# 2SD2240J

### Silicon NPN epitaxial planar type

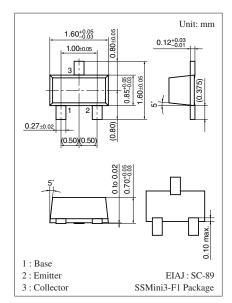
For high breakdown voltage low-noise amplification Complementary to 2SB1463J

#### ■ Features

- ullet High collector-emitter voltage (Base open)  $V_{CEO}$
- Low noise voltage NV
- SS-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing.

### ■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	150	V	
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	150	V	
Emitter-base voltage (Collector open)	$V_{EBO}$	5	V	
Collector current	$I_C$	50	mA	
Peak collector current	$I_{CP}$	100	mA	
Collector power dissipation	P <sub>C</sub>	125	mW	
Junction temperature	$T_{j}$	125	°C	
Storage temperature	$T_{stg}$	-55 to +125	°C	



Marking Symbol: P

#### ■ Electrical Characteristics $T_a = 25$ °C $\pm 3$ °C

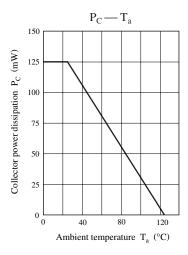
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_C = 100 \mu\text{A},  I_B = 0$	150			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 10 \ \mu A, I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = 100 \text{ V}, I_{E} = 0$			1	μΑ
Forward current transfer ratio *	h <sub>FE</sub>	$V_{CE} = 5 \text{ V}, I_{C} = 10 \text{ mA}$	130		330	_
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_C = 30 \text{ mA}, I_B = 3 \text{ mA}$			1	V
Transition frequency	$f_T$	$V_{CB} = 10 \text{ V}, I_E = -10 \text{ mA}, f = 200 \text{ MHz}$		150		MHz
Collector output capacitance	C <sub>ob</sub>	$V_{CB} = 10 \text{ V}, I_{E} = 0, f = 1 \text{ MHz}$		2.3		pF
(Common base, input open circuited)						
Noixe voltage	NV	$V_{CE} = 10 \text{ V}, I_{C} = 1 \text{ mA}, G_{V} = 80 \text{ dB}$		150		mV
		$R_g = 100 \text{ k}\Omega$ , Function = FLAT				

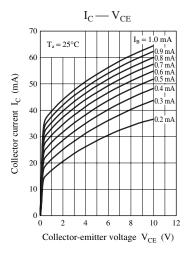
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

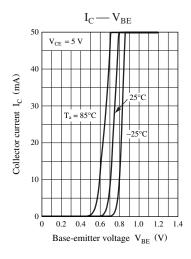
#### 2. \*: Rank classification

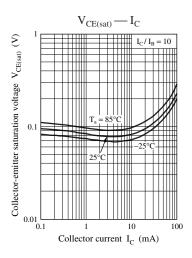
Rank	R	S
$h_{\mathrm{FE}}$	130 to 220	185 to 330

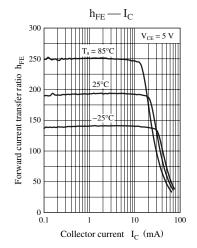
## **Panasonic**

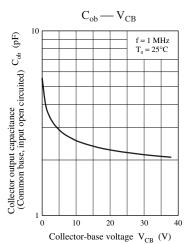












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