

2SC5209

FOR RELAY DRIVE POWER SUPPLY APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

2SC5209 is a silicon NPN epitaxial type transistor. It designed with high voltage, high collector current and high hFE.

Complementary with 2SA1944.

FEATURE

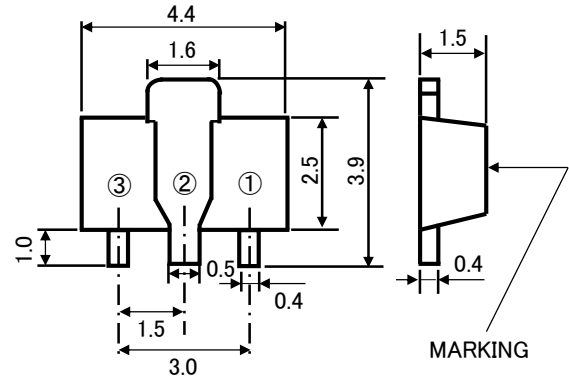
- Small package for mounting.
- High hFE hFE=600~1800
- Small collector to emitter saturation voltage.
 $V_{CE(sat)}=0.15V$ typ (@ $I_C=500mA$, $I_B=10mA$)
- High voltage $V_{CEO}=50V$

APPLICATION

Audio machine, VTR, relay drive of other electronic machine, power supply.

OUTLINE DRAWING

UNIT:mm



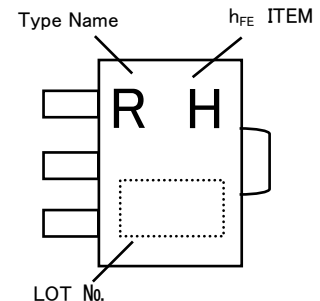
TERMINAL CONNECTOR

- ①: BASE JEITA: SC-62
②: COLLECTOR JEDEC: SOT-89
③: EMITTER

MAXIMUM RATING ($T_a=25^\circ C$)

SYMBOL	PARAMETER	RATING	UNIT
V_{CBO}	Collector to Base voltage	50	V
V_{EBO}	Emitter to Base voltage	6	V
V_{CEO}	Collector to Emitter voltage	50	V
I_C	Collector current	1	A
I_{CM}	Peak collector current	2	A
P_C	Collector dissipation($T_a=25^\circ C$)	500	mW
T_j	Junction temperature	+150	$^\circ C$
T_{stg}	Storage temperature	-55~+150	$^\circ C$

