〈SMALL-SIGNAL TRANSISTOR〉

2SC4356

FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

..... 2SC4356 is a silicon NPN epitaxial type transistor designed relay drive application.

FEATURE

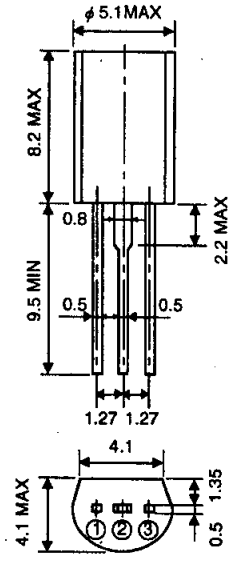
- High voltage V_{CEO}=60V
- High collector current I_C=2A
- Low $V_{CE(sat)}$ $V_{CE(sat)}$=0.5Vmax (@I_C=1A,I_B=50mA)
- High collector dissipation P_C=900mW

APPLICATION

Audio machine, VCR, relay drive.

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

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

Note)
The dimension without tolerance represent central value.

MAXIMUM RATINGS (Ta=25℃)

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	60	V
V_{EBO}	Emitter to Base voltage	6	V
V_{CEO}	Collector to Emitter voltage	60	V
I_{CM}	Peak Collector current	3	A
I_C	Collector current	2	A
P_C	Collector dissipation(Ta=25℃)	900	mW
T_j	Junction temperature	+150	℃
T_{stg}	Storage temperature	-55 to +150	℃

ELECTRIAL CHARACTERISTICS (Ta=25℃)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	I_C=10μA,I_E=0	60			V
$V_{(BR)EBO}$	E to B break down voltage	I_E=10μA,I_C=0	6			V
$V_{(BR)CEO}$	C to E break down voltage	I_C=2mA,R_{BE}=∞	60			V
I_{CBO}	Collector cut off current	V_{CB}=50V,I_E=0			0.2	μA
I_{EBO}	Emitter cut off current	V_{EB}=4V,I_C=0			0.2	μA
h_{FE} *	DC forward current gain	V_{CE}=4V,I_C=100mA	55		300	—
$V_{CE(sat)}$	C to E saturation voltage	I_C=1A,I_B=50mA		0.2	0.5	V
f_T	Gain band width product	V_{CE}=2V,I_E=-10mA		80		MHz
C_{ob}	Collector output capacitance	V_{CB}=10V,I_E=0,f=1MHz		18		pF

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

Item	C	D	E
h_{FE}	55 to 110	90 to 180	150 to 300

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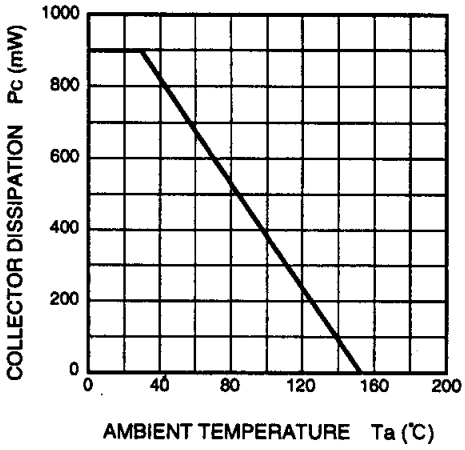
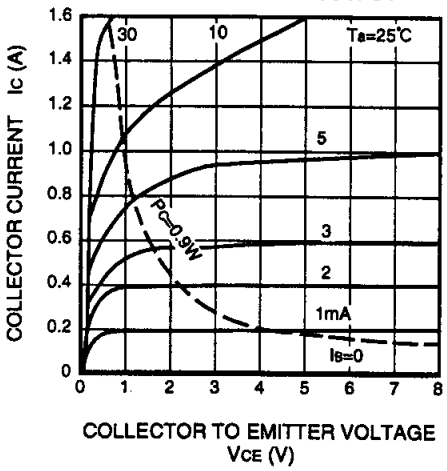
TYPICAL CHARACTERISTICS

