

〈SMALL-SIGNAL TRANSISTOR〉

2SC3441

FOR GENERAL PURPOSE HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

2SC3441 is a super mini silicon NPN epitaxial type transistor designed with high collector current, high voltage.

Complementary with 2SA1366.

FEATURE

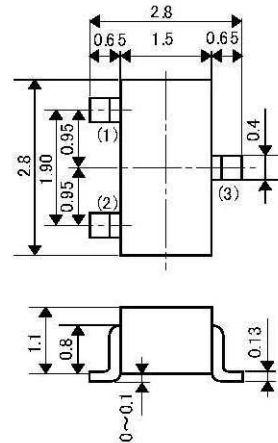
- High V_{CE0} $V_{CE0}=50V$
- Excellent linearity of DC forward current gain
- Super mini package for easy mounting
- High collector current $I_{CM}=600mA$
- High gain band width product $f_T=150MHz$ typ

APPLICATION

For switching application, for small type motor drive application.

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

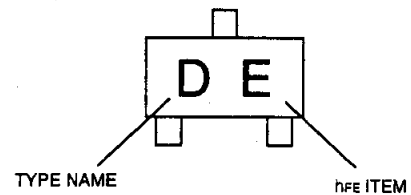
- ① : BASE
 - ② : EMITTER
 - ③ : COLLECTOR
- EIAJ : SC-59
JEDEC : TO-236 resemblance

Note)
The dimension without tolerance represent central value.

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

Symbol	Parameter	Ratings	Unit
V_{CB0}	Collector to Base voltage	55	V
V_{EB0}	Emitter to Base voltage	4	V
V_{CE0}	Collector to Emitter voltage	50	V
I_{CM}	Peak collector current	600	mA
I_C	Collector current	400	mA
P_C	Collector dissipation($T_a=25^\circ C$)	150	mW
T_j	Junction temperature	+125	$^\circ C$
T_{stg}	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	$I_C=10\mu A, I_E=0$	55			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	$I_C=100\mu A, R_{BE}=\infty$	50			V
I_{CBO}	Collector cut off current	$V_{CB}=25V, I_E=0$			0.5	μA
I_{EBO}	Emitter cut off current	$V_{EB}=2V, I_C=0$			0.5	μA
h_{FE}^*	DC forward current gain	$V_{CE}=4V, I_C=100mA$	90		500	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=200mA, I_B=10mA$		0.15	0.5	V
f_T	Gain band width product	$V_{CE}=6V, I_E=-10mA$		150		MHz

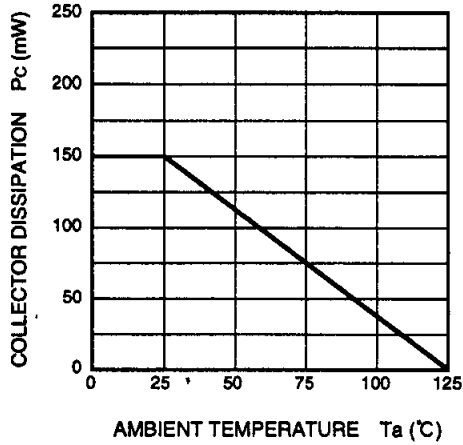
* : It shows hFE classification in right table.

Marking	DD	DE	DF
hFE	90 to 180	150 to 300	250 to 500

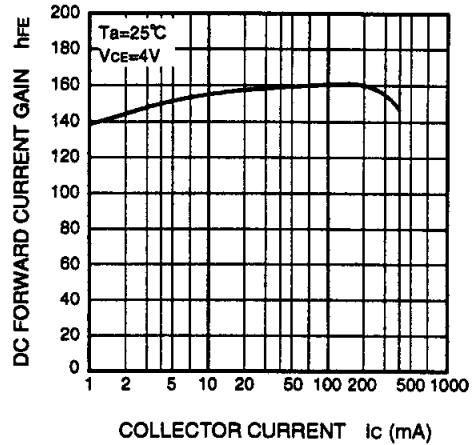
FOR GENERAL PURPOSE HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

TYPICAL CHARACTERISTICS

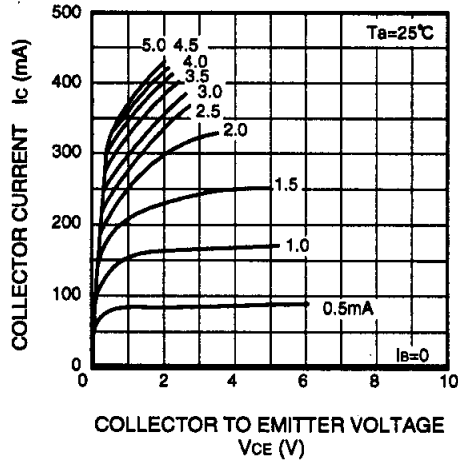
COLLECTOR DISSIPATION VS.
AMBIENT TEMPERATURE



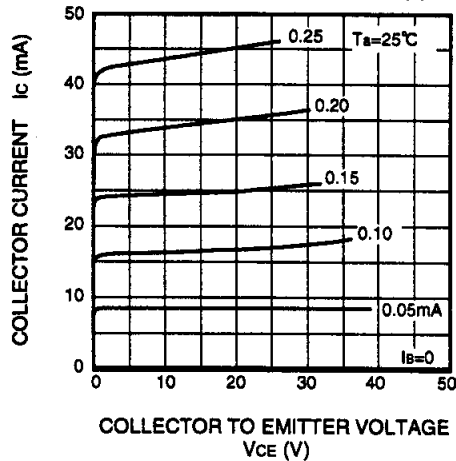
DC FORWARD CURRENT GAIN VS.
COLLECTOR CURRENT



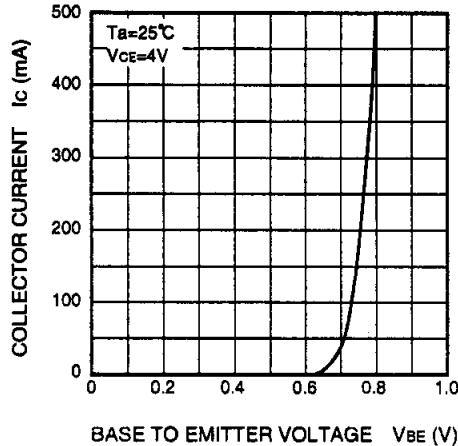
COMMON EMITTER OUTPUT (1)



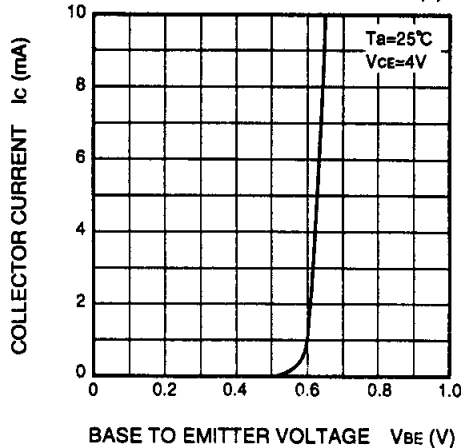
COMMON EMITTER OUTPUT (2)



COMMON EMITTER TRANSFER (1)



COMMON EMITTER TRANSFER (2)



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