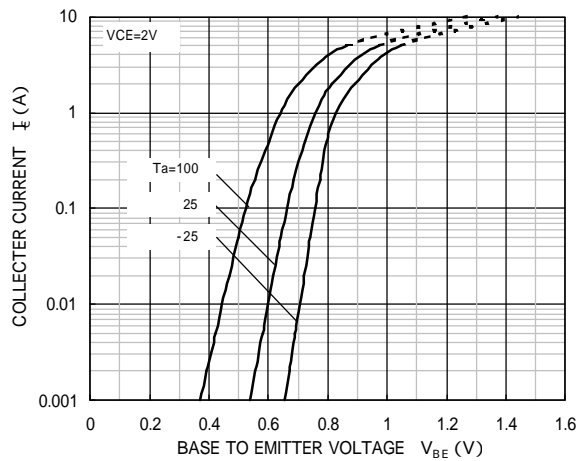
* Measured using pulse current.

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

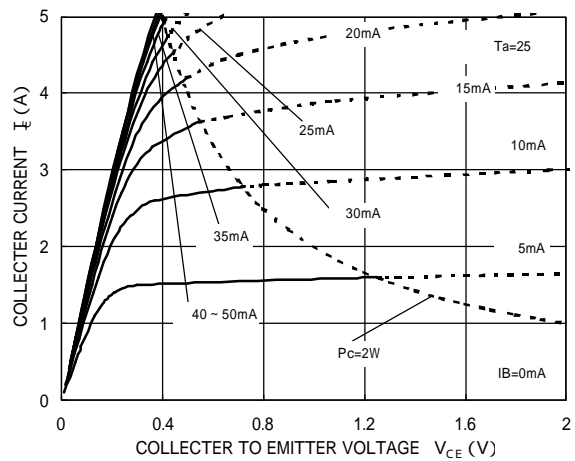
Marking	Q	R
h_{FE}	120 to 270	180 to 390

TYPICAL CHARACTERISTICS

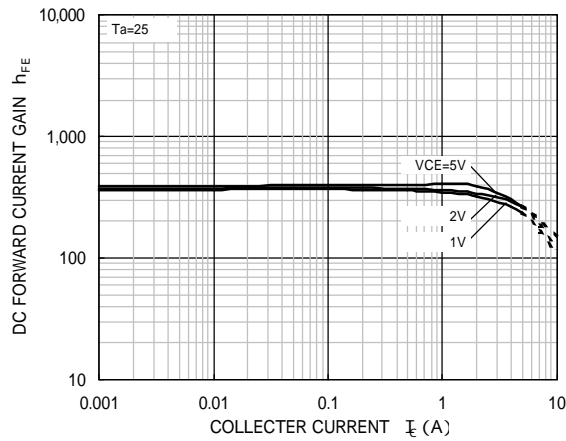
COMMON EMITTER TRANSFER



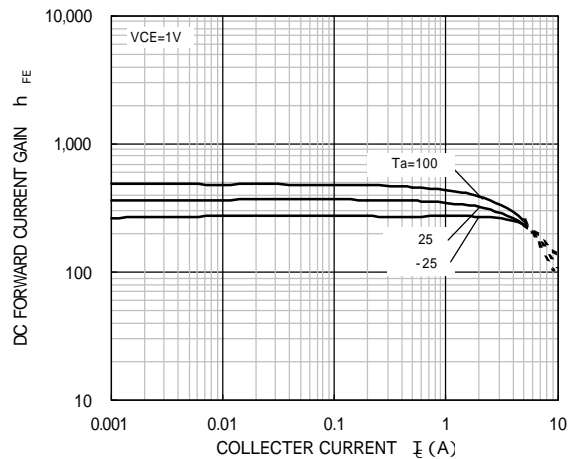
COMMON EMITTER OUTPUT



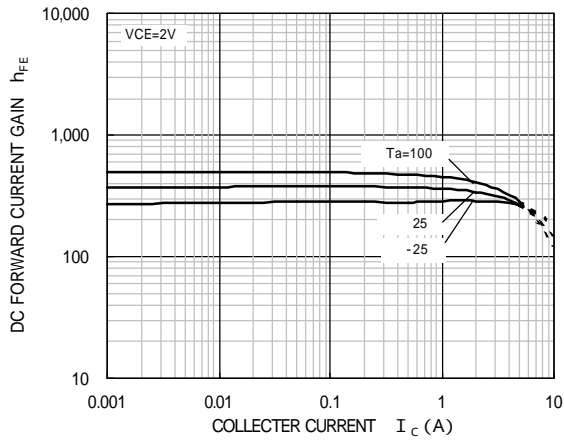
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT ()



