

2SC828, 2SC828A

Silicon NPN Epitaxial Planar Type

For small-signal amplification

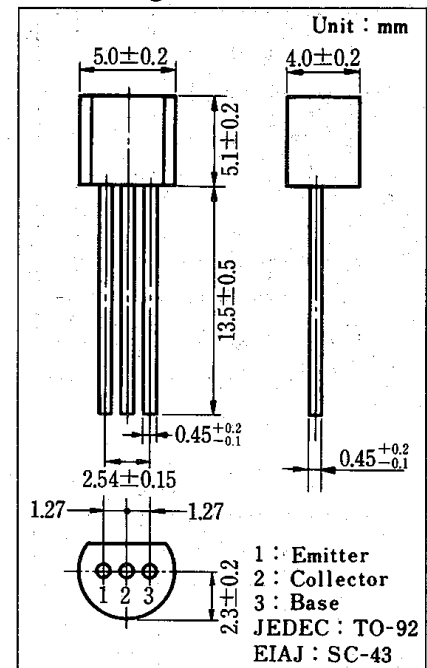
■ Features

- Large DC current gain h_{FE}

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

Item	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	30	V
		45	
Collector-Emitter Voltage	V_{CEO}	25	V
		45	
Emitter-Base Voltage	V_{EBO}	7	V
Peak Collector Voltage	I_{CP}	100	mA
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 ~ +150	$^\circ\text{C}$

■ Package Dimensions

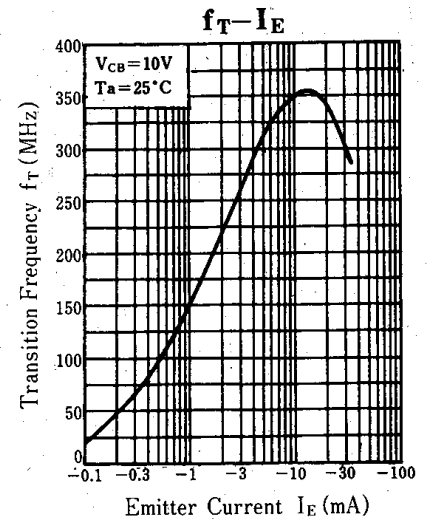
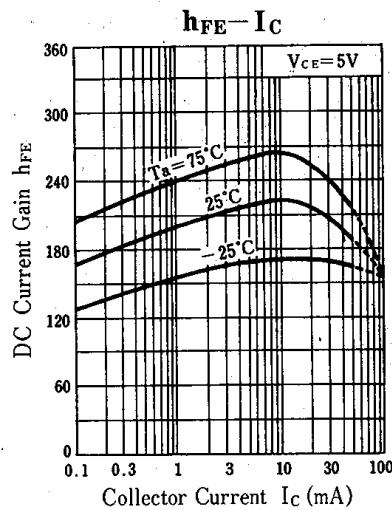
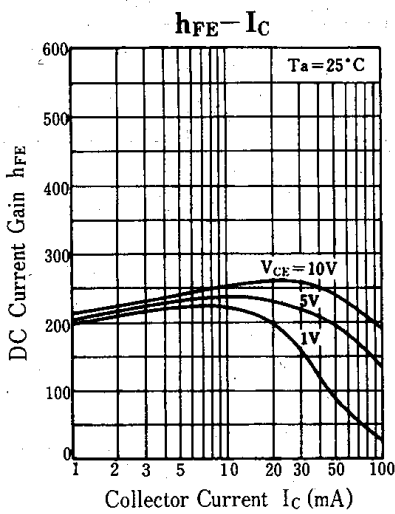
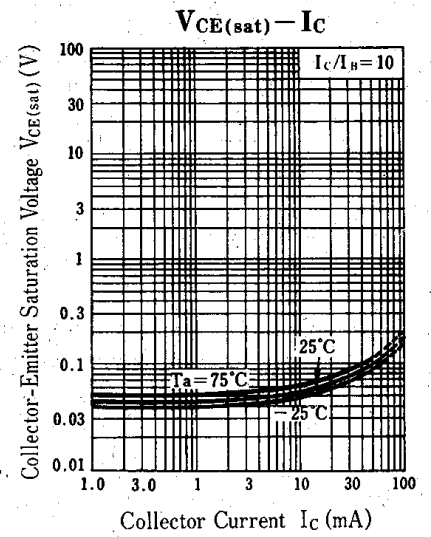
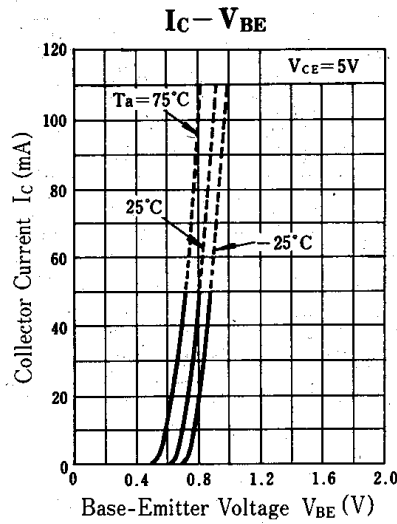
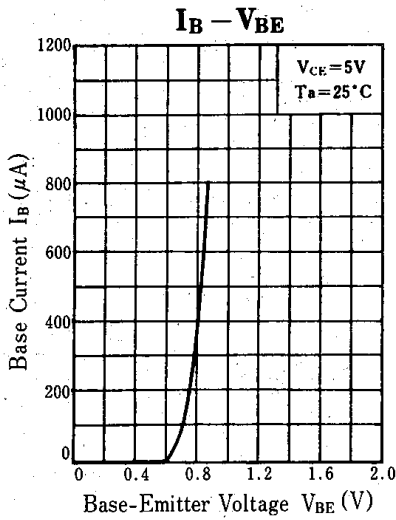
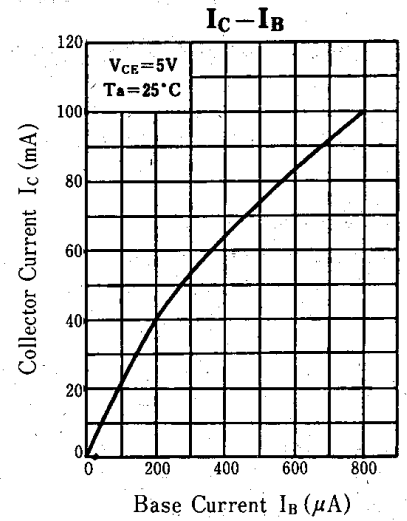
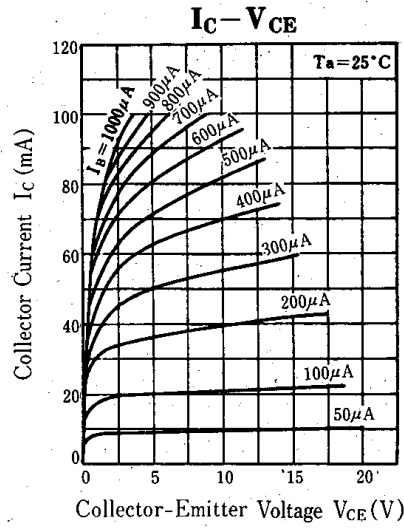
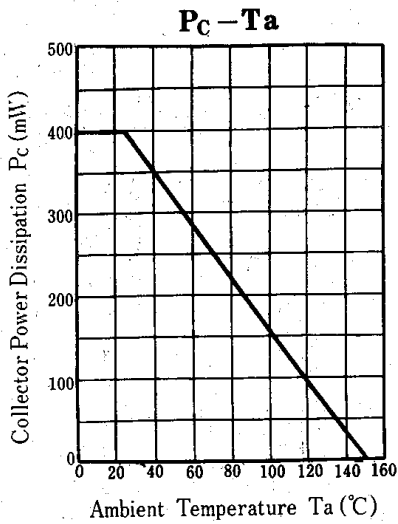


