

〈SMALL-SIGNAL TRANSISTOR〉

2SC3440

**FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE**

DESCRIPTION

2SC3440 is a super mini silicon NPN epitaxial type transistor designed with high collector current, small $V_{CE(sat)}$.

Complementary with 2SA1365.

FEATURE

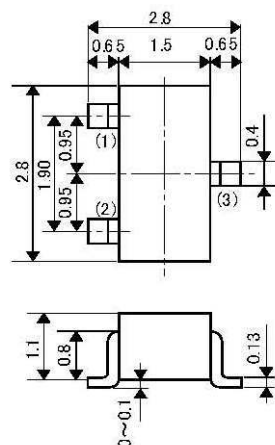
- Low collector to emitter saturation voltage
 $V_{CE(sat)}=0.2V$ typ
- Excellent linearity of DC forward current gain
- Super mini package for easy mounting
- High collector current $I_{CM}=1A$
- High gain band width product $f_T=180MHz$ typ

APPLICATION

Small type motor drive, relay drive, power supply.

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

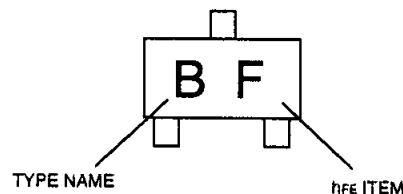
- ① : BASE
 - ② : EMITTER
 - ③ : COLLECTOR
- EIAJ : SC-59
JEDEC : TO-236 resemblance

Note)
The dimension without tolerance represent central value.

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

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	25	V
V_{EBO}	Emitter to Base voltage	4	V
V_{CEO}	Collector to Emitter voltage	20	V
I_{CM}	Peak collector current	1	A
I_C	Collector current	700	mA
P_C	Collector dissipation($T_a=25^\circ C$)	150	mW
T_j	Junction temperature	+125	$^\circ C$
T_{sig}	Storage temperature	-55 to +125	$^\circ C$

MARKING



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

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	$I_C=10\mu A, I_E=0$	25			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=10\mu A, I_C=0$	4			V
$V_{(BR)CEO}$	C to E break down voltage	$I_C=100\mu A, R_{BE}=\infty$	20			V
I_{CBO}	Collector cut off current	$V_{CB}=25V, I_E=0$			1	μA
I_{EBO}	Emitter cut off current	$V_{EB}=2V, I_C=0$			1	μA
$h_{FE} *$	DC forward current gain	$V_{CE}=4V, I_C=100mA$	150		800	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=500mA, I_B=25mA$		0.2	0.5	V
f_T	Gain band width product	$V_{CE}=6V, I_E=-10mA$		180		MHz

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

Marking	BE	BF	BG
h_{FE}	150 to 300	250 to 500	400 to 800

ISAHAYA ELECTRONICS CORPORATION

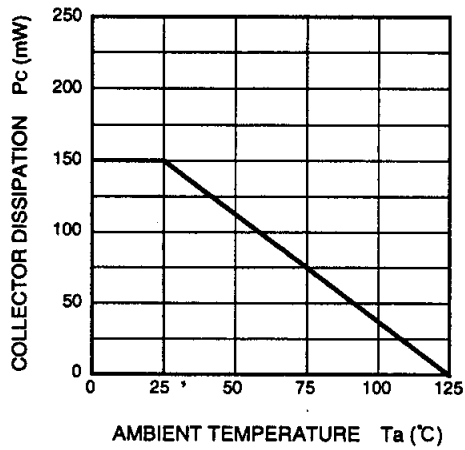
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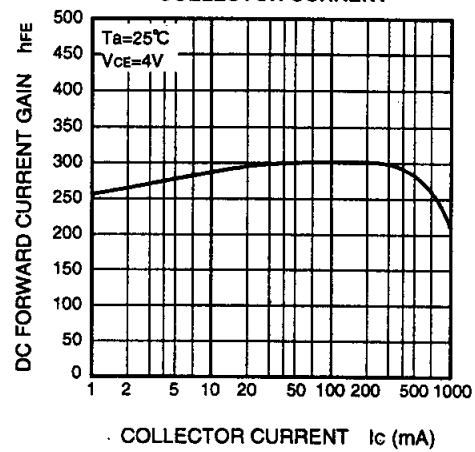
FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

TYPICAL CHARACTERISTICS

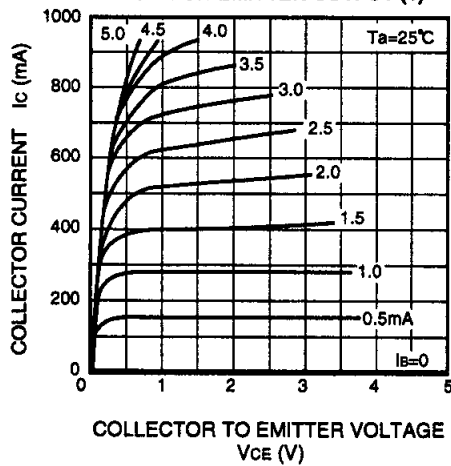
**COLLECTOR DISSIPATION VS.
AMBIENT TEMPERATURE**



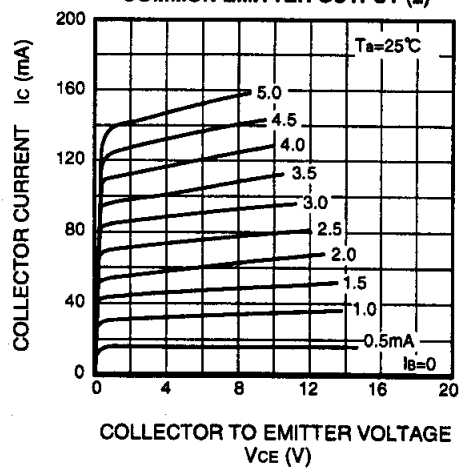
**DC FORWARD CURRENT GAIN VS.
COLLECTOR CURRENT**



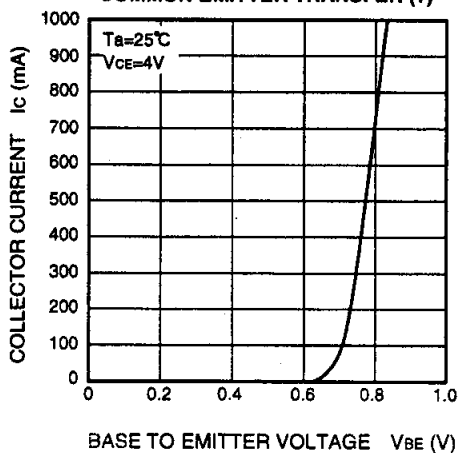
COMMON EMITTER OUTPUT (1)



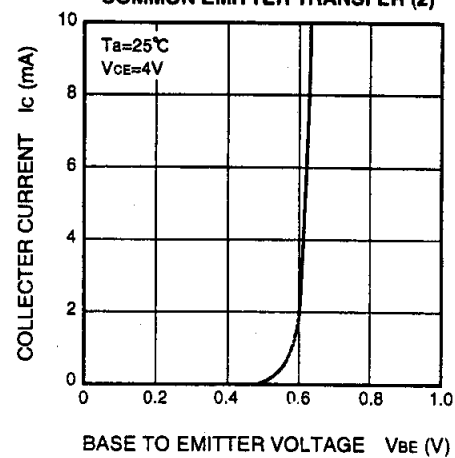
COMMON EMITTER OUTPUT (2)



COMMON EMITTER TRANSFER (1)



COMMON EMITTER TRANSFER (2)





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