

〈SMALL-SIGNAL TRANSISTOR〉

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

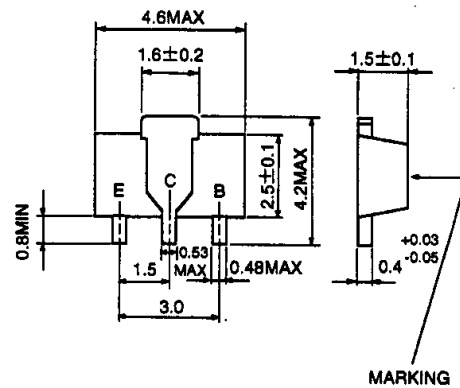
- High voltage $V_{CE0}=50V$
- Small collector to emitter saturation voltage
 $V_{CE(sat)}=0.15V$ typ (@ $I_C=500mA, I_B=10mA$)
- High hFE $h_{FE}=600$ to 1800
- Small package for mounting

APPLICATION

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

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

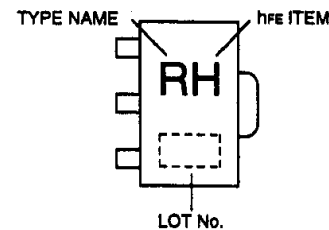
E : EMITTER
C : COLLECTOR EIAJ : SC-62
B : BASE JEDEC : -

Note)
The dimension without tolerance represent central value.

MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings	Unit
V_{CB0}	Collector to Base voltage	50	V
V_{EB0}	Emitter to Base voltage	6	V
V_{CE0}	Collector to Emitter voltage	50	V
I_{CM}	Peak collector current	2	A
I_C	Collector current	1	A
P_C	Collector dissipation(Ta=25°C)	500	mW
T_J	Junction temperature	+150	°C
T_{stg}	Storage temperature	-55 to +150	°C

