

SANYO	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	$^\circ\text{C}$

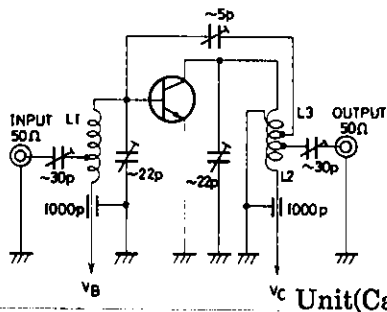
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 18\text{V}, I_E = 0$			0.1	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*		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.

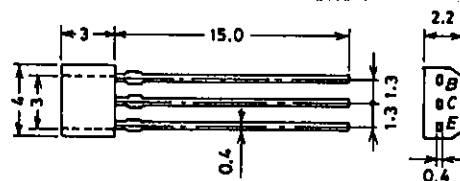
60 D 120	100 E 200	160 F 320
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PG Test Circuit

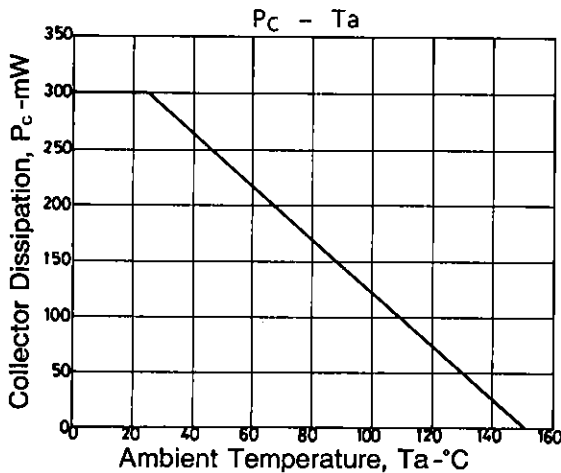
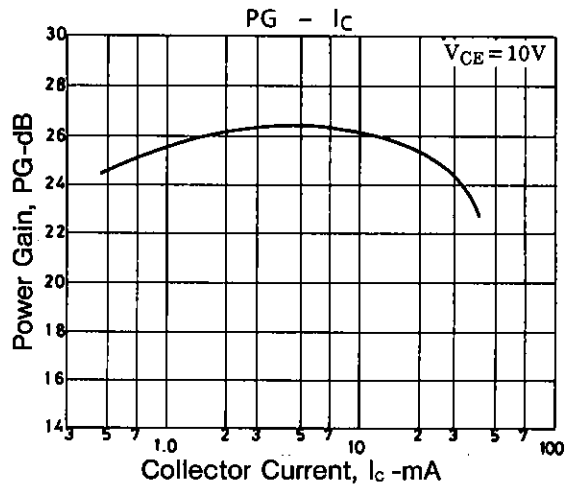
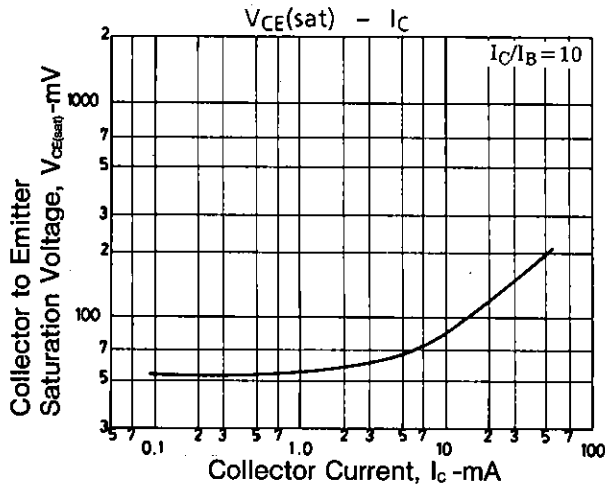
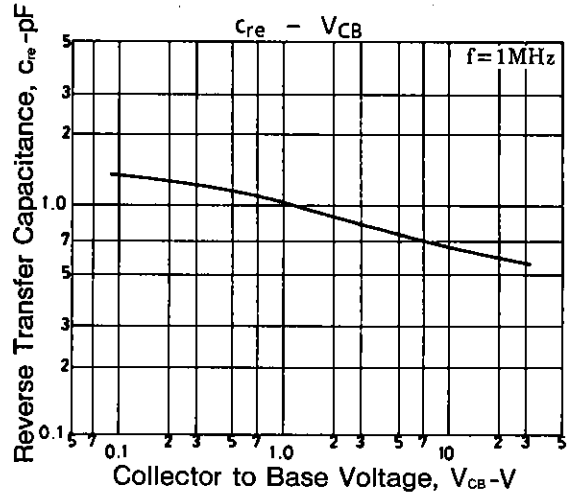
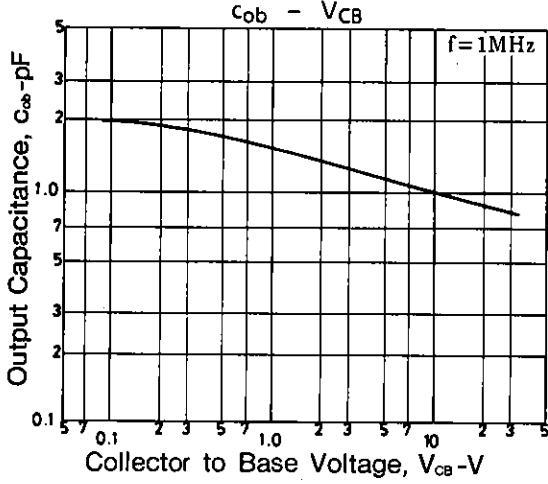
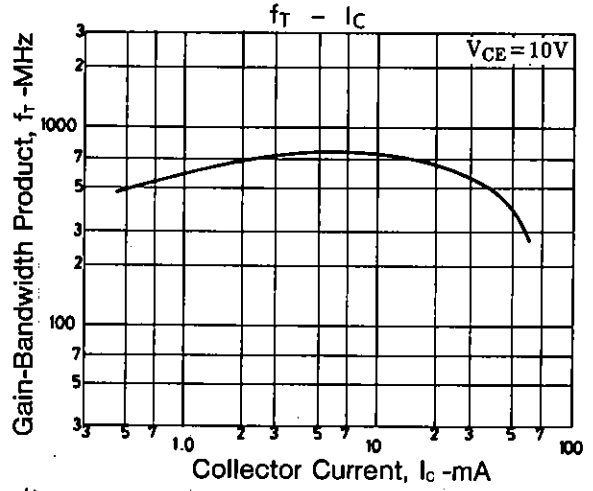
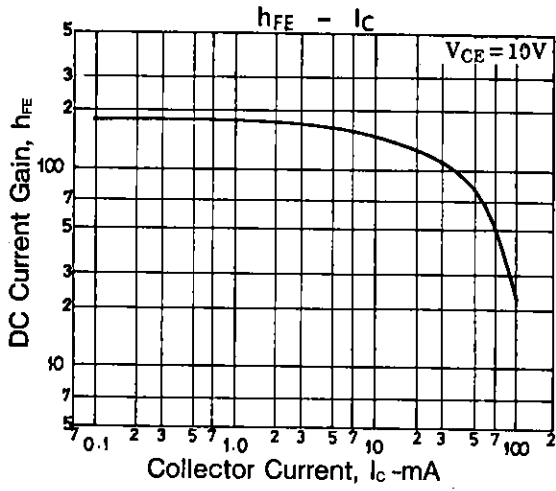


- L₁: 1mm ϕ plated wire, 10mm ϕ 5T, pitch 15mm, tap: 2T from base side
- L₂: 1mm ϕ plated wire, 10mm ϕ 7T, pitch 10mm, tap: 2T from V_c side
- L₃: 1mm ϕ enamel wire, 10mm ϕ 3T pitch 10mm

Package Dimensions 2033
(unit: mm)



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



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