MARKING



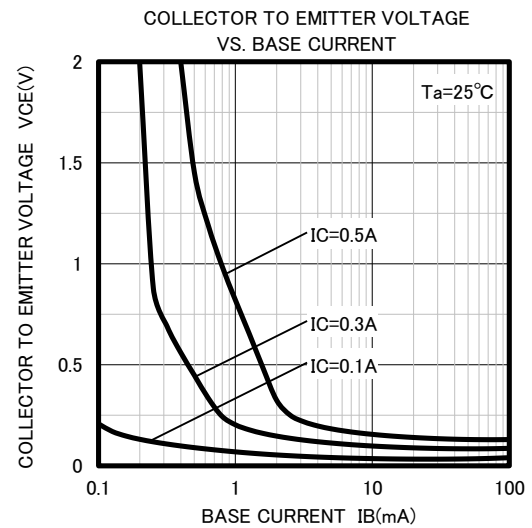
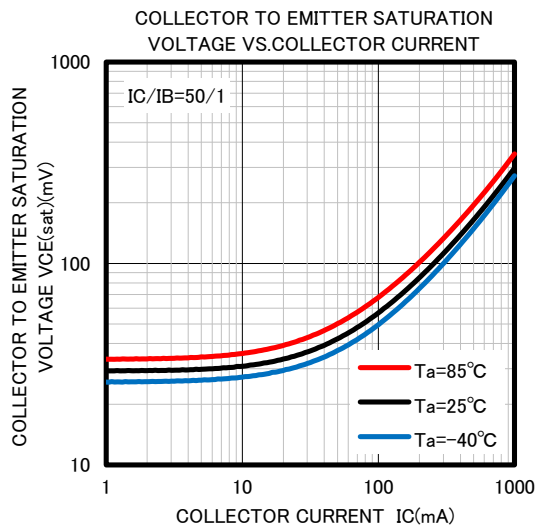
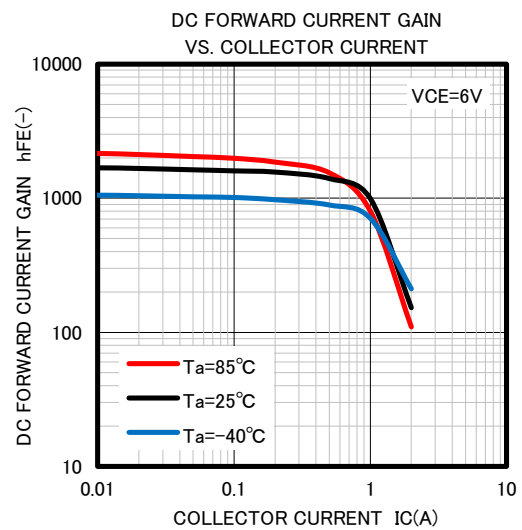
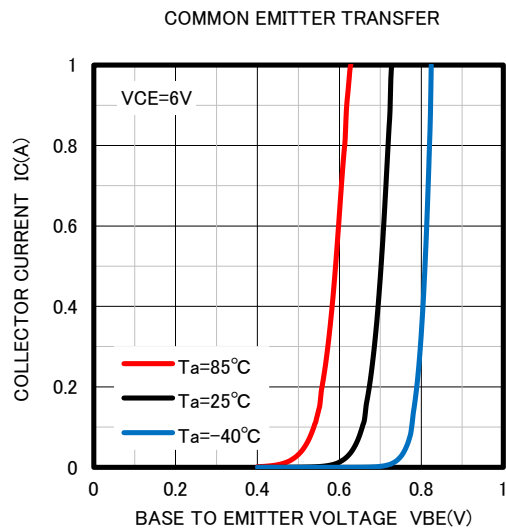
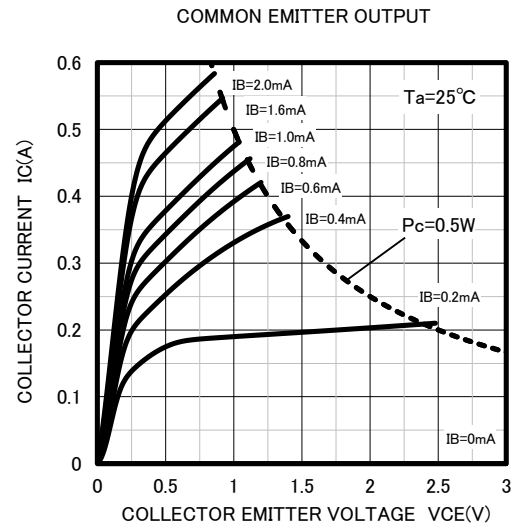
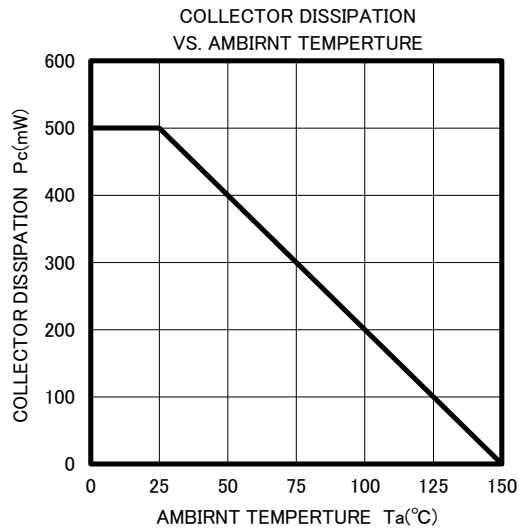
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B breakdown voltage	$I_C=10\mu A$, $I_E=0mA$	50	-	-	V
$V_{(BR)EBO}$	E to B breakdown voltage	$I_E=10\mu A$, $I_C=0mA$	6	-	-	V
$V_{(BR)CEO}$	C to E breakdown voltage	$I_C=1mA$, $R_{BE}=\infty$	50	-	-	V
I_{CBO}	Collector cut off current	$V_{CB}=40V$, $I_E=0mA$	-	-	0.1	μA
I_{EBO}	Emitter cut off current	$V_{EB}=2V$, $I_C=0mA$	-	-	0.1	μA
hFE ※	DC forward current gain	$V_{CE}=6V$, $I_C=100mA$	600	-	1800	-
$V_{CE(sat)}$	C to E saturation voltage	$I_C=500mA$, $I_B=10mA$	-	0.15	0.5	V
fT	Gain bandwidth product	$V_{CE}=10V$, $I_E=-10mA$	-	130	-	MHz
Cob	Collector output capacitance	$V_{CB}=10V$, $I_E=0mA$, f=1MHz	-	12	-	pF

