

**2SA1857**

FM, RF, MIX, IF Amplifier High-Frequency General-Purpose Amplifier Applications

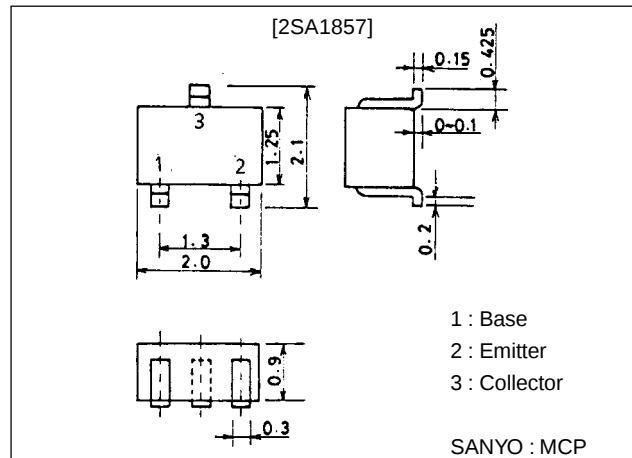
Features

- High power gain : PG=25dB typ (f=100MHz).
- High cutoff frequency : f_T =750MHz typ.
- Low collector-to-emitter saturation voltage.
- Complementary pair with the 2SC4400.

Package Dimensions

unit:mm

2059A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		-15	V
Collector-to-Emitter Voltage	V_{CEO}		-12	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	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=-12V, I_E=0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-2V, I_C=0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=-10V, I_C=-5mA$	60*		270*	
Gain-Bandwidth Product	f_T	$V_{CE}=-10V, I_C=-5mA$		750		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10V, f=1MHz$		1.2	1.6	pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=-10V, f=1MHz$		0.9		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-10mA, I_B=-1mA$		-0.1	-0.3	V
Power Gain	PG	$V_{CE}=-10V, I_C=-10mA, f=100MHz$		25		dB

* : The 2SA1857 is classified by 5mA h_{FE} as follows :

60	3	120	90	4	180	135	5	270
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Marking : JS

 h_{FE} rank : 3, 4, 5

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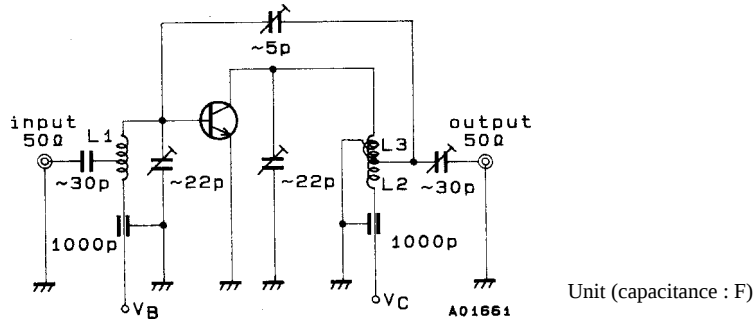
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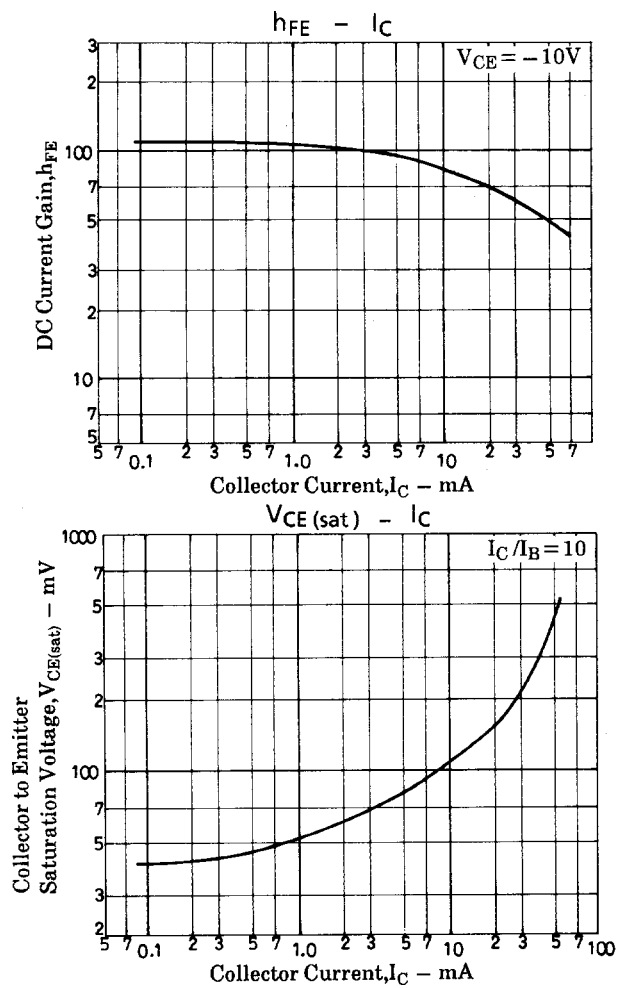
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

