

**2SC4400**

High-Frequency General-Purpose Amplifier Applications

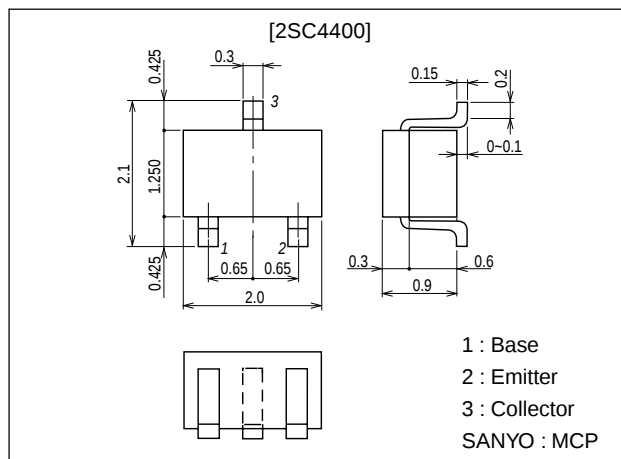
Features

- High power gain.
- High cutoff frequency.
- Small C_{ob} , C_{re} .
- Very small-sized package permitting the 2SC4400-applied sets to be made small and slim.

Package Dimensions

unit:mm

2059B



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		40	V
Collector-to-Emitter Voltage	V_{CEO}		18	V
Emitter-to-Base Voltage	V_{EBO}		3	V
Collector Current	I_C		50	mA
Collector Dissipation	P_C		150	mW
Junction Temperature	T_J		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=18\text{V}, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=2\text{V}, I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=10\text{V}, I_C=5\text{mA}$	60*		270*	
Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=5\text{mA}$		750		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		0.7	1.2	pF
Reverse transfer Capacitance	C_{re}	$V_{CB}=10\text{V}, f=1\text{MHz}$		0.45		pF

* : The 2SC4400 is classified by 5mA h_{FE} as follows :

Marking : RT

 h_{FE} rank : 3, 4, 5

60	3	120	90	4	180	135	5	270
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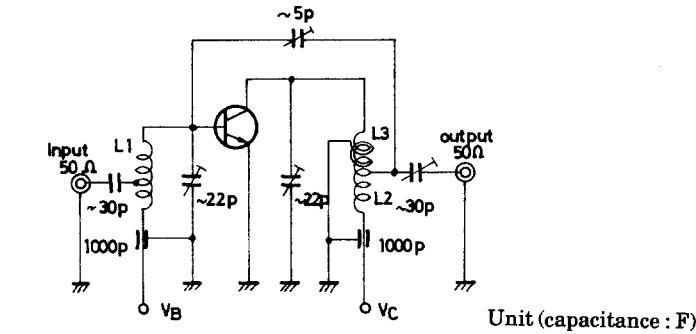
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

