

**FOR GENERAL PURPOSE HIGH CURRENT DRIVE APPLICATION
SILICON PNP EPITAXIAL TYPE**

DESCRIPTION

2SA1399 is a silicon PNP epitaxial type transistor designed with high collector current, high voltage.

Complementary with 2SC3581.

FEATURE

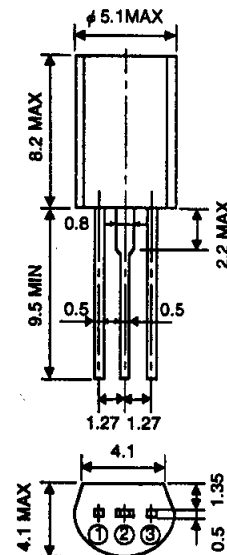
- High collector current $I_{CM}=600\text{mA}$
- High gain band width product $f_T=150\text{MHz}$ typ
- High V_{CEO} $V_{CEO}=50\text{V}$
- Excellent linearity of DC forward current gain

APPLICATION

For switching, small type motor drive application.

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

- ① : EMITTER
 - ② : COLLECTOR
 - ③ : BASE
- EIAJ : —
JEDEC : —

Note)
The dimension without tolerance represent central value.

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

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	-55	V
V_{EBO}	Emitter to Base voltage	-4	V
V_{CEO}	Collector to Emitter voltage	-50	V
I_{CM}	Peak Collector current	-600	mA
I_C	Collector current	-400	mA
P_C	Collector dissipation ($T_a=25^\circ\text{C}$)	900	mW
T_j	Junction temperature	+150	$^\circ\text{C}$
T_{stg}	Storage temperature	-55 to +150	$^\circ\text{C}$

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

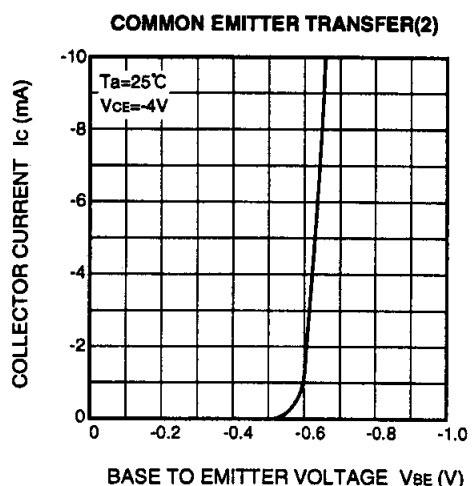
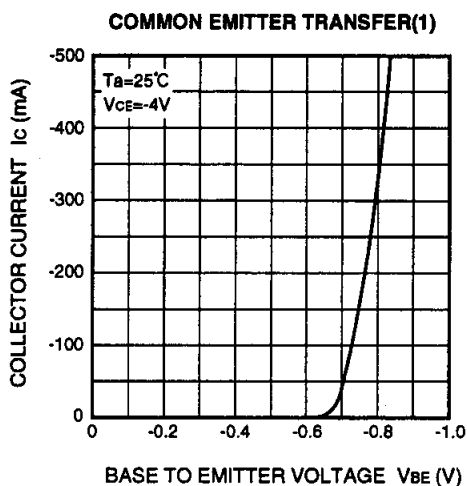
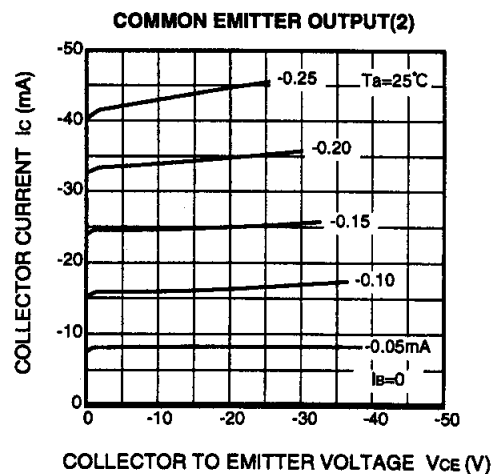
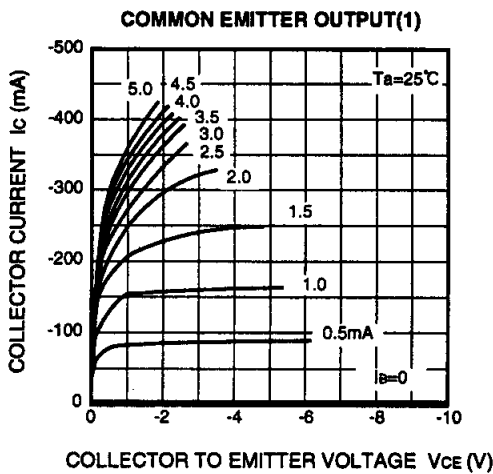
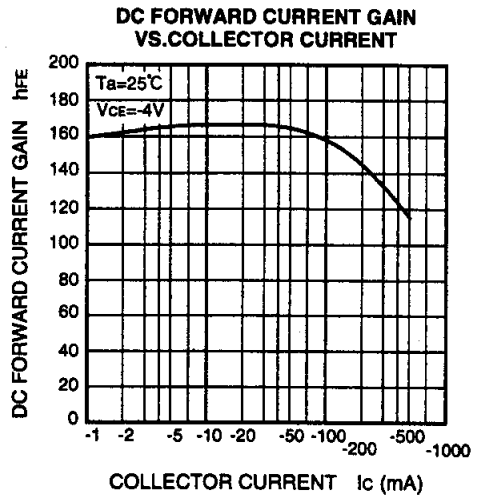
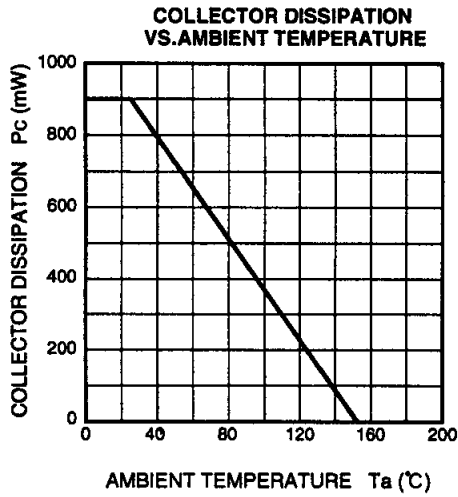
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	$I_C=-10\ \mu\text{A}, I_E=0$	-55			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=-10\ \mu\text{A}, I_C=0$	-4			V
$V_{(BR)CEO}$	C to E break down voltage	$I_C=-100\ \mu\text{A}, R_{BE}=\infty$	-50			V
I_{CBO}	Collector cut off current	$V_{CB}=-25\text{V}, I_E=0$			-1	μA
I_{EBO}	Emitter cut off current	$V_{EB}=-2\text{V}, I_C=0$			-1	μA
h_{FE}^*	DC forward current gain	$V_{CE}=-4\text{V}, I_C=-100\text{mA}$	90		500	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=-200\text{mA}, I_B=-10\text{mA}$		-0.17	-0.5	V
f_T	Gain band width product	$V_{CE}=-6\text{V}, I_E=10\text{mA}$		150		MHz

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

Item	D	E	F
h_{FE}	90 to 180	150 to 300	250 to 500

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TYPICAL CHARACTERISTICS



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