

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

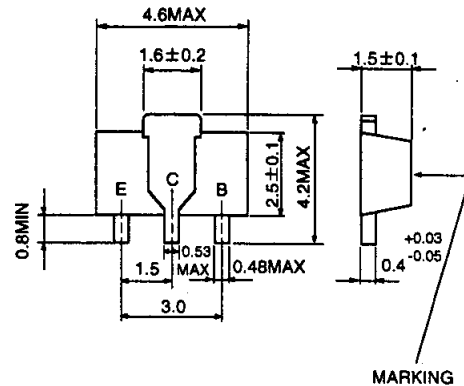
- High h_{FE} $h_{FE}=400$ to 1800
- High collector current ($I_{CM}=3A$, $I_C=1.5A$)
- Low $V_{CE(sat)}$ $V_{CE(sat)}=0.2V$ typ (@ $I_C=1A$, $I_B=20mA$)
- High collector dissipation $P_C=500mW$
- Small package for mounting

APPLICATION

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

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

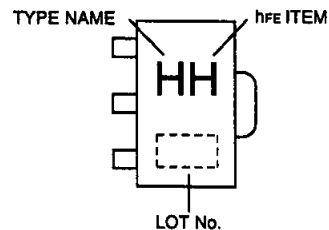
E : EMITTER
C : COLLECTOR EIAJ : SC-62
B : BASE JEDEC : -

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	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

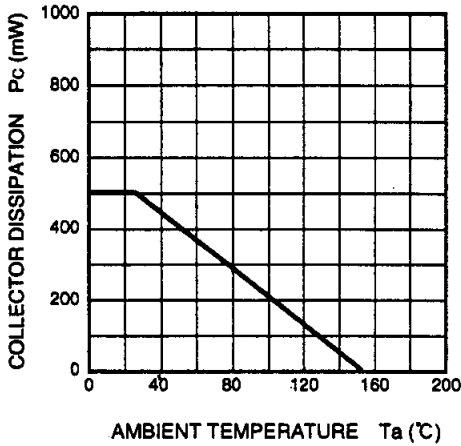
* : It shows h_{FE} classification in right table.

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

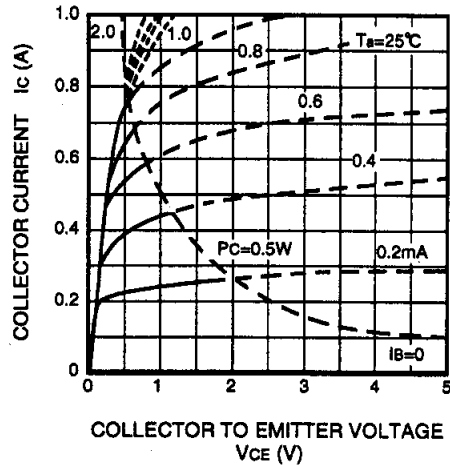
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TYPICAL CHARACTERISTICS

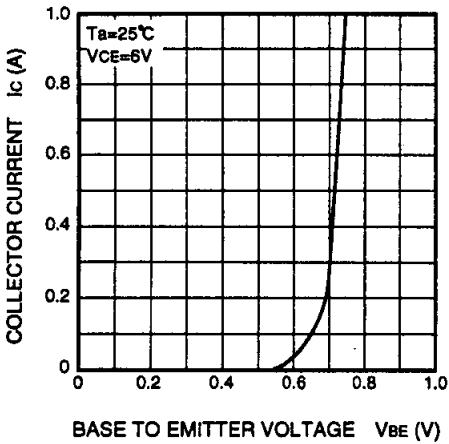
COLLECTOR DISSIPATION VS.
AMBIENT TEMPERATURE



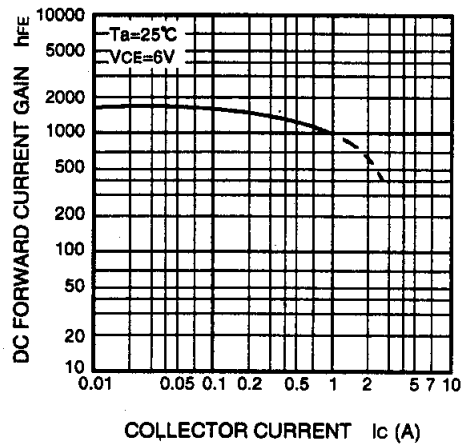
COMMON EMITTER OUTPUT



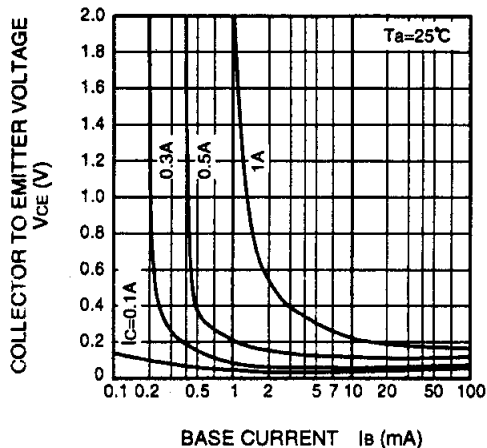
COMMON EMITTER TRANSFER



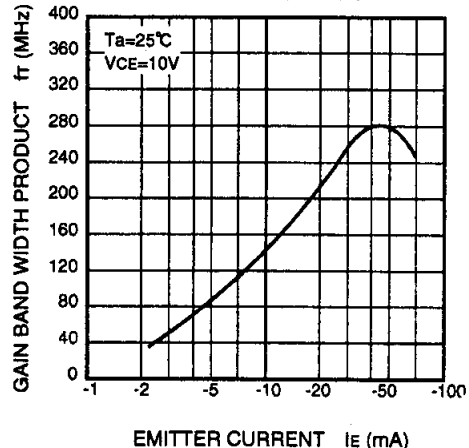
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



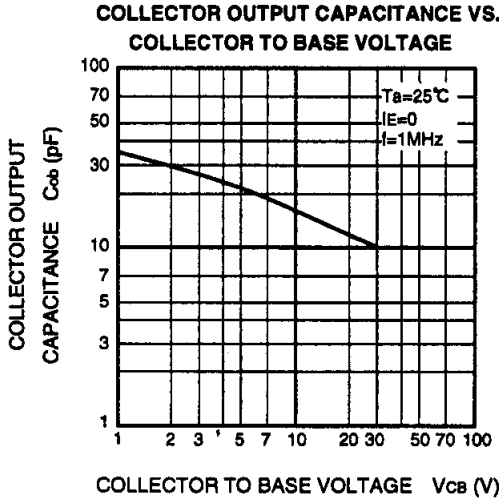
COLLECTOR TO EMITTER SATURATION
VOLTAGE VS. BASE CURRENT



GAIN BAND WIDTH PRODUCT VS.
EMITTER CURRENT



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