

**FOR SMALL TYPE MOTOR PLUNGER DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE****DESCRIPTION**

2SC3439 is a silicon NPN epitaxial type transistor designed with high collector dissipation, high collector current, high h_{FE} .

Complementary with 2SA1369.

FEATURE

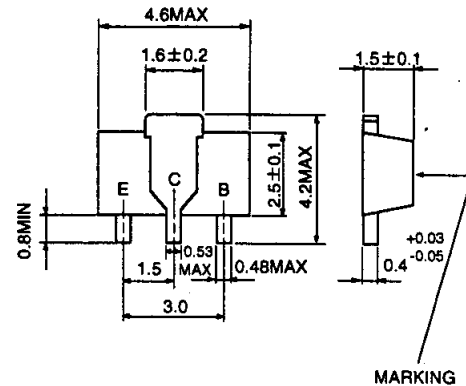
- High h_{FE} $h_{FE}=400$ to 1800
- High collector current ($I_{CM}=3A$, $I_C=1.5A$)
- Low $V_{CE(sat)}$ $V_{CE(sat)}=0.2V$ typ (@ $I_C=1A$, $I_B=20mA$)
- High collector dissipation $P_C=500mW$
- Small package for mounting

APPLICATION

VCR, tape deck, small type motor drive for player, drive for relay, power supply for ripple filter.

OUTLINE DRAWING

Unit:mm

**TERMINAL CONNECTOR**

E : EMITTER
C : COLLECTOR
B : BASE

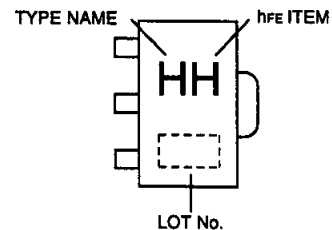
EIAJ : SC-62
JEDEC : -

Note)

The dimension without tolerance represent central value.

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

Symbol	Parameter	Rating	Unit
V_{CBO}	Collector to Base voltage	30	V
V_{EBO}	Emitter to Base voltage	6	V
V_{CEO}	Collector to Emitter voltage	25	V
I_{CM}	Peak collector current	3	A
I_C	Collector current	1.5	A
P_C	Collector dissipation ($T_a=25^\circ C$)	500	mW
T_j	Junction temperature	+150	$^\circ C$
T_{stg}	Storage temperature	-55 to +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 break down voltage	$I_C=10\mu A, I_E=0$	30			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	$I_C=1mA, R_{BE}=\infty$	25			V
I_{CBO}	Collector cut off current	$V_{CB}=20V, I_E=0$			0.1	μA
I_{EBO}	Emitter cut off current	$V_{EB}=2V, I_C=0$			0.1	μA
h_{FE}^*	DC forward current gain	$V_{CE}=6V, I_C=500mA$	400		1800	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=1A, I_B=20mA$		0.2	0.5	V
f_T	Gain band width product	$V_{CE}=10V, I_E=-10mA$		130		MHz
C_{ob}	Collector output capacitance	$V_{CB}=10V, I_E=0, f=1MHz$		17		pF

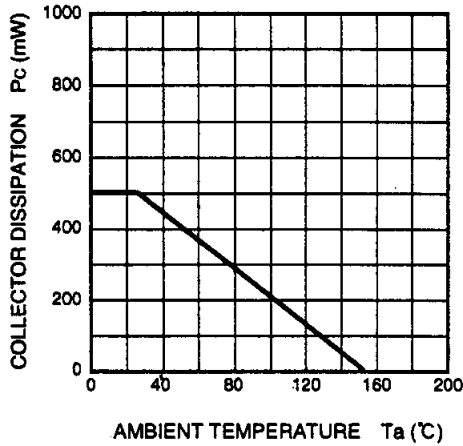
* : It shows h_{FE} classification in right table.