91098HA (KT)/31594HO (KOTO) AX-8847 No.4644-1/3

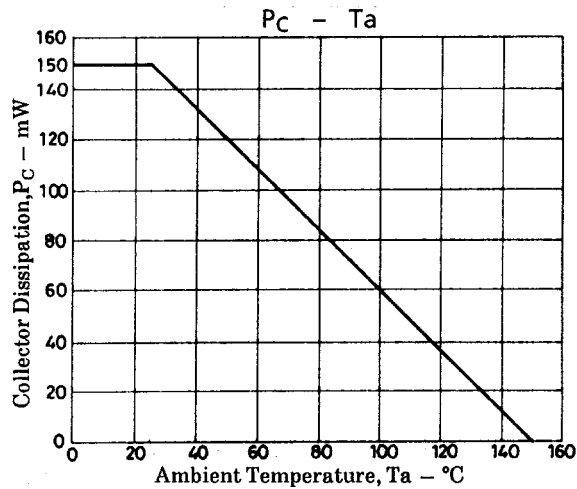
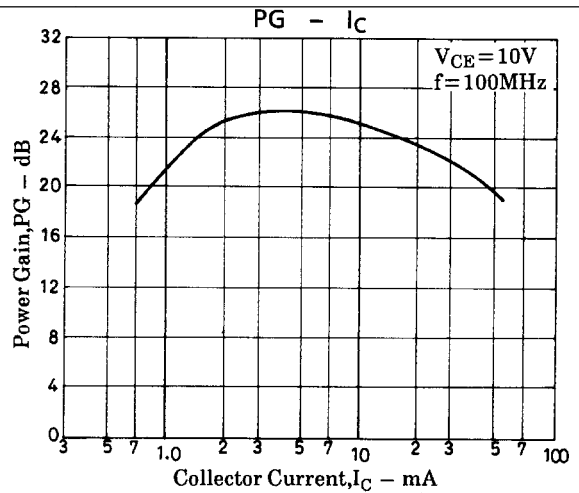
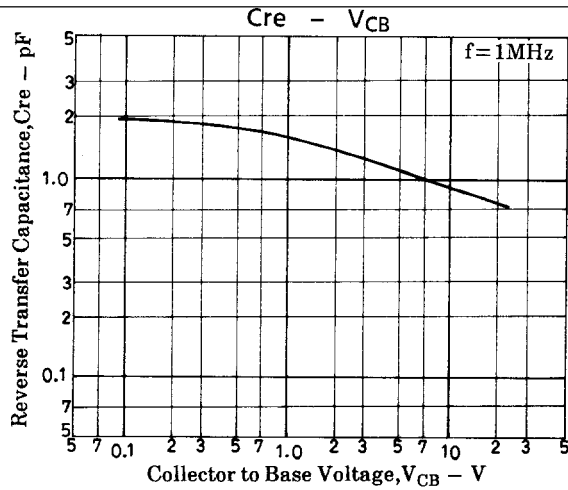
PG Test Circuit



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



2SA1857



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