

SANYO	No.733D	2SC2839
	NPN Epitaxial Planar Silicon Transistor	
HF Amp Applications		

Features

- . Very small package enabling compactness and slimness of sets.
- . High f_T and small c_{re} . ($f_T=320\text{MHz typ}$, $c_{re}=0.95\text{pF typ}$)

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

			unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	20	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current	I_C	30	mA
Collector Dissipation	P_C	150	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

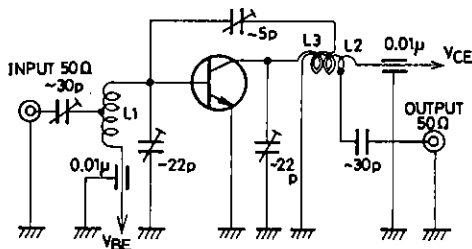
Electrical Characteristics at $T_a=25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=10\text{V}, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=6\text{V}, I_C=1\text{mA}$	60*		320*	
Gain-Bandwidth Product	f_T	$V_{CE}=6\text{V}, I_C=1\text{mA}$	200	320		MHz
Reverse Transfer Capacitance	c_{re}	$V_{CB}=6\text{V}, f=1\text{MHz}$	0.7	0.95	1.3	pF
Base to Collector Time Constant	$\tau_{bb} 'C_c$	$V_{CB}=6\text{V}, I_C=1\text{mA}, f=31.9\text{MHz}$	12	20		ps
Noise Figure	NF	$V_{CE}=6\text{V}, I_C=1\text{mA}, f=100\text{MHz}$	3.0			dB
Power Gain	PG	$V_{CE}=6\text{V}, I_C=1\text{mA}, f=100\text{MHz}$	25			dB

* : The 2SC2839 is classified as follows by h_{FE} at 1mA.

60	D	120	100	E	200	160	F	320
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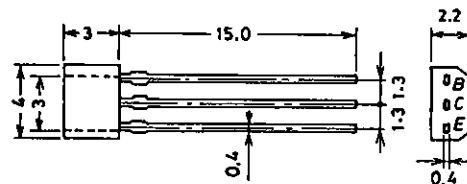
NF, PG Test Circuit



- L1 : 1mmϕ plated wire, 10mmϕ 5T tap, 2T from VBE side.
- L2 : 1mmϕ plated wire, 10mmϕ 7T tap, 1T from VCE side.
- L3 : 1mmϕ plated wire, 10mmϕ 3T.

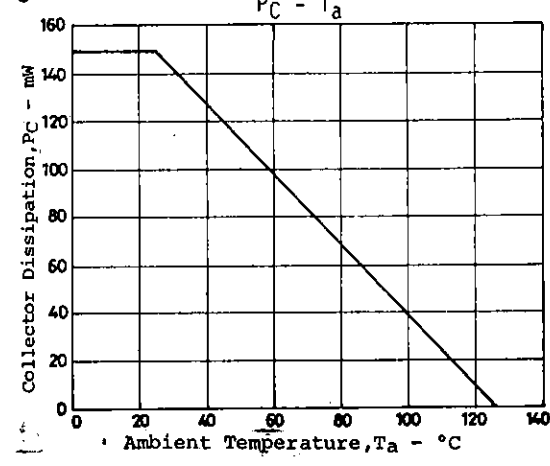
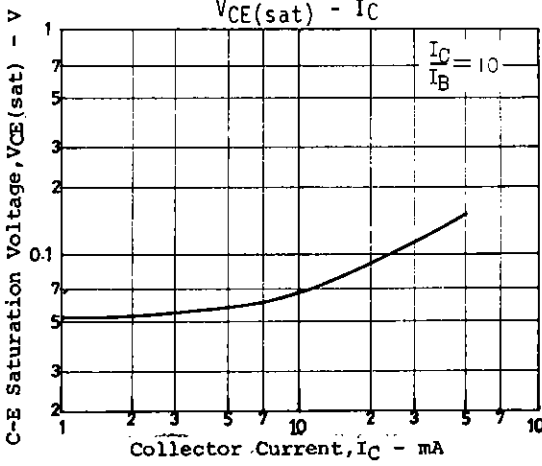
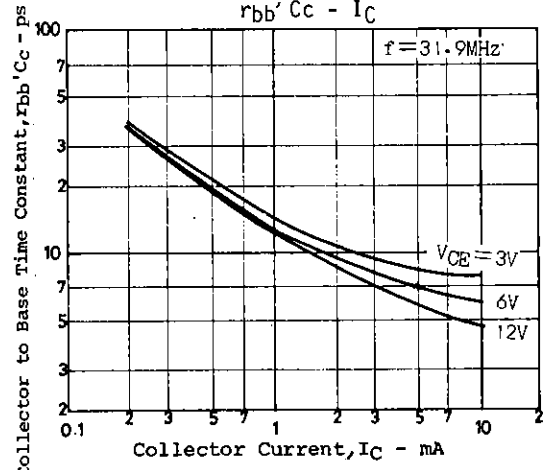
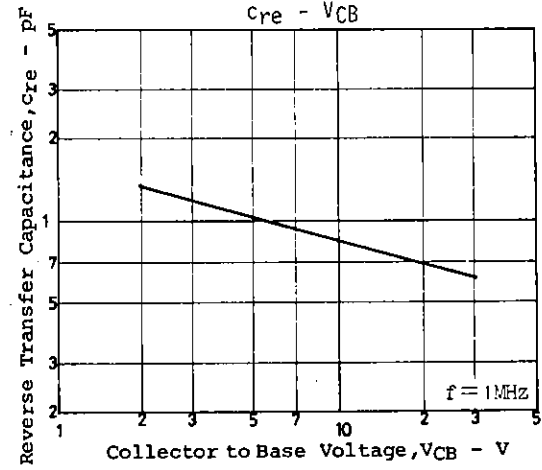
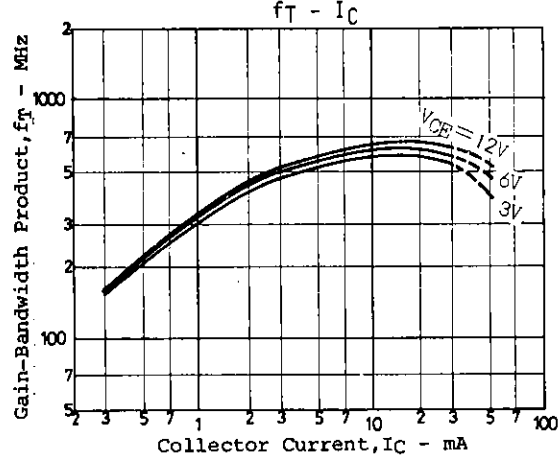
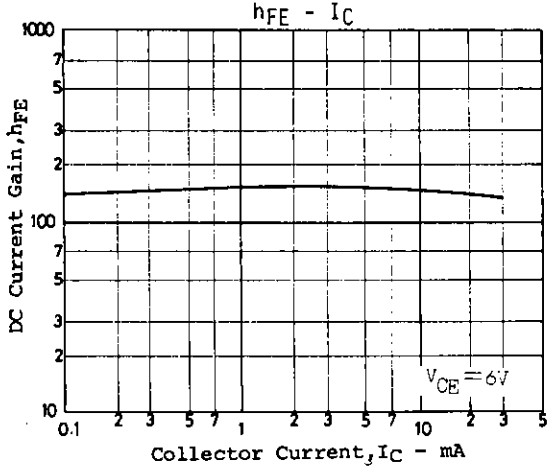
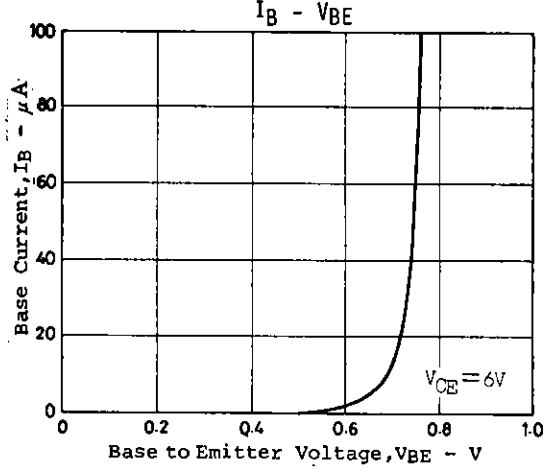
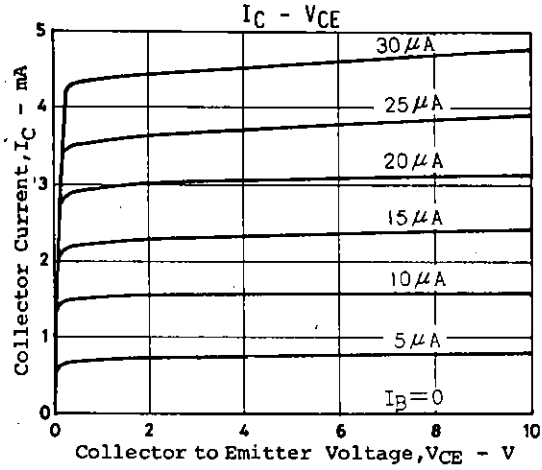
Unit(Capacitance : F)

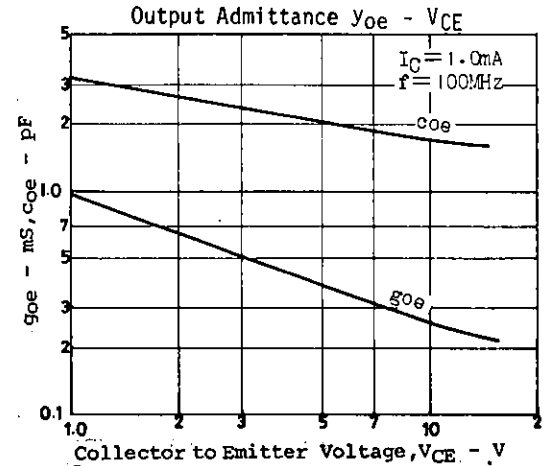
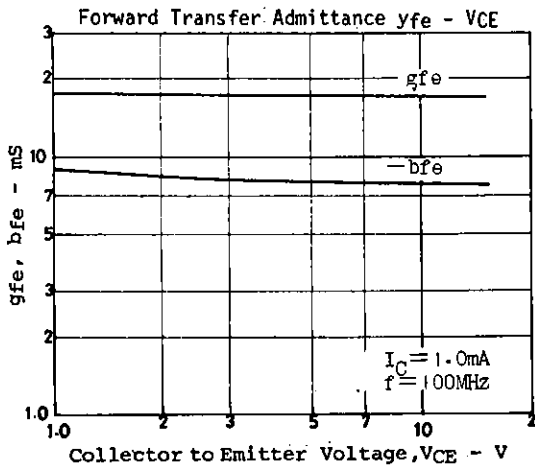
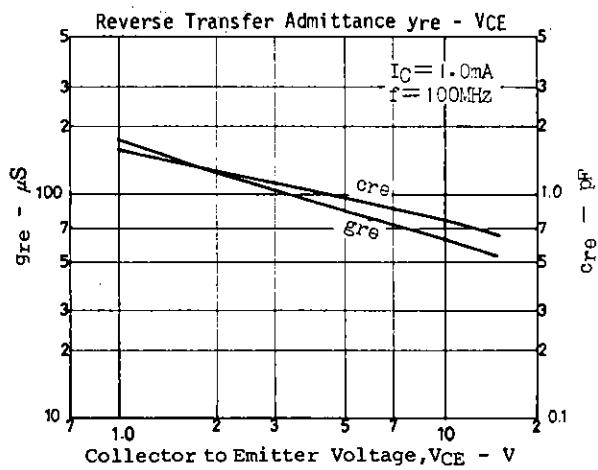
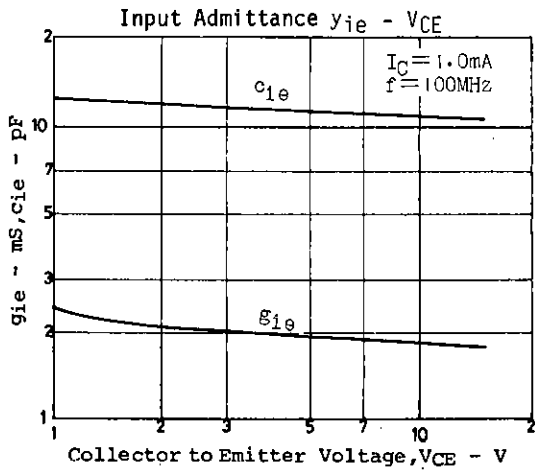
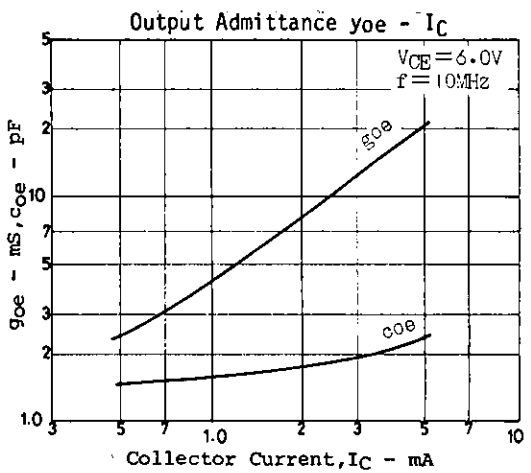
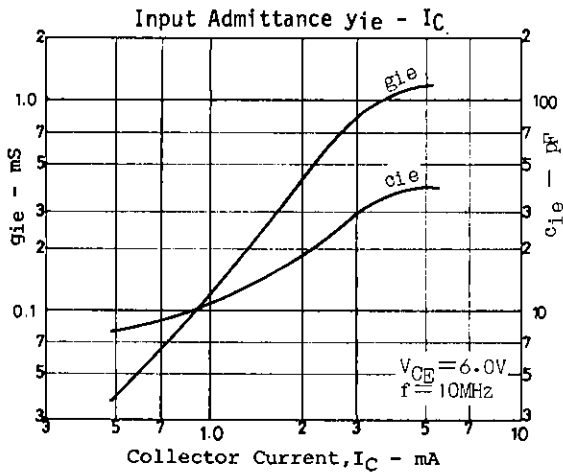
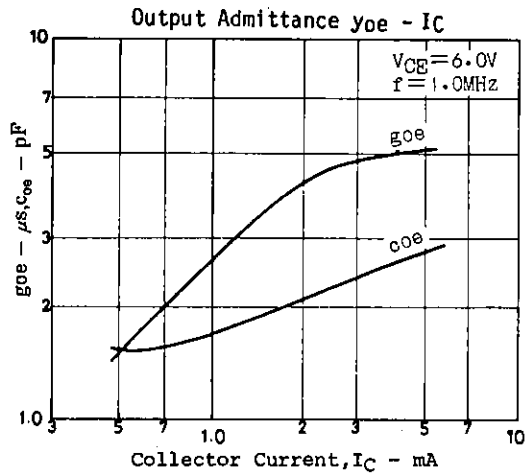
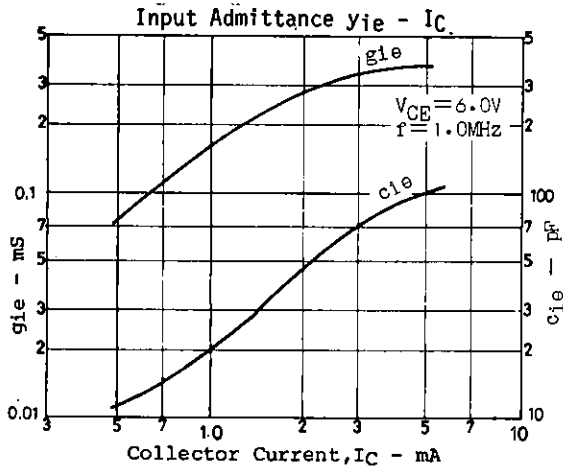
Package Dimensions 2033
(unit: mm)

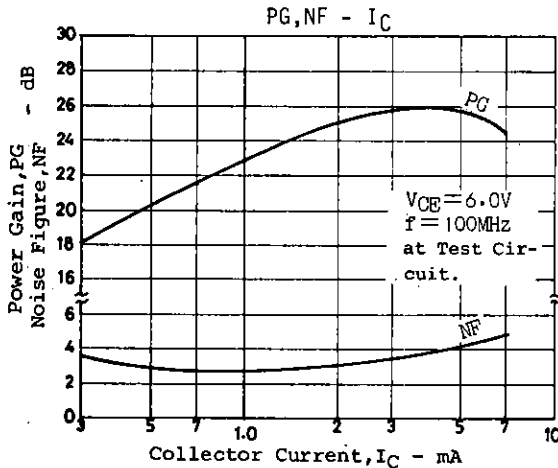
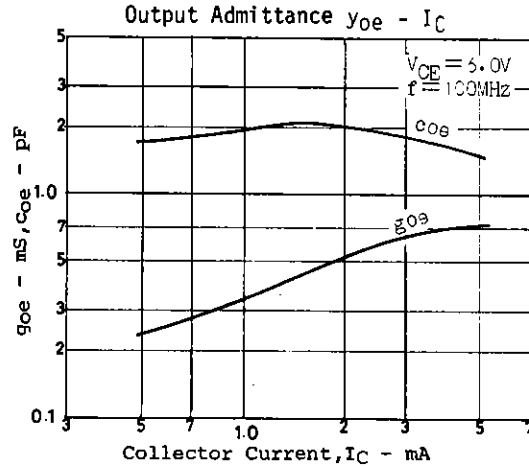
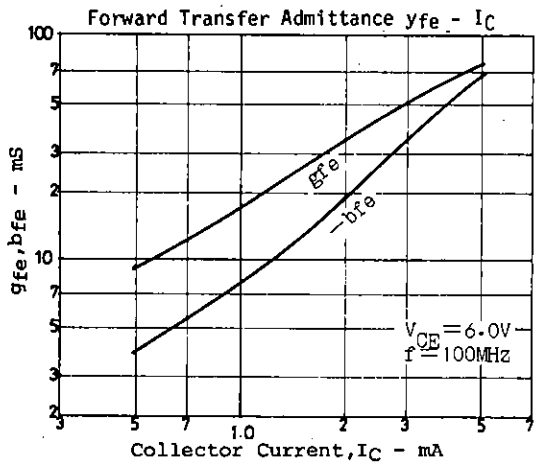
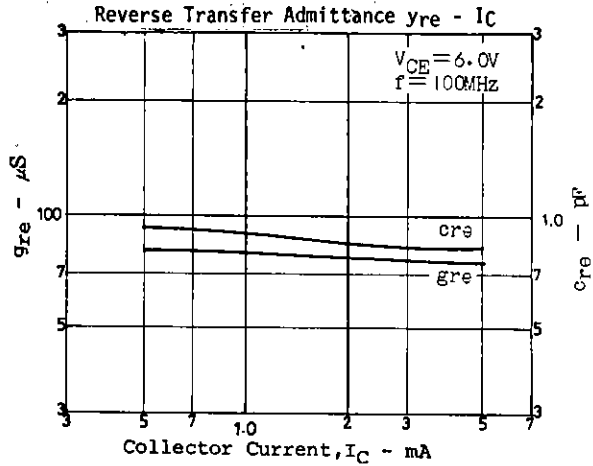
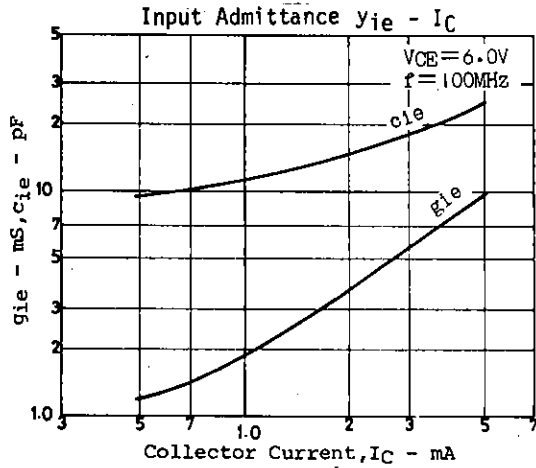


- B: Base
- C: Collector
- E: Emitter
- SANYO: SPA

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