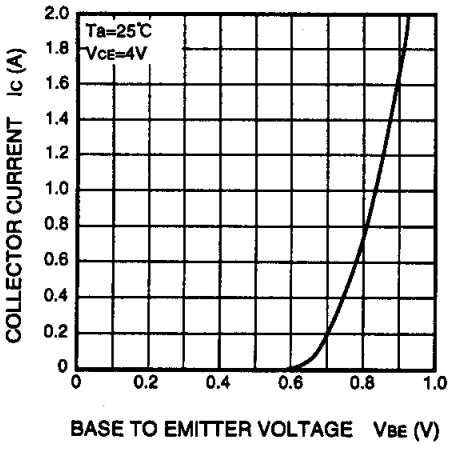
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



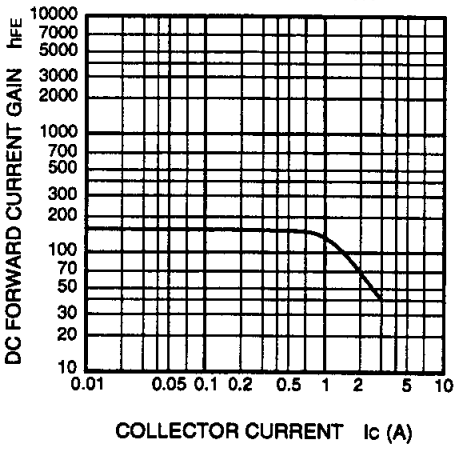
COMMON EMITTER OUTPUT



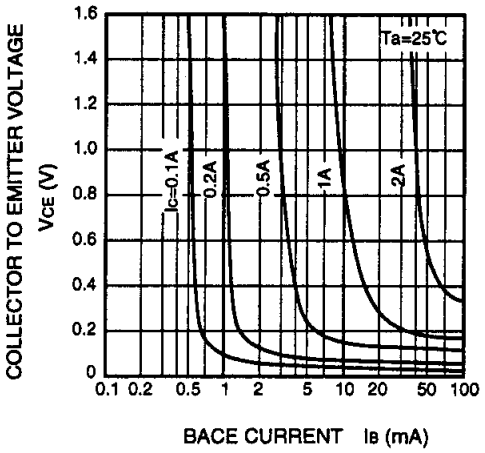
COMMON EMITTER TRANSFER



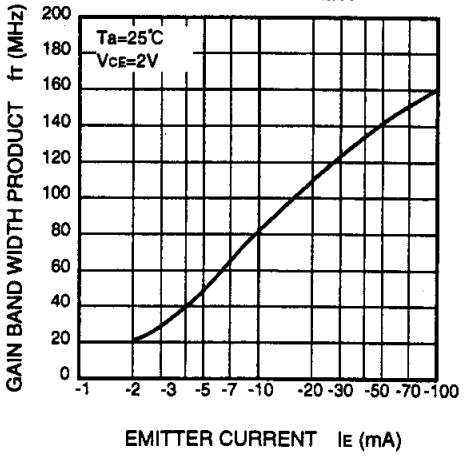
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



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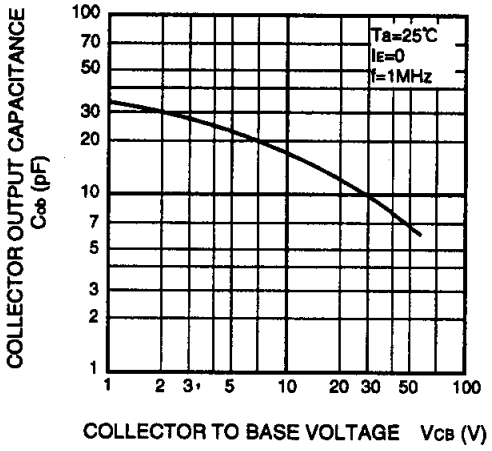
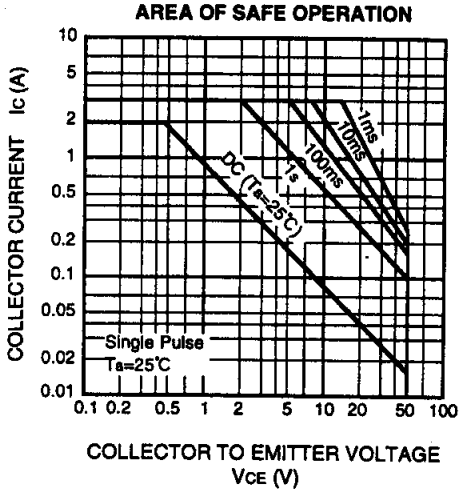
COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE



AREA OF SAFE OPERATION



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