

〈SMALL-SIGNAL TRANSISTOR〉

2SC4357

FOR HIGH CURRENT DRIVE AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

2SC4357 is a silicon NPN epitaxial type transistor designed for high collector current, for high voltage.

FEATURE

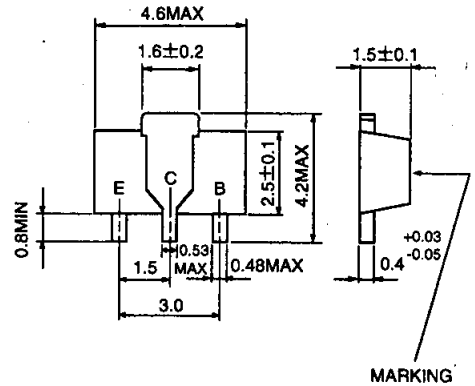
- High voltage $V_{CE0}=60V$
- High collector current ($I_C=2A$)
- Low collector to emitter saturation voltage
 $V_{CE(sat)}=0.5V$ max(@ $I_C=1A, I_B=50mA$)
- High collector dissipation $P_C=500mW$

APPLICATION

Audio machine, VCR, relay drive, power supply.

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

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

Note)

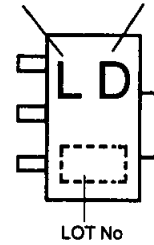
The dimension without tolerance represent central value.

MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings	Unit
V_{CB0}	Collector to Base voltage	60	V
V_{EB0}	Emitter to Base voltage	6	V
V_{CE0}	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°C)	500	mW
T_j	Junction temperature	+150	°C
T_{stg}	Storage temperature	-55 to +150	°C

MARKING

TYPE NAME hFE ITEM



ELECTRICAL CHARACTERISTICS (Ta=25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	$I_C=10\mu A, I_E=0$	60			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	$I_C=2mA, R_{BE}=\infty$	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
hFE *	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

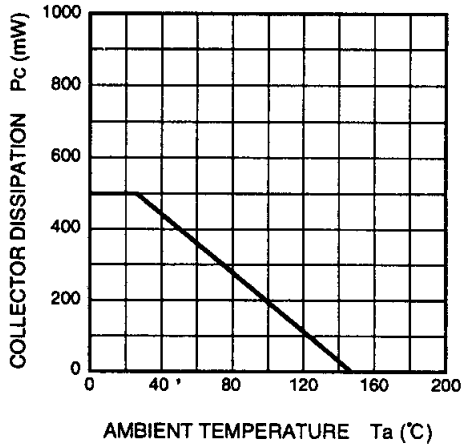
* : It shows hFE classification in right table.

Marking	LC	LD	LE
hFE	55 to 110	90 to 180	150 to 300

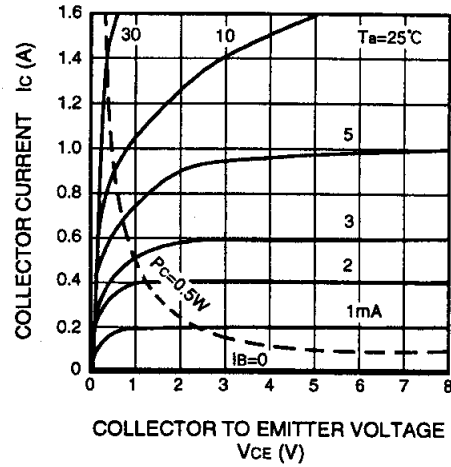
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TYPICAL CHARACTERISTICS

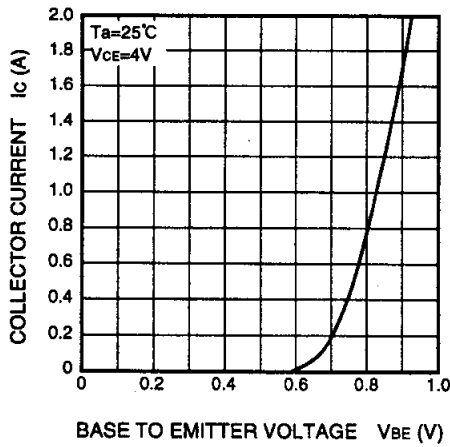
COLLECTOR DISSIPATION VS.
AMBIENT TEMPERATURE



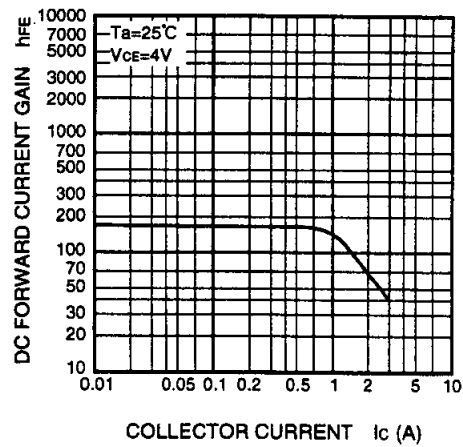
COMMON EMITTER OUTPUT



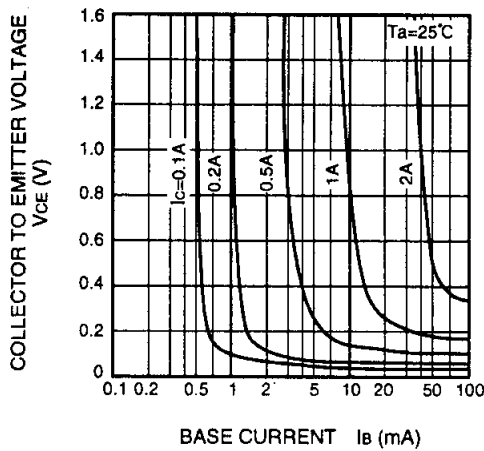
COMMON EMITTER TRANSFER



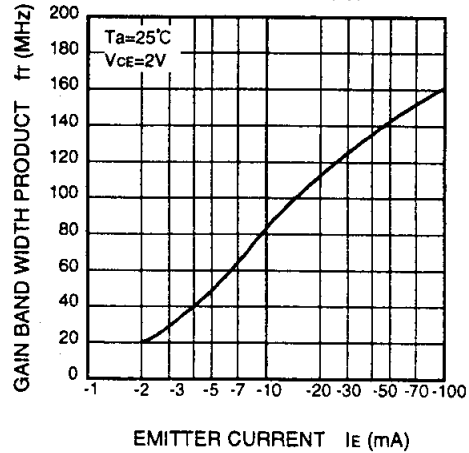
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION
VOLTAGE VS. BASE CURRENT



GAIN BAND WIDTH PRODUCT VS.
EMITTER CURRENT



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