■ Electrical Characteristics ($T_a=25^\circ\text{C}$)

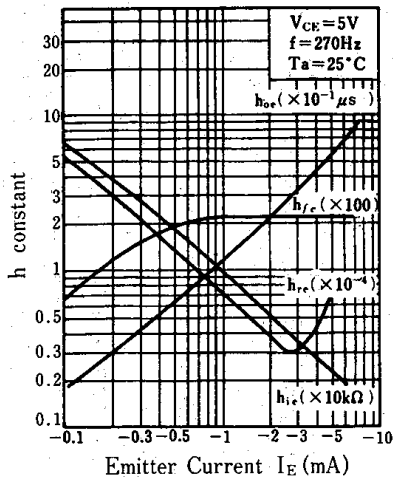
Item	Symbol	Condition	min.	typ.	max.	Unit
Collector-Base Voltage	V_{CBO}	$I_C = 10 \mu\text{A}, I_E = 0$	30			V
			45			
Collector-Emitter Voltage	V_{CEO}	$I_C = 2 \text{mA}, I_B = 0$	25			V
			45			
Emitter-Base Voltage	V_{EBO}	$I_E = 10 \mu\text{A}, I_C = 0$	7			V
DC Current Gain	h_{FE}^*	$V_{CE} = 5 \text{V}, I_C = 2 \text{mA}$	130		520	
Base-Emitter Voltage	V_{BE}	$V_{CB} = 5 \text{V}, I_C = 10 \text{mA}$			0.8	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 50 \text{mA}, I_B = 5 \text{mA}$		0.14		V
Transition Frequency	f_T	$V_{CB} = 10 \text{V}, I_E = -2 \text{mA}, f = 200 \text{MHz}$		220		MHz
Noise Figure	NF	$V_{CE} = 5 \text{V}, I_C = 0.2 \text{mA}, R_g = 2 \text{k}\Omega, f = 1 \text{kHz}$		6		dB

* h_{FE} Ranking

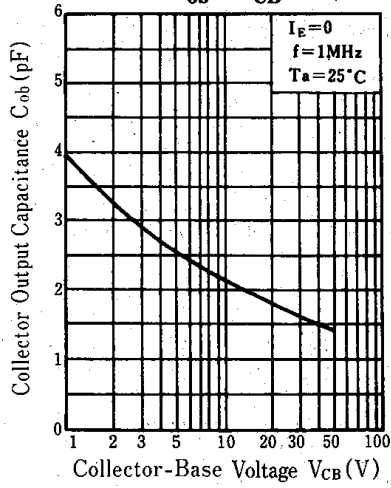
Rank	Q	R	S
h_{FE}	130 ~ 260	180 ~ 360	260 ~ 520



h Parameter - I_E



$C_{ob} - V_{CB}$



NF - I_E

