2SD2216G

Silicon NPN epitaxial planar type

For general amplification
Complementary to 2SB1462G

■ Features

- High forward current transfer ratio h_{FE}
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- SS-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing.

■ Package

- Code
  SSMini3-F3
- Marking Symbol: Y
- Pin Name
  1: Base
  2: Emitter
  3: Collector

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	60	V
Collector-emitter voltage (Base open)	V_{CEO}	50	V
Emitter-base voltage (Collector open)	V_{EBO}	7	V
Collector current	I_C	100	mA
Peak collector current	I_{CP}	200	mA
Collector power dissipation	P_C	125	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	–55 to +125	°C

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

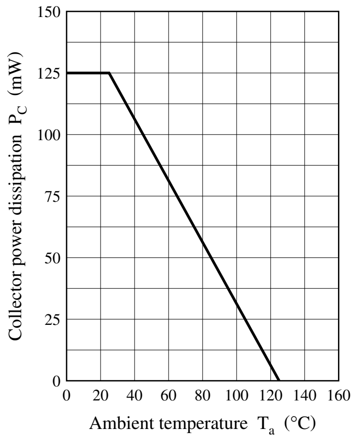
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	I_C = 10 µA, I_E = 0	60			V
Collector-emitter voltage (Base open)	V_{CEO}	I_C = 2 mA, I_B = 0	50			V
Emitter-base voltage (Collector open)	V_{EBO}	I_E = 10 µA, I_C = 0	7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	V_{CB} = 20 V, I_E = 0			0.1	µA
Collector-emitter cutoff current (Base open)	I_{CEO}	V_{CE} = 10 V, I_B = 0			100	µA
Forward current transfer ratio	h_{FE1} *2	V_{CE} = 10 V, I_C = 2 mA	160		460	—
	h_{FE2} *1	V_{CE} = 2 V, I_C = 100 mA	90			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 100 mA, I_B = 10 mA		0.1	0.3	V
Transition frequency	f_T	V_{CB} = 10 V, I_E = –2 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		3.5		pF

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

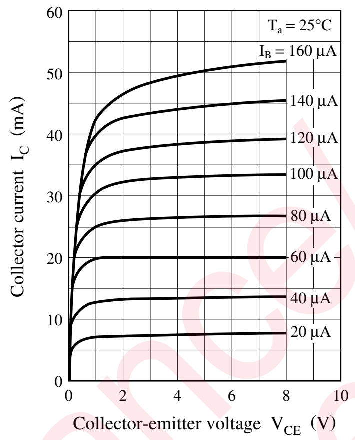
Rank	Q	R	S	No rank
h_{FE1}	160 to 260	210 to 340	290 to 460	180 to 390

Product of no-rank is not classified and have no marking symbol for rank.

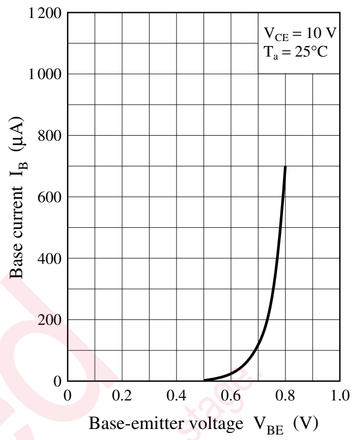
P_C — T_a



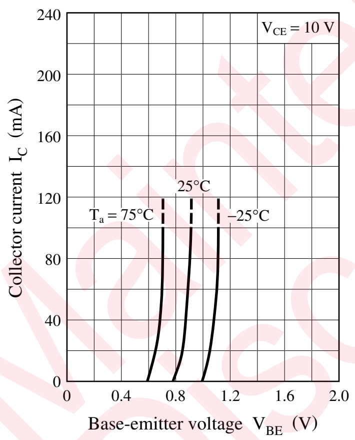
I_C — V_{CE}



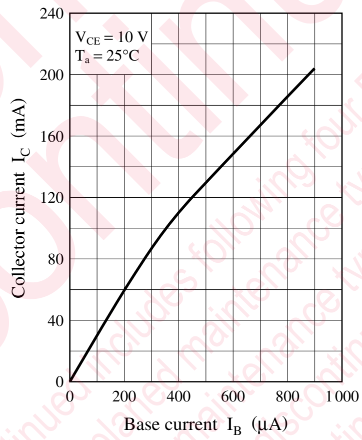
I_B — V_{BE}



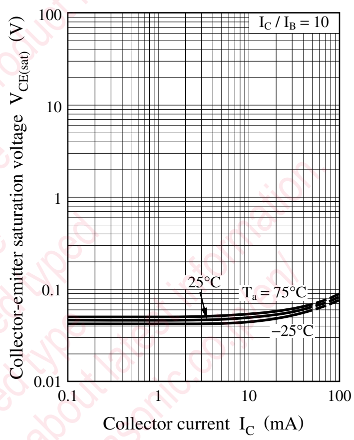
I_C — V_{BE}



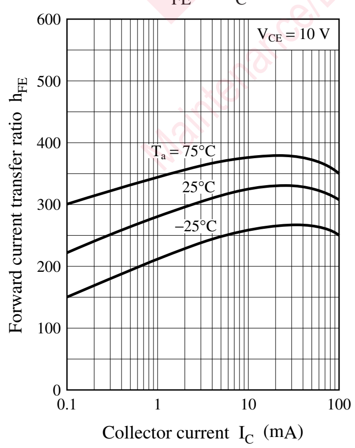
I_C — I_B



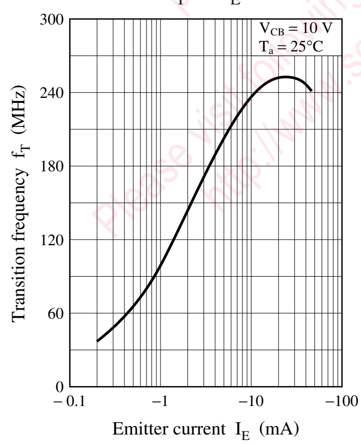
$V_{CE(sat)}$ — I_C



h_{FE} — I_C



f_T — I_E



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