

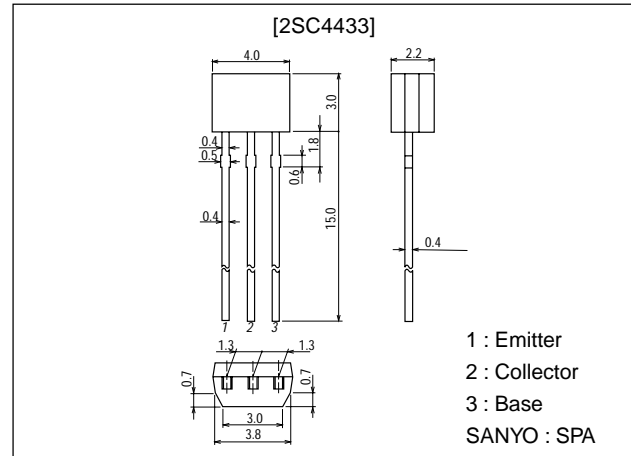
**2SC4433****HF Amplifier Applications****Features**

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

Package Dimensions

unit:mm

2033A

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

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

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*		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
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}$, $I_B=1\text{mA}$			0.2	V
Base-to-Collector 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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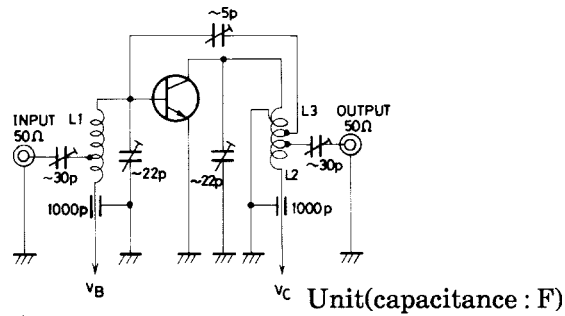
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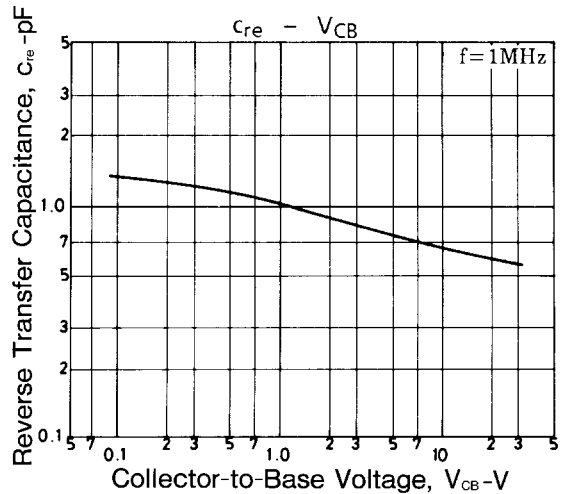
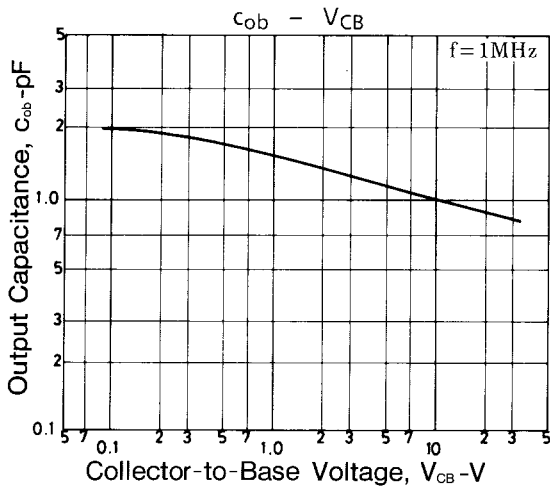