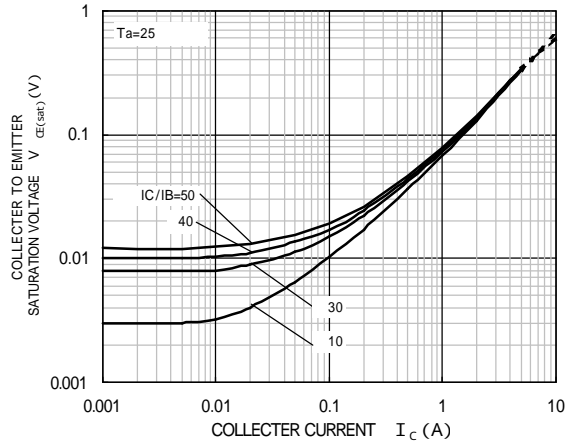
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT ()



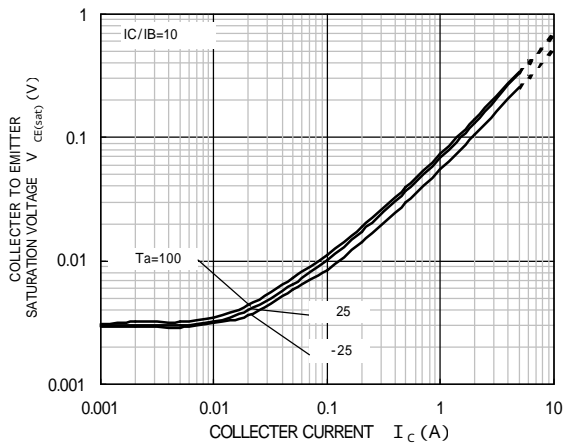
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT ()



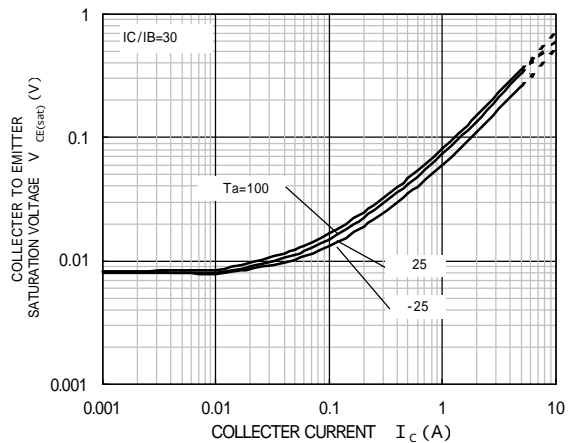
COLLECTOR TO EMITTER SATURATION
VOLTAGE VS. COLLECTOR CURRENT ()



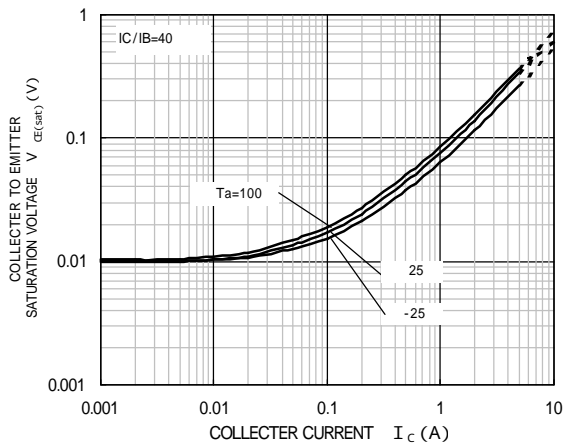
COLLECTOR TO EMITTER SATURATION
VOLTAGE VS. COLLECTOR CURRENT ()



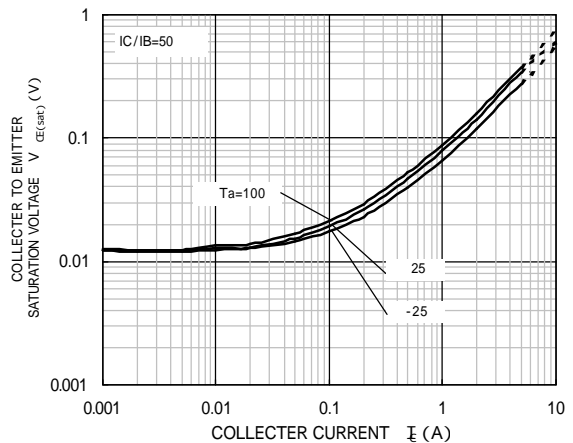
COLLECTOR TO EMITTER SATURATION
VOLTAGE VS. COLLECTOR CURRENT ()

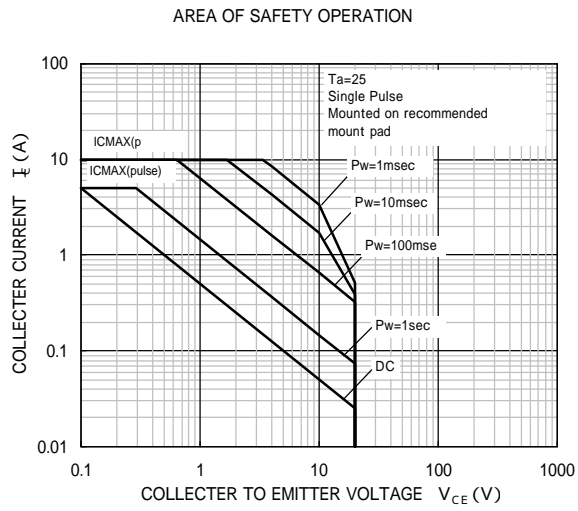


COLLECTOR TO EMITTER SATURATION
VOLTAGE VS. COLLECTOR CURRENT ()



COLLECTOR TO EMITTER SATURATION
VOLTAGE VS. COLLECTOR CURRENT ()







Marketing division, Marketing planning department

6-41 Tsukuba, Isahaya, Nagasaki, 854-0065 Japan

Keep safety first in your circuit designs!

•ISAHAYA Electronics Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (1) placement of substitutive, auxiliary, (2) use of non-flammable material or (3) prevention against any malfunction or mishap.

Notes regarding these materials

- These materials are intended as a reference to our customers in the selection of the ISAHAYA products best suited to the customer's application; they don't convey any license under any intellectual property rights, or any other rights, belonging ISAHAYA or third party.
- ISAHAYA Electronics Corporation assumes no responsibility for any damage, or infringement of any third party's rights, originating in the use of any product data, diagrams, charts or circuit application examples contained in these materials.
- All information contained in these materials, including product data, diagrams and charts, represent information on products at the time of publication of these materials, and are subject to change by ISAHAYA Electronics Corporation without notice due to product improvements or other reasons. It is therefore recommended that customers contact ISAHAYA Electronics Corporation or an authorized ISAHAYA products distributor for the latest product information before purchasing product listed herein.
- ISAHAYA Electronics Corporation products are not designed or manufactured for use in a device or system that is used under circumstances in which human life is potentially at stake. Please contact ISAHAYA electronics corporation or an authorized ISAHAYA products distributor when considering the use of a product contained herein for any specific purposes, such as apparatus or systems for transportation, vehicular, medical, aerospace, nuclear, or undersea repeater use.
- The prior written approval of ISAHAYA Electronics Corporation is necessary to reprint or reproduce in whole or in part these materials.
- If these products or technologies are subject to the Japanese export control restrictions, they must be exported under a license from the Japanese government and cannot be imported into a country other than the approved destination. Any diversion or re-export contrary to the export control laws and regulations of Japan and/or the country of destination is prohibited.
- Please contact ISAHAYA Electronics Corporation or authorized ISAHAYA products distributor for further details on these materials or the products contained therein.