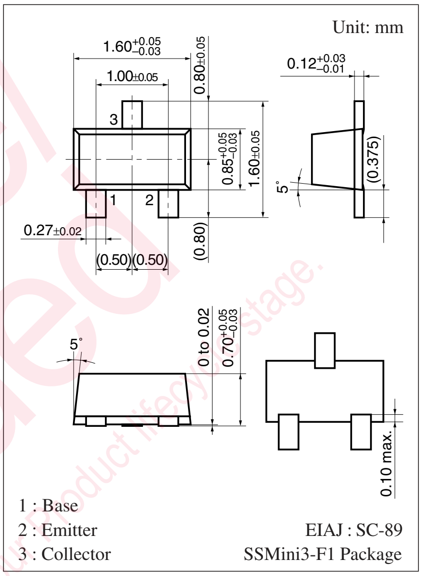
2SD2240J

Silicon NPN epitaxial planar type

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



Marking Symbol: P

■ Features

- 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_{CBO}	150	V
Collector-emitter voltage (Base open)	V_{CEO}	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_C	125	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	−55 to +125	°C

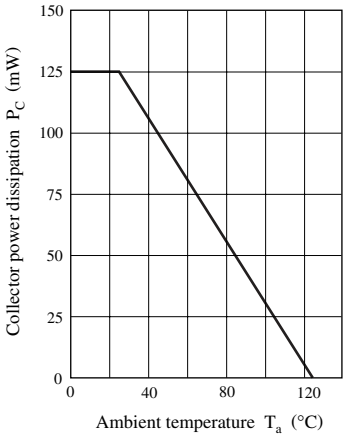
■ Electrical Characteristics $T_a = 25°C \pm 3°C$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 100\ \mu A$, $I_B = 0$	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}	$V_{CB} = 100$ V, $I_E = 0$			1	µA
Forward current transfer ratio *	h_{FE}	$V_{CE} = 5$ V, $I_C = 10$ mA	130		330	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 30$ mA, $I_B = 3$ mA			1	V
Transition frequency	f_T	$V_{CB} = 10$ V, $I_E = -10$ mA, f = 200 MHz		150		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 10$ V, $I_E = 0$, f = 1 MHz		2.3		pF
Noixe voltage	NV	$V_{CE} = 10$ V, $I_C = 1$ mA, $G_V = 80$ dB, $R_g = 100$ kΩ, Function = FLAT		150		mV

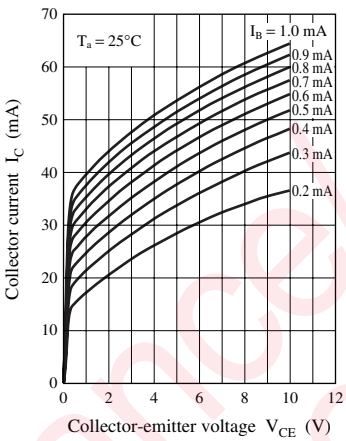
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. ∗: Rank classification

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

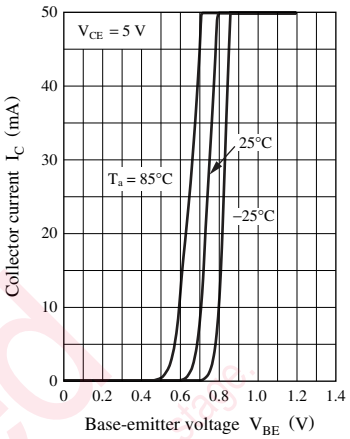
P_C — T_a



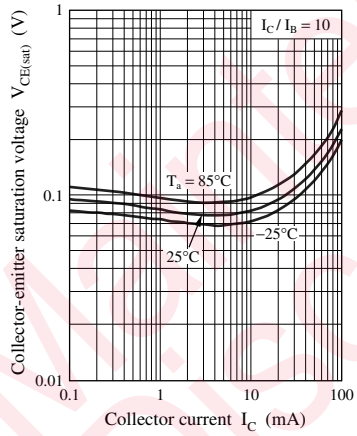
I_C — V_{CE}



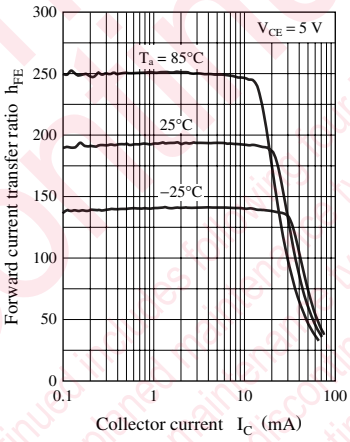
I_C — V_{BE}



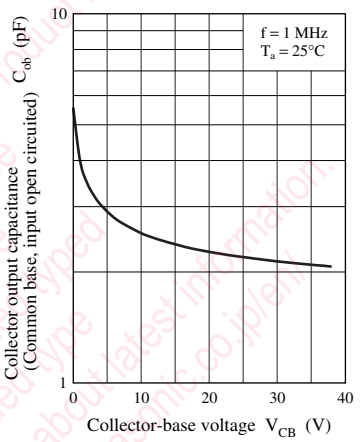
$V_{CE(sat)}$ — I_C



h_{FE} — I_C



C_{ob} — V_{CB}



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