

<b>SANYO</b>	No.3553	2SC4433
		NPN Epitaxial Planar Silicon Transistor

HF Amp Applications

**Features**

- High power gain : PG=28dB typ(f=100MHz)
- High cutoff frequency :  $f_T = 750\text{MHz}$  typ
- Small  $C_{ob}$ ,  $C_{re}$

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

			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	$P_C$	300	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

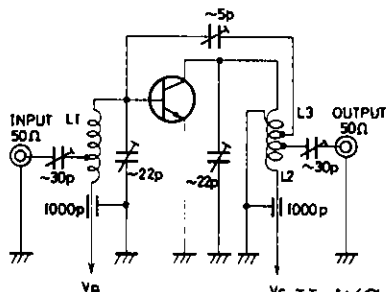
**Electrical Characteristics at  $T_a = 25^\circ\text{C}$**

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 18\text{V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 2\text{V}, I_C = 0$			0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 5\text{mA}$	60*		320*	
Gain-Bandwidth Product	$f_T$	$V_{CE} = 10\text{V}, I_C = 5\text{mA}$		750		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		1.0	1.5	pF
Reverse Transfer Capacitance	$C_{re}$	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		0.65		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$			0.2	V
B-C Time Constant	$r_{bb'} C_c$	$V_{CE} = 10\text{V}, I_C = 5\text{mA}, f = 31.9\text{MHz}$			25	ps
Power Gain	PG	$V_{CE} = 10\text{V}, I_C = 10\text{mA}, f = 100\text{MHz}$		26		dB

\*The 2SC4433 is classified by 5mA  $h_{FE}$  as follows.

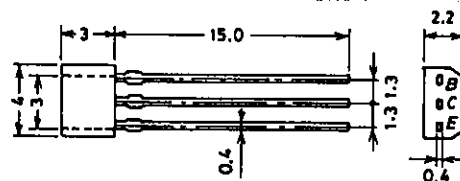
60 D 120	100 E 200	160 F 320
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**PG Test Circuit**

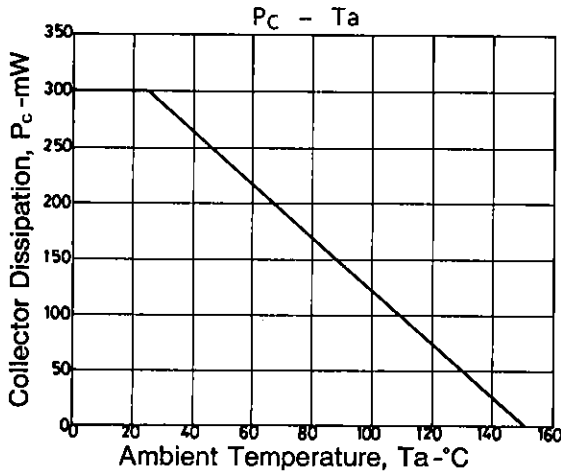
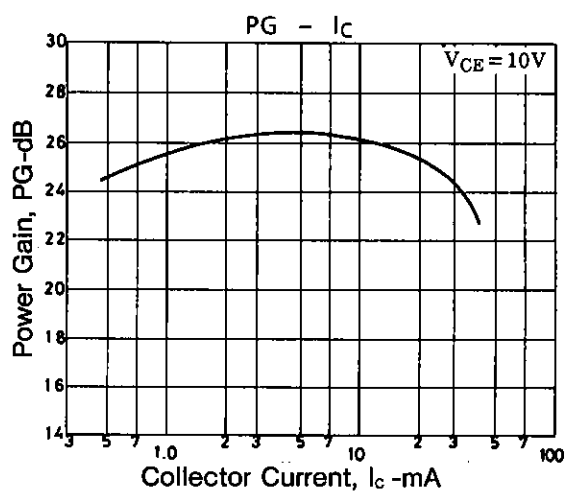
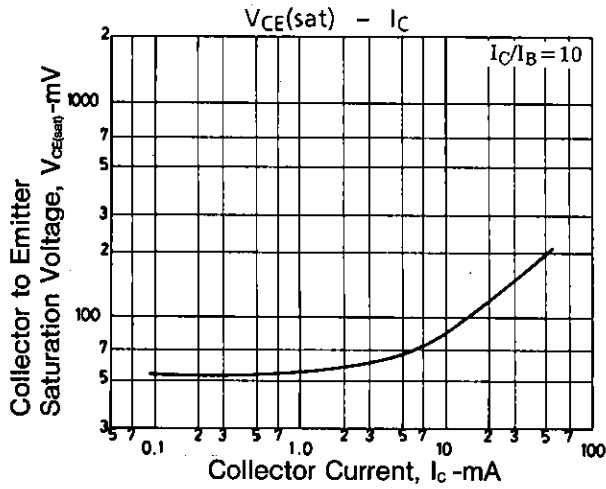
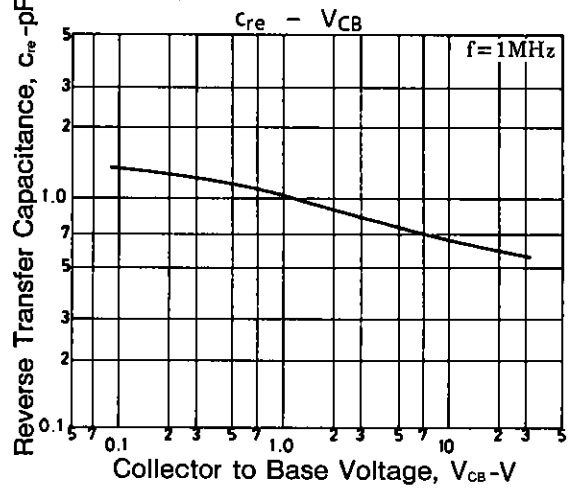
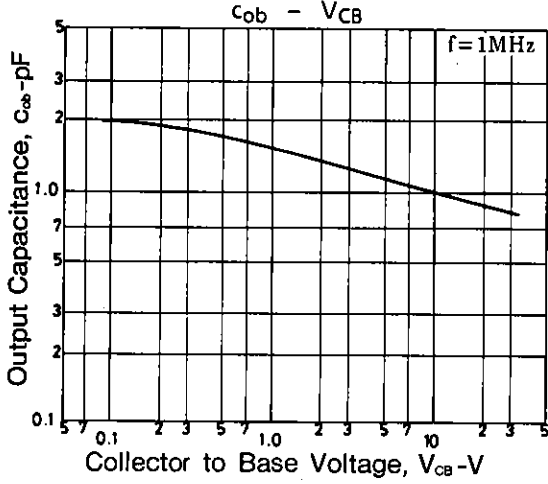
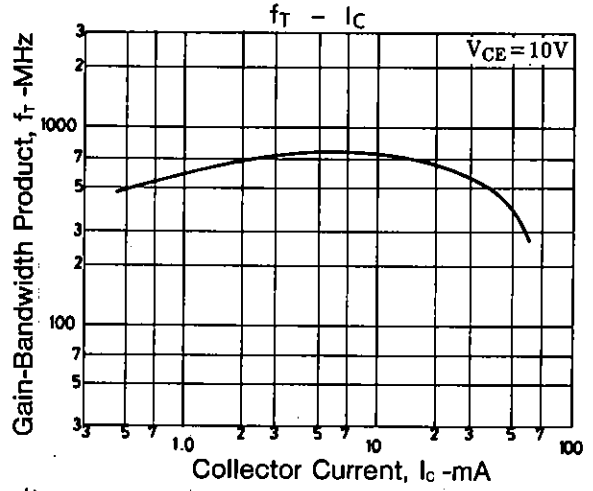
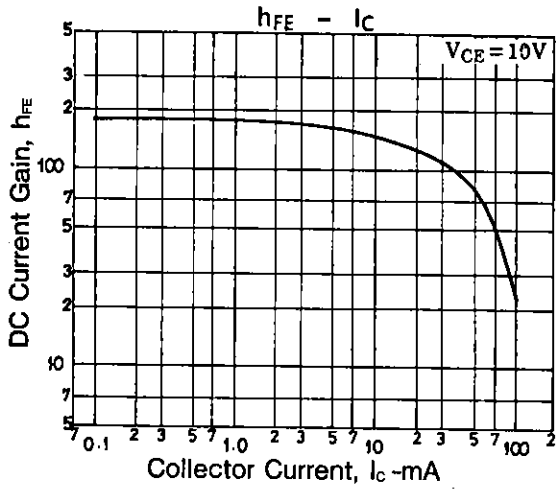


- Unit(Capacitance : F)
- $L_1$  : 1mm $\phi$  plated wire, 10mm $\phi$  5T, pitch 15mm, tap : 2T from base side
  - $L_2$  : 1mm $\phi$  plated wire, 10mm $\phi$  7T, pitch 10mm, tap : 2T from  $V_C$  side
  - $L_3$  : 1mm $\phi$  enamel wire, 10mm $\phi$  3T pitch 10mm

**Package Dimensions 2033**  
(unit: mm)



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



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