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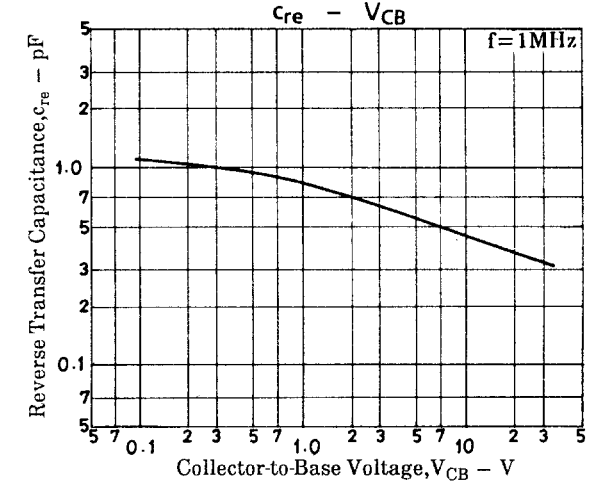
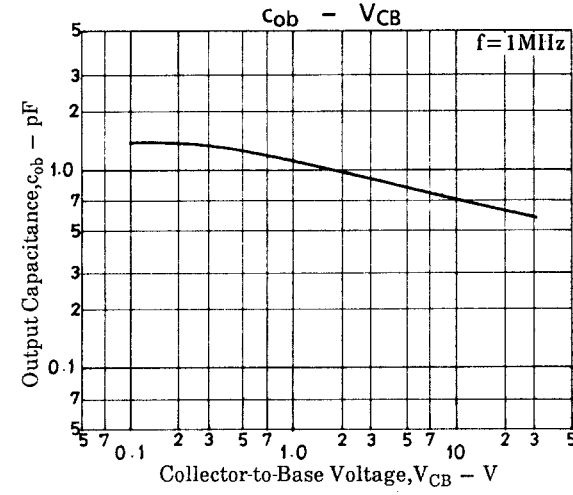
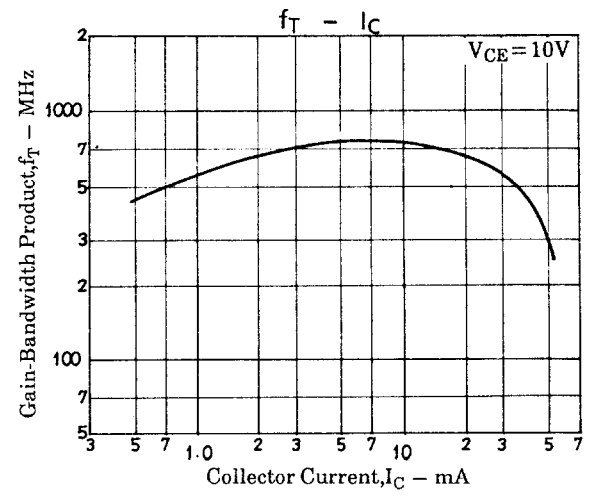
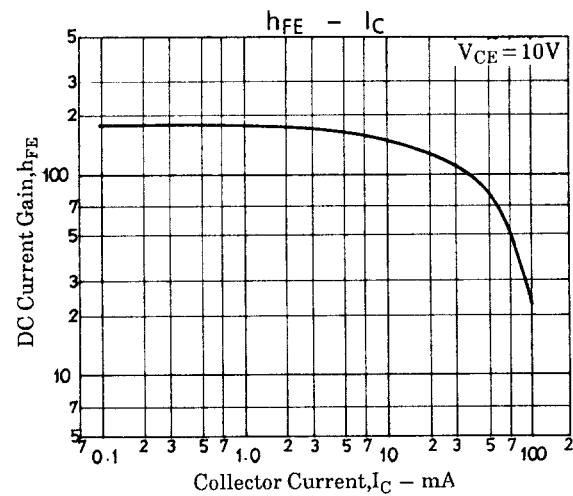
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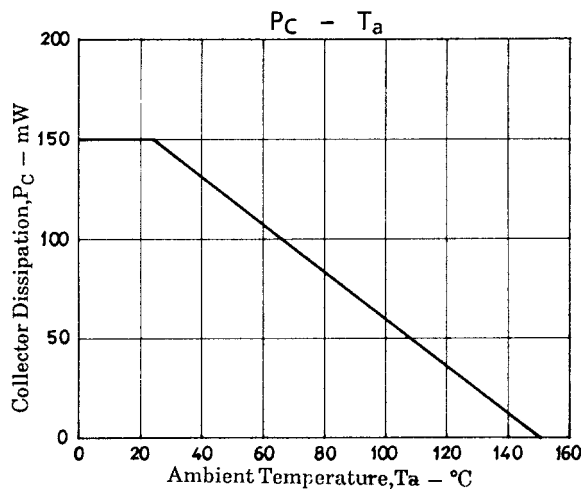
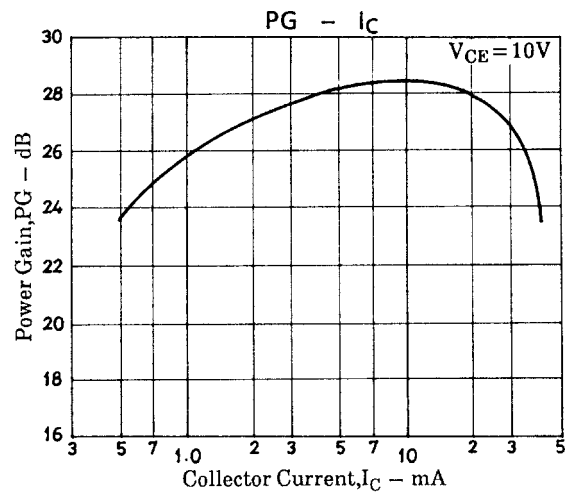
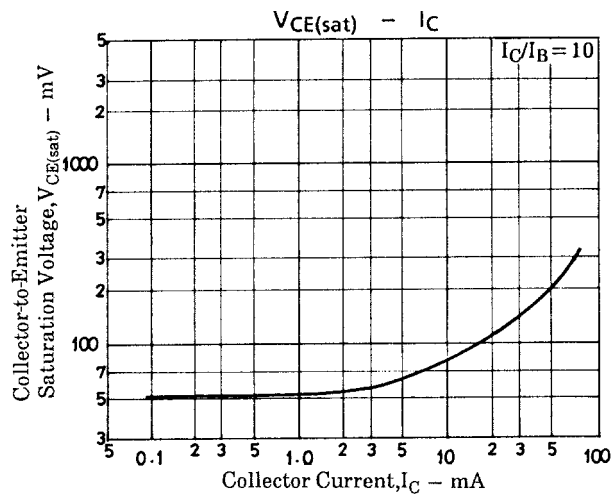
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$			0.2	V
Base-to-Collector Time Constant	$r_{bb}C_C$	$V_{CB}=10V, I_C=5mA, f=31.9MHz$			23	ps
Power Gain	PG	$V_{CB}=10V, I_C=10mA, f=100MHz$		28		dB

PG Test Circuit



- L₁ : 1mmϕ plated wire, 10mmϕ 5T, pitch 15mm,
tap : 2T from base side
L₂ : 1mmϕ plated wire, 10mmϕ 7T, pitch 10mm,
tap : 2T from V_C side
L₃ : 1mmϕ enamel wire, 10mmϕ 3T, pitch 10mm





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