MARKING



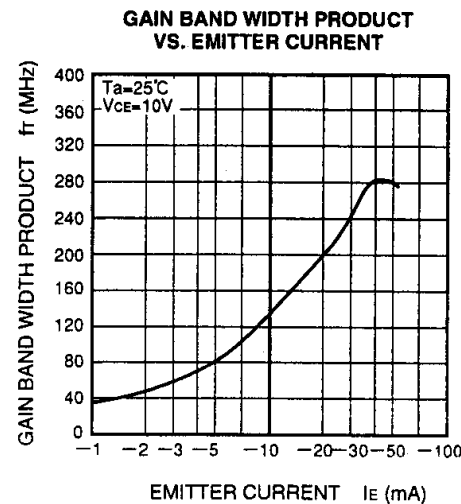
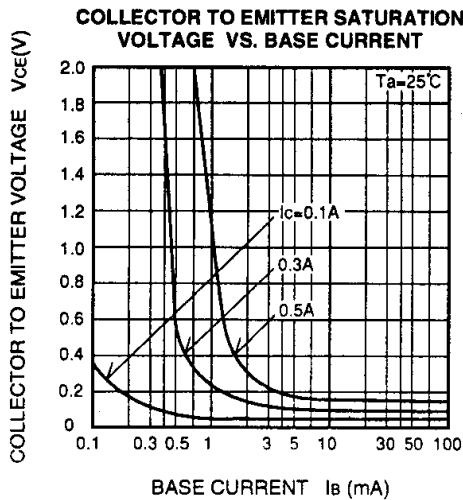
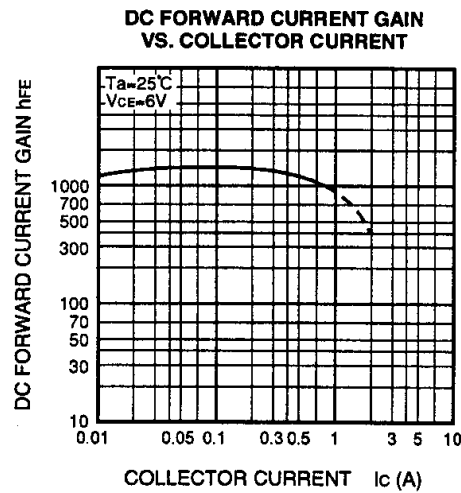
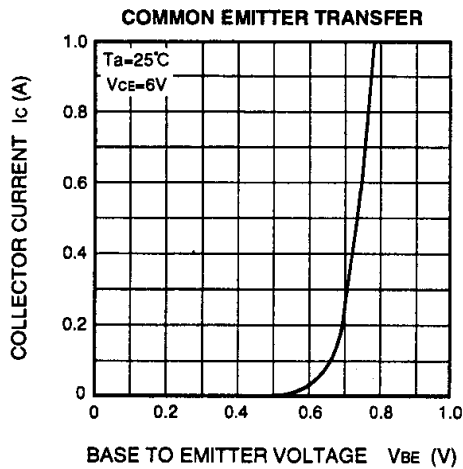
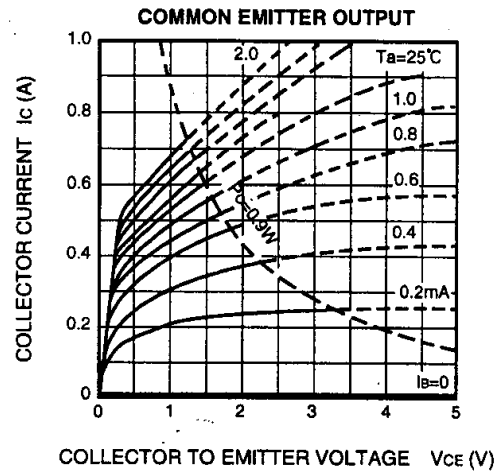
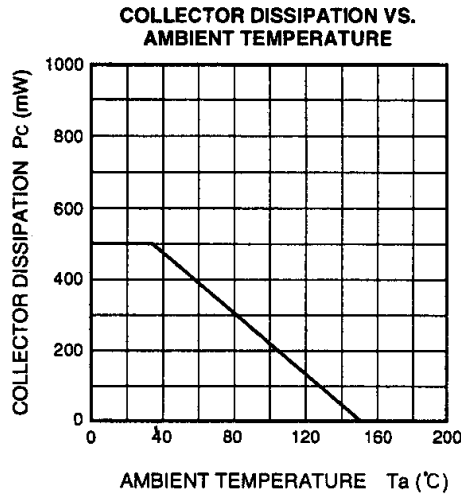
ELECTRICAL CHARACTERISTICS (Ta=25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	$I_C=10 \mu A, I_E=0$	50			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=10 \mu A, I_C=0$	6			V
$V_{(BR)CEO}$	C to E break down voltage	$I_C=1mA, R_{BE}=\infty$	50			V
I_{CBO}	Collector cut off current	$V_{CB}=40V, I_E=0$			0.1	μA
I_{EBO}	Emitter cut off current	$V_{EB}=2V, I_C=0$			0.1	μA
h_{FE}^*	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
f_T	Gain band width product	$V_{CE}=10V, I_E=-10mA$		130		MHz
C_{ob}	Collector output capacitance	$V_{CB}=10V, I_E=0, f=1MHz$		12		pF

* : It shows hFE classification in right table.

Marking	RH	RJ
hFE	600 to 1200	900 to 1800

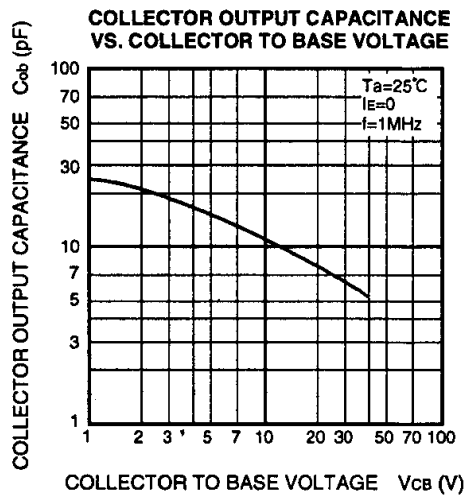
TYPICAL CHARACTERISTICS



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 **ISAHAYA ELECTRONICS CORPORATION**

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