Marking	HG	HH	HJ
h_{FE}	400 to 800	600 to 1200	900 to 1800

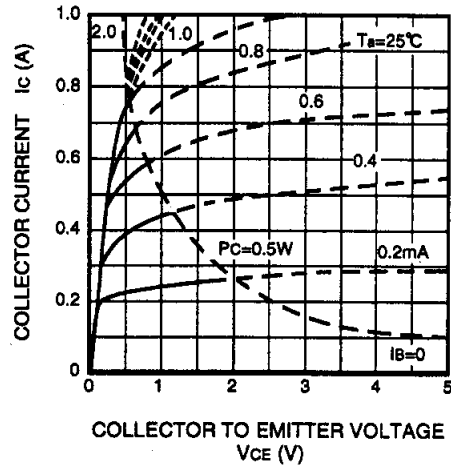
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SILICON NPN EPITAXIAL TYPE**

TYPICAL CHARACTERISTICS

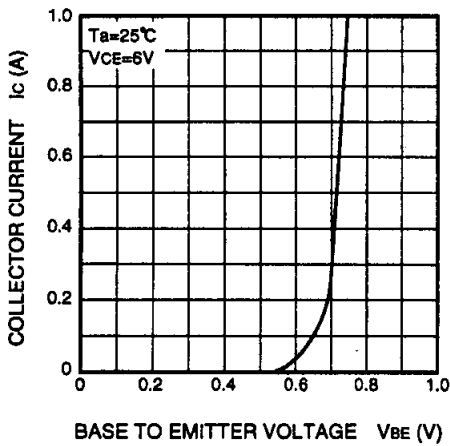
**COLLECTOR DISSIPATION VS.
AMBIENT TEMPERATURE**



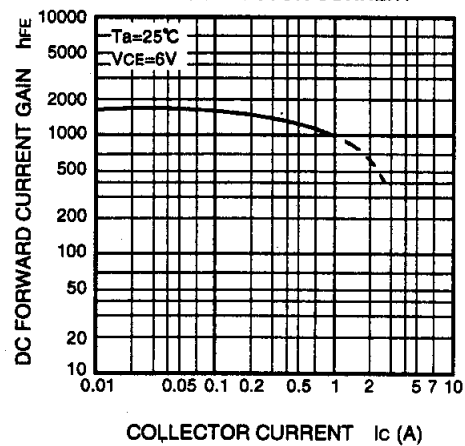
COMMON EMITTER OUTPUT



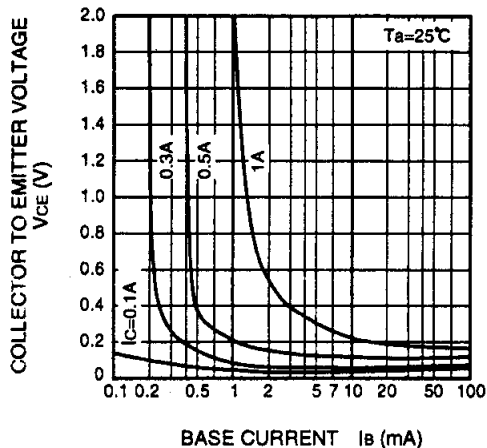
COMMON EMITTER TRANSFER



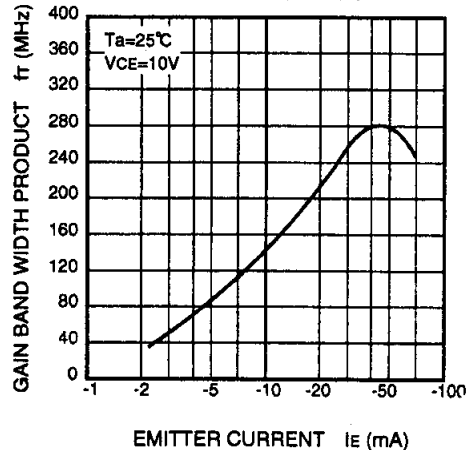
**DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT**



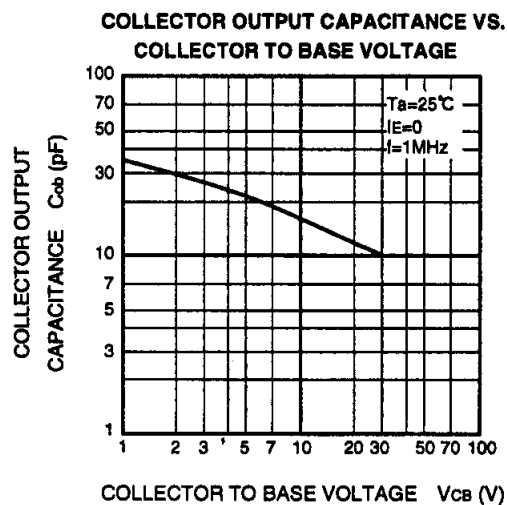
**COLLECTOR TO EMITTER SATURATION
VOLTAGE VS. BASE CURRENT**



**GAIN BAND WIDTH PRODUCT VS.
EMITTER CURRENT**



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