

# 2SD2357

## Silicon NPN epitaxial planer type

For low-frequency amplification

Complementary to 2SB1537

### Features

- Low collector to emitter saturation voltage  $V_{CE(sat)}$ .
- Large collector power dissipation  $P_C$ .
- Mini Power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

### Absolute Maximum Ratings (Ta=25°C)

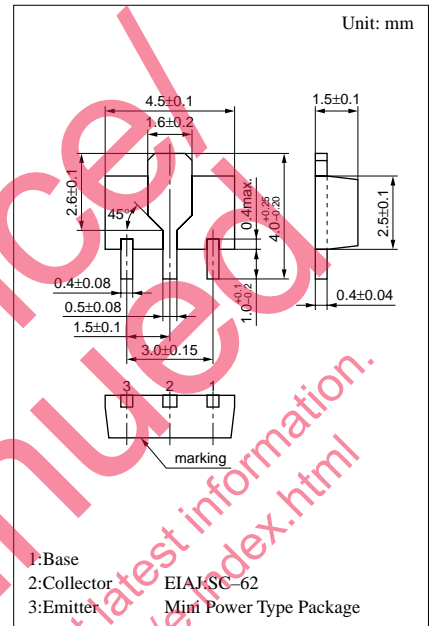
Parameter	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	10	V
Collector to emitter voltage	$V_{CEO}$	10	V
Emitter to base voltage	$V_{EBO}$	5	V
Peak collector current	$I_{CP}$	1.2	A
Collector current	$I_C$	1	A
Collector power dissipation	$P_C^*$	1	W
Junction temperature	$T_J$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C

\* Printed circuit board: Copper foil area of 1cm<sup>2</sup> or more, and the board thickness of 1.7mm for the collector portion

### Electrical Characteristics (Ta=25°C)

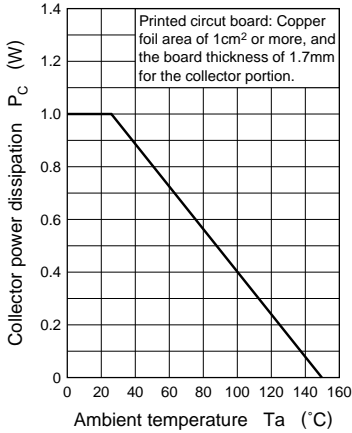
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 7V, I_E = 0$			1	μA
Collector to base voltage	$V_{CBO}$	$I_E = 10\mu A, I_C = 0$	10			V
Collector to emitter voltage	$V_{CEO}$	$I_C = 1mA, I_B = 0$	10			V
Emitter to base voltage	$V_{EBO}$	$I_E = 10\mu A, I_C = 0$	5			V
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 2V, I_C = 100mA^{**}$	200		800	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 5mA$			0.15	V
Transition frequency	$f_T$	$V_{CB} = 5V, I_E = -50mA, f = 200MHz$		120		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 5V, I_E = 0, f = 1MHz$		30		pF

\*\* Pulse measurement

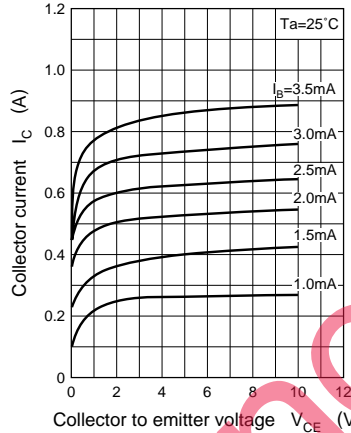


Marking symbol : 1M

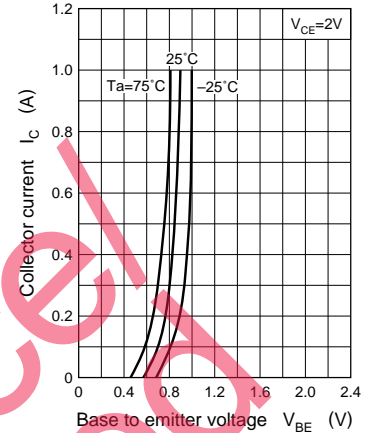
$P_C - T_a$



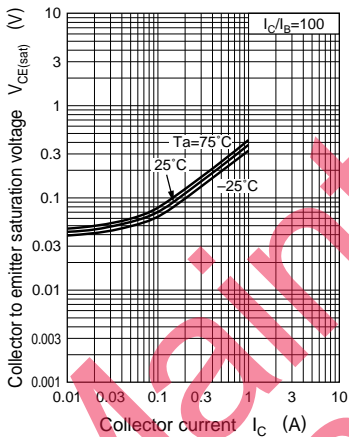
$I_C - V_{CE}$



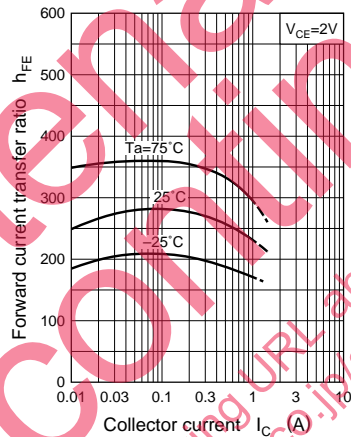
$I_C - V_{BE}$



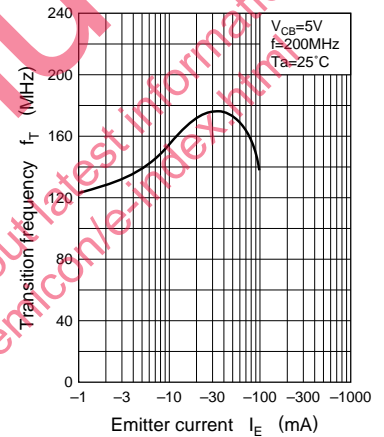
$V_{CE(sat)} - I_C$



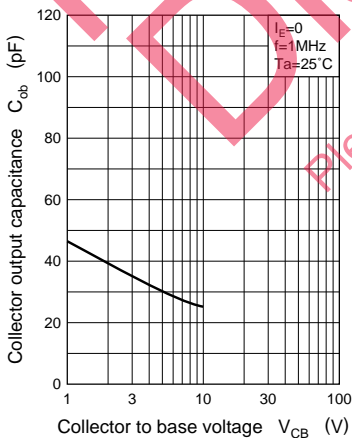
$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$



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