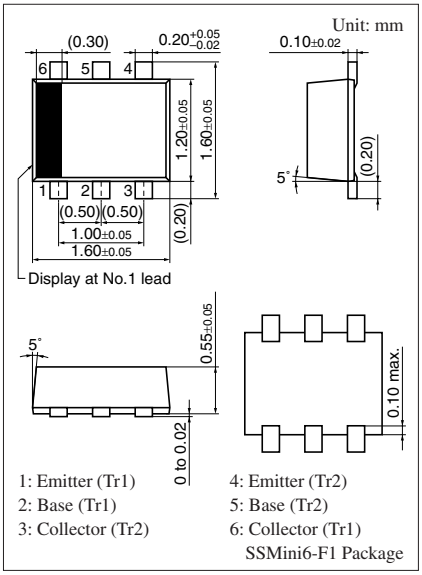
UP04534

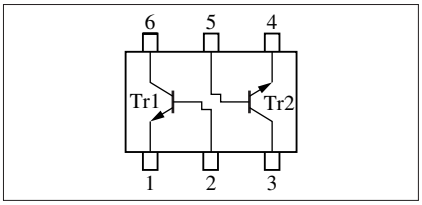
Silicon NPN epitaxial planar transistor

For high-frequency amplification



Marking Symbol: 7E

Internal Connection



■ Features

- Two elements incorporated into one package (Each transistor is separated)
- Reduction of the mounting area and assembly cost by one half

■ Basic Part Number of Element

- 2SC2404 × 2 elements

■ Absolute Maximum Ratings $T_a = 25°C$

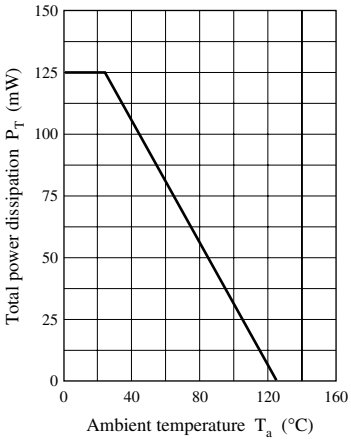
Parameter		Symbol	Rating	Unit
Rating of element	Collector-base voltage (Emitter open)	V_{CBO}	30	V
	Collector-emitter voltage (Base open)	V_{CEO}	20	V
	Emitter-base voltage (Collector open)	V_{EBO}	3	V
	Collector current	I_C	15	mA
Overall	Total power dissipation	P_T	125	mW
	Junction temperature	T_j	125	°C
	Storage temperature	T_{stg}	−55 to +125	°C

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

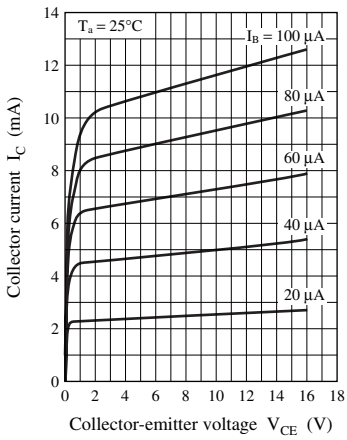
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	I_C = 10 µA, I_E = 0	30			V
Emitter-base voltage (Collector open)	V_{EBO}	I_E = 10 µA, I_C = 0	3			V
Base-emitter voltage	V_{BE}	V_{CB} = 6 V, I_E = −1 mA		720		mV
Forward current transfer ratio	h_{FE}	V_{CB} = 6 V, I_E = −1 mA	65		160	—
Reverse transfer capacitance (Common emitter)	C_{re}	V_{CB} = 6 V, I_E = −1 mA, f = 10.7 MHz		0.8	1.0	pF
Transition frequency	f_T	V_{CB} = 6 V, I_E = −1 mA, f = 200 MHz	450	650		MHz
Noise figure	NF	V_{CB} = 6 V, I_E = −1 mA, f = 100 MHz		3.3		dB
Power gain	G_P	V_{CB} = 6 V, I_E = −1 mA, f = 100 MHz		24		dB

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

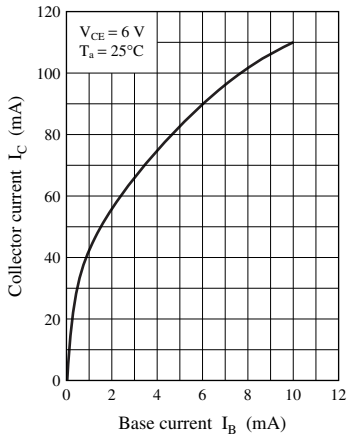
P_T — T_a



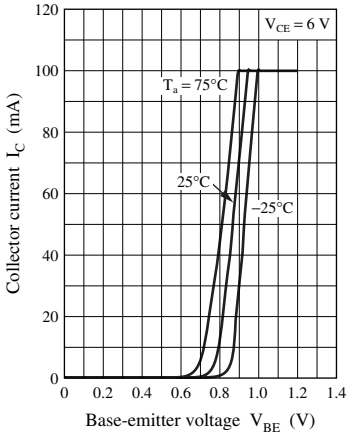
I_C — V_{CE}



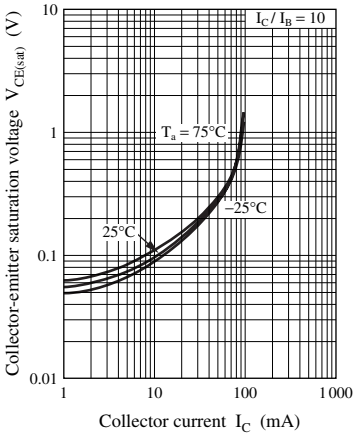
I_C — I_B



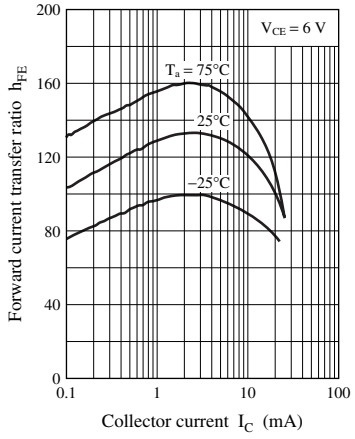
I_C — V_{BE}



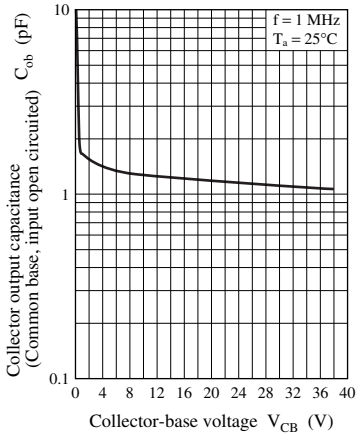
$V_{CE(sat)}$ — I_C



h_{FE} — I_C



C_{ob} — V_{CB}



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