※) It shows hFE classification at right table.

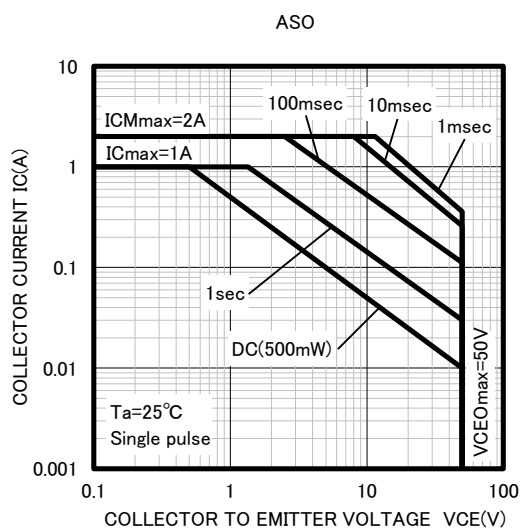
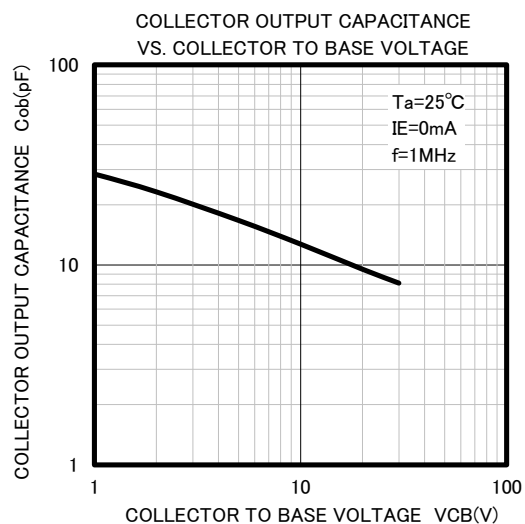
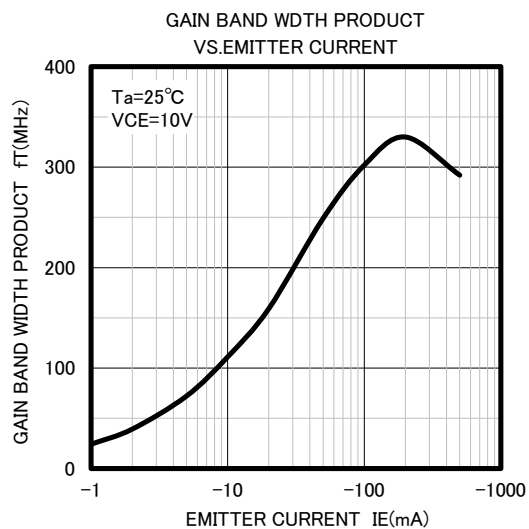
Item	H	J
hFE	600~1200	900~1800

TYPICAL CHARACTERISTICS



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