

XN0F256

Silicon NPN epitaxial planar type

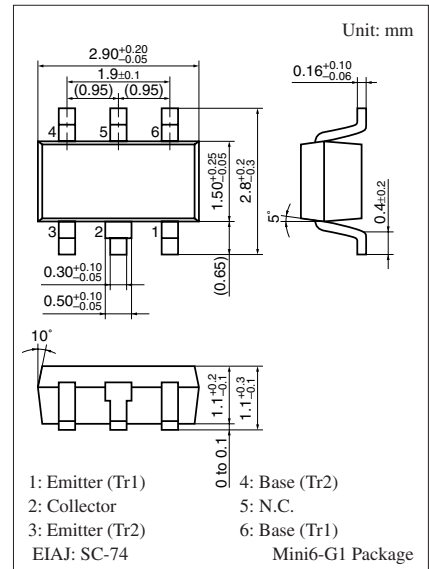
For muting

■ Features

- Two elements incorporated into one package
(Collector-coupled transistors with built-in resistor)
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Reduction of the mounting area and assembly cost by one half

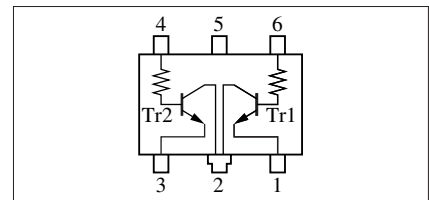
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
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}	5	V
Collector current	I_C	600	mA
Total power dissipation	P_T	300	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



Marking Symbol: 6A

Internal Connection

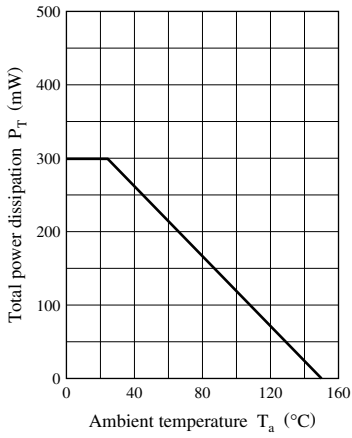


■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

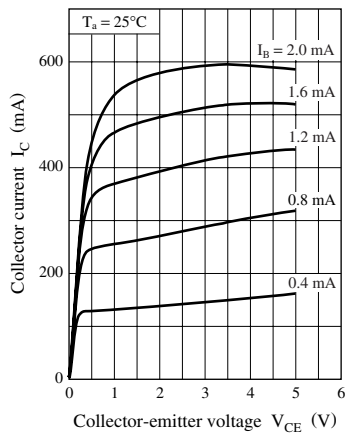
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 1 \mu\text{A}, I_E = 0$	30			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 1 \text{ mA}, I_B = 0$	20			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 1 \mu\text{A}, I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 30 \text{ V}, I_E = 0$			1	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 5 \text{ V}, I_C = 0$			1	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 5 \text{ V}, I_C = 50 \text{ mA}$	100		600	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50 \text{ mA}, I_B = 2.5 \text{ mA}$			80	mV
Input resistance	R_i		-30%	4.7	+30%	k Ω
Transition frequency	f_T	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz

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

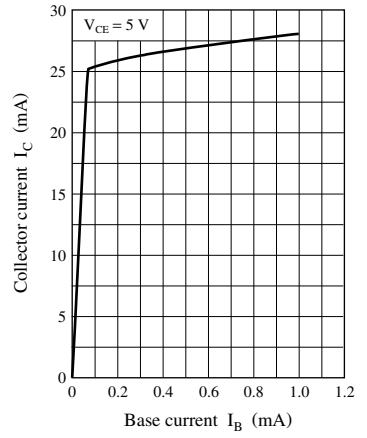
$P_T - T_a$



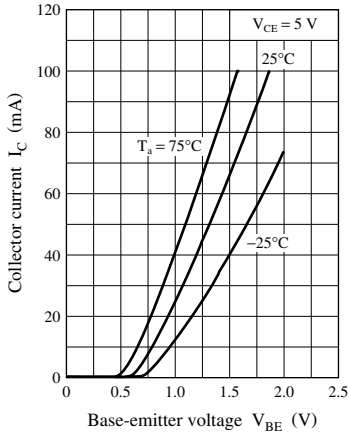
$I_C - V_{CE}$



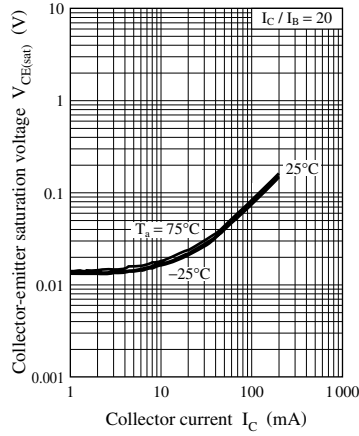
$I_C - I_B$



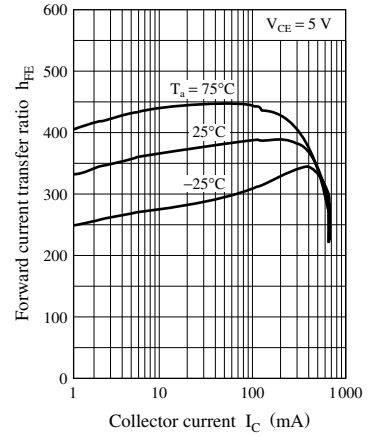
$I_C - V_{BE}$



$V_{CE(sat)} - I_C$



$h_{FE} - I_C$



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