

**DESCRIPTION**

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

**FEATURE**

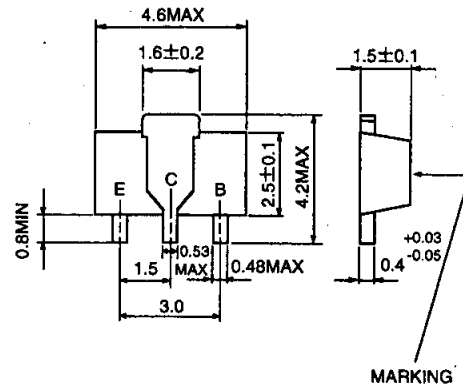
- High voltage  $V_{CE0}=60V$
- High collector current ( $I_C=2A$ )
- Low collector to emitter saturation voltage  
 $V_{CE(sat)}=0.5V$  max(@  $I_C=1A, I_B=50mA$ )
- High collector dissipation  $P_C=500mW$

**APPLICATION**

Audio machine, VCR, relay drive, power supply.

**OUTLINE DRAWING**

Unit:mm



**TERMINAL CONNECTOR**

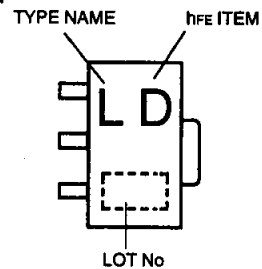
E : EMITTER  
C : COLLECTOR EIAJ : SC-62  
B : BASE JEDEC : -

Note)  
The dimension without tolerance represent central value.

**MAXIMUM RATINGS (Ta=25°C)**

Symbol	Parameter	Ratings	Unit
$V_{CE0}$	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**



**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	$\mu A$
$I_{EBO}$	Emitter cut off current	$V_{EB}=4V, I_C=0$			0.2	$\mu A$
$h_{FE} *$	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

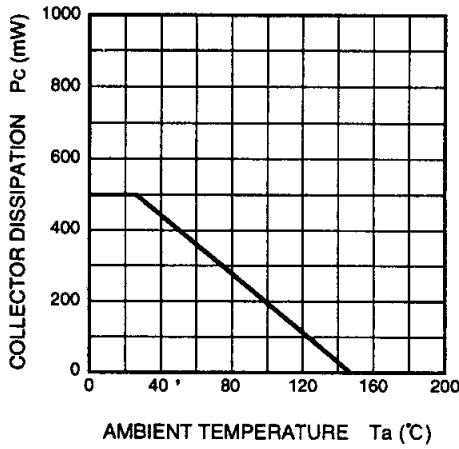
\* : It shows hFE classification in right table.

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

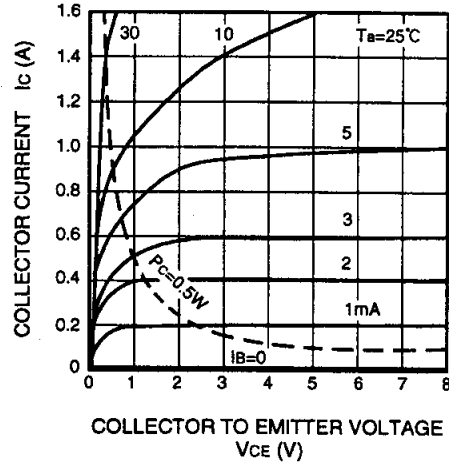
FOR HIGH CURRENT DRIVE AMPLIFY APPLICATION  
SILICON NPN EPITAXIAL TYPE

**TYPICAL CHARACTERISTICS**

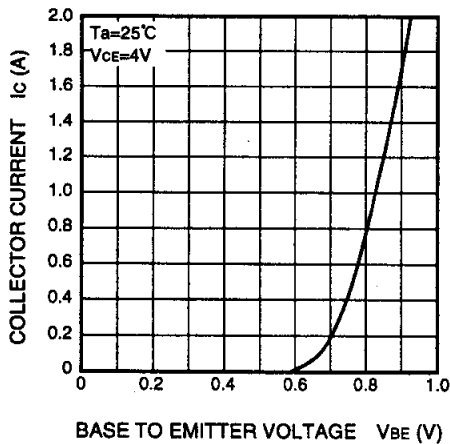
**COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE**



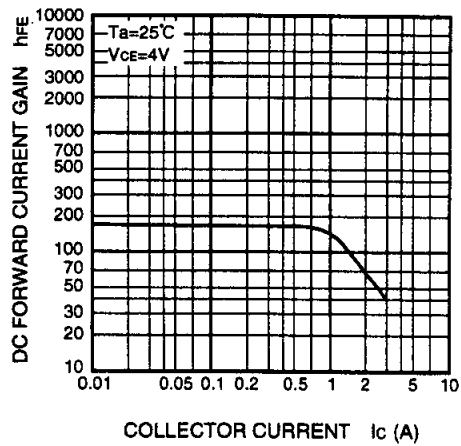
**COMMON EMITTER OUTPUT**



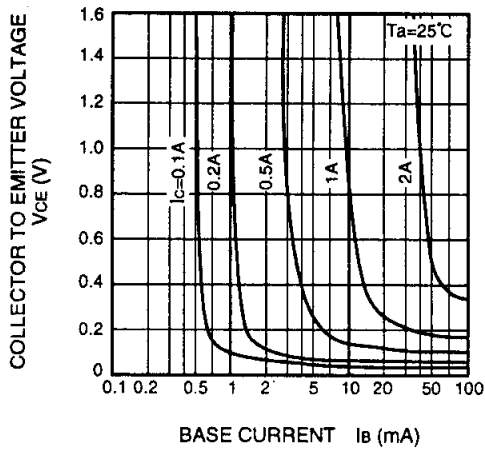
**COMMON EMITTER TRANSFER**



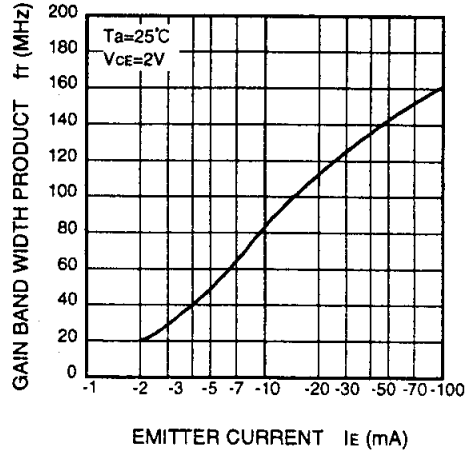
**DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT**



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

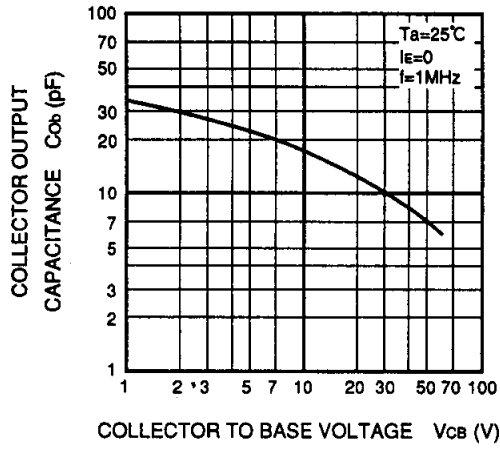


**GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT**

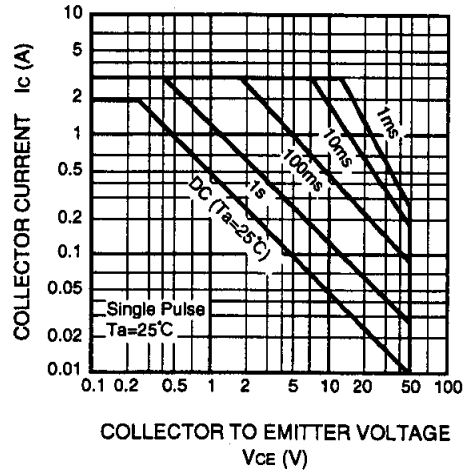


**FOR HIGH CURRENT DRIVE AMPLIFY APPLICATION  
SILICON NPN EPITAXIAL TYPE**

**COLLECTOR OUTPUT CAPACITANCE VS.  
COLLECTOR TO BASE VOLTAGE**



**AREA OF SAFE OPERATION**



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