

PNP EPITAXIAL SILICON TRANSISTOR

ST9018

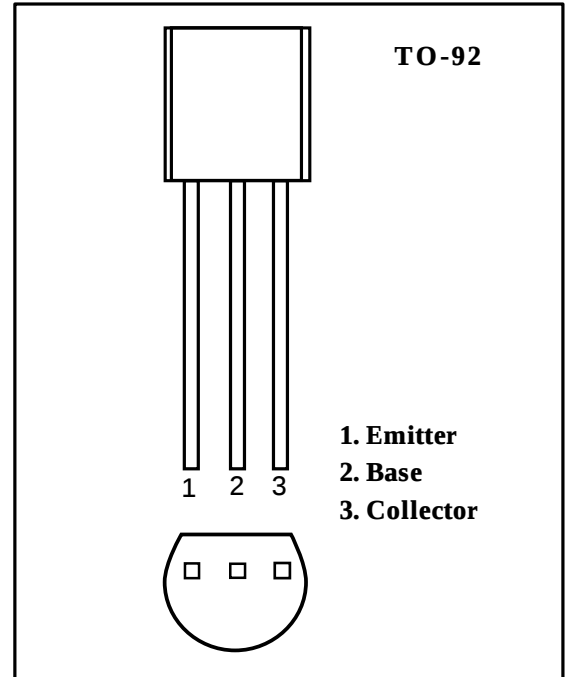
High Frequency Low Noise Amplifier Application

- ◇ Collector Current $I_C = -50\text{mA}$
- ◇ Collector Power Dissipation $P_C = 625\text{mW}$
- ◇ High Current Gain Bandwidth Product
 $f_T = 1,100\text{MHz}$ (Typ)

ABSOLUTE MAXIMUM RATINGS

($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	50	mA
Collector Power Dissipation	P_C	400	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS

($T_a = 25^\circ\text{C}$, unless otherwise specified)

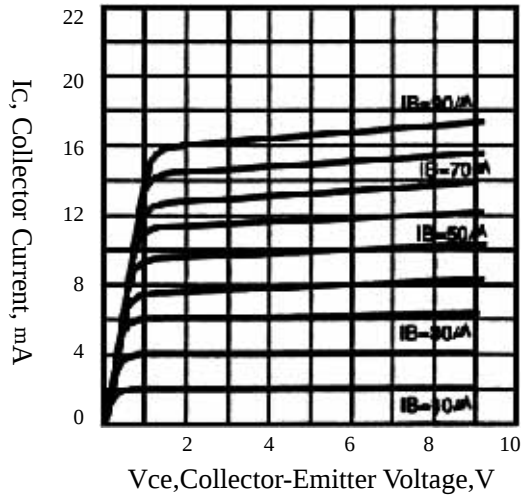
Characteristic	Symbol	Test Condition	Min	TYP	MAX	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C = 100\mu\text{A}$	30			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = 1\text{mA}$	15			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = 100\mu\text{A}$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 12\text{V}$			50	nA
DC current gain	$*h_{FE}$	$I_C = 1\text{mA}, V_{CE} = 5\text{V}$	54	100	198	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$			0.5	V
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		1.3	1.7	pF
Transition Frequency	f_T	$V_{CE} = 5\text{V}, I_C = 5\text{mA}$	700	1100		MHz

* h_{FE} Classification: F: 54~80 , G: 72~108, H: 97~146, I: 132~198

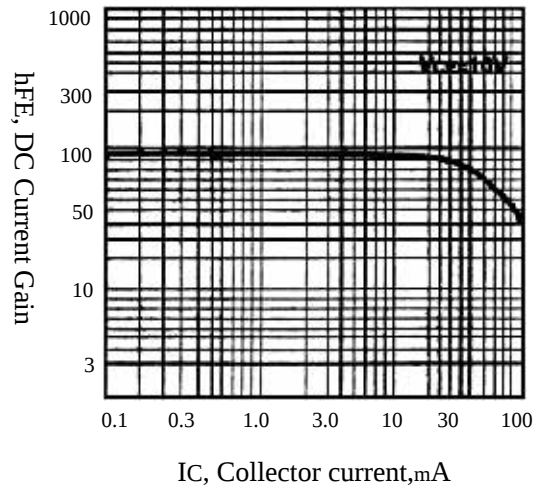
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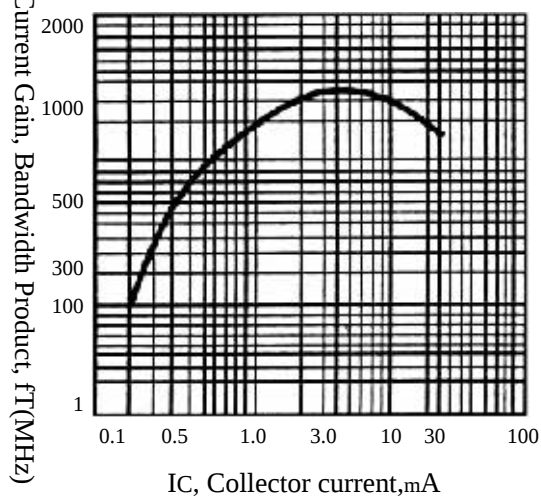
Static Characteristics



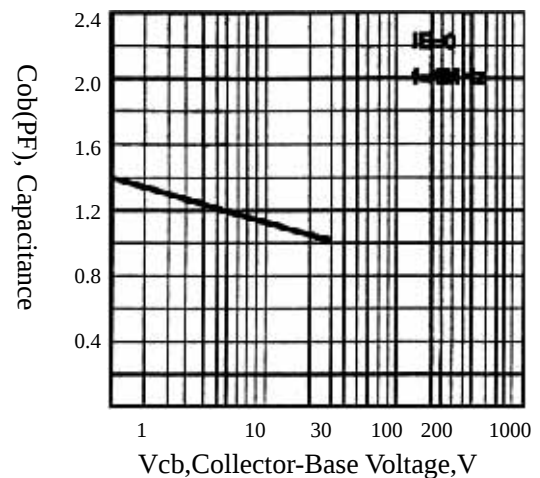
DC Current Gain



Current Gain-Bandwidth Product



Output Capacitance



Base Emitter Saturation Voltage
Collector Emitter Saturation Voltage

