

# 2SD1258

## Silicon NPN Triple-Diffused Planar Type

High DC Current Gain ( $h_{FE}$ ), Power Amplifier

### ■ Features

- High DC current gain ( $h_{FE}$ )
- Good linearity of DC current gain ( $h_{FE}$ )
- "N Type" package configuration with a cooling fin for direct soldering on PC board of a small-size electronic equipment

### ■ Absolute Maximum Ratings ( $T_c=25^\circ\text{C}$ )

Item	Symbol	Value	Unit
Collector-base voltage	$V_{CBO}$	200	V
Collector-emitter voltage	$V_{CEO}$	150	V
Emitter-base voltage	$V_{EBO}$	6	V
Peak collector current	$I_{CP}$	2.5	A
Collector current	$I_C$	1	A
Base current	$I_B$	0.1	A
Collector power dissipation	$T_c=25^\circ\text{C}$	40	W
	$T_a=25^\circ\text{C}$	1.3	
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 ~ +150	$^\circ\text{C}$

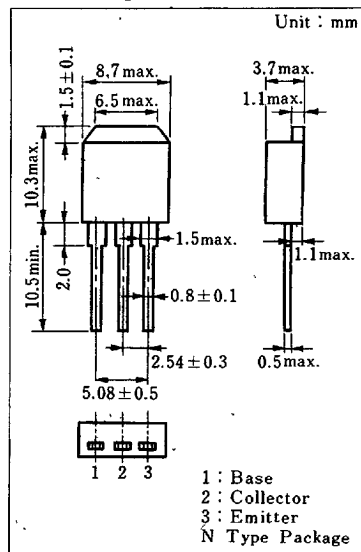
### ■ Electrical Characteristics ( $T_c=25^\circ\text{C}$ )

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB}=200\text{ V}, I_E=0$			100	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB}=6\text{ V}, I_C=0$			100	$\mu\text{A}$
Collector-emitter voltage	$V_{CEO}$	$I_C=25\text{ mA}, I_B=0$	150			V
DC current gain	$h_{FE}^*$	$V_{CE}=4\text{ V}, I_C=0.2\text{ A}$	500		2000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=0.5\text{ A}, I_B=0.02\text{ A}$			1	V
Transition frequency	$f_T$	$V_{CE}=4\text{ V}, I_C=0.1\text{ A}, f=10\text{ MHz}$		25		MHz

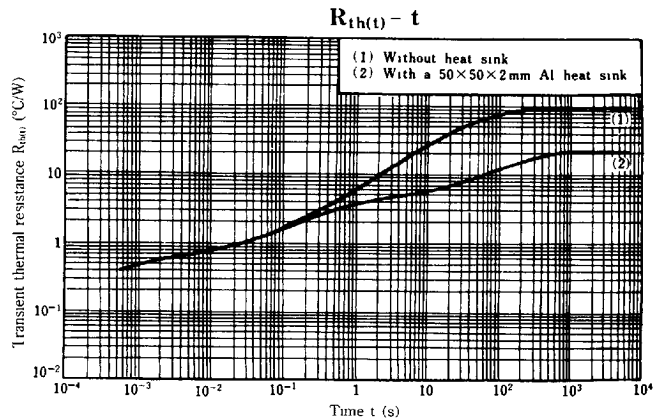
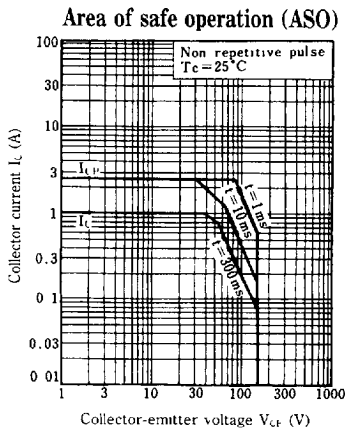
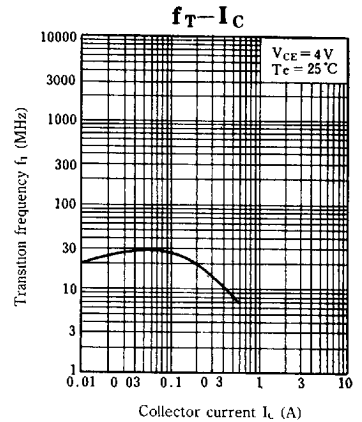
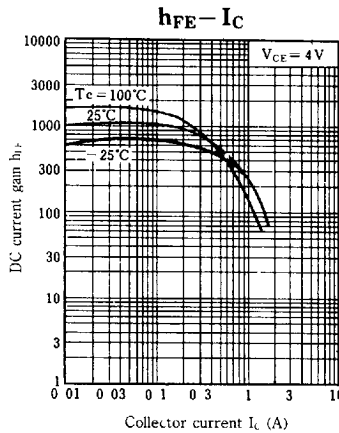
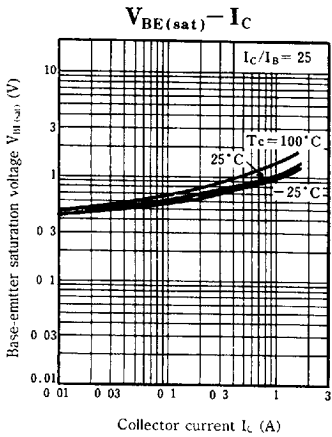
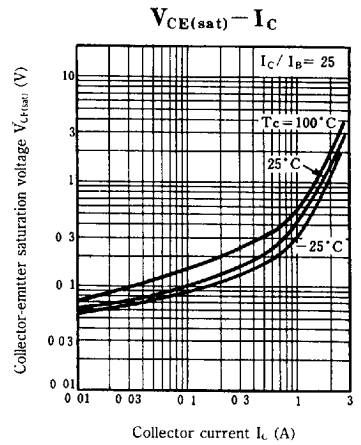
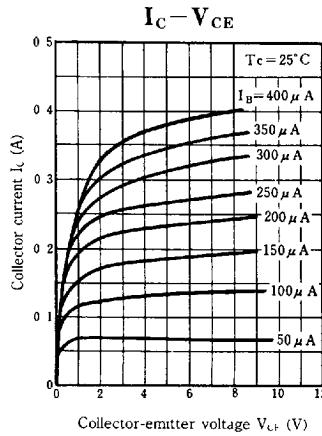
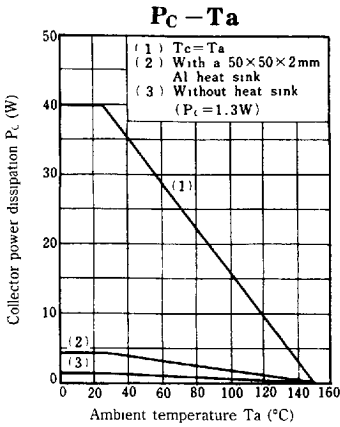
### \* $h_{FE}$ Classifications

Class	Q	P
$h_{FE}$	500 ~ 1200	800 ~ 2000

### ■ Package Dimensions



\*Surface-mount type is also available.  
(Refer to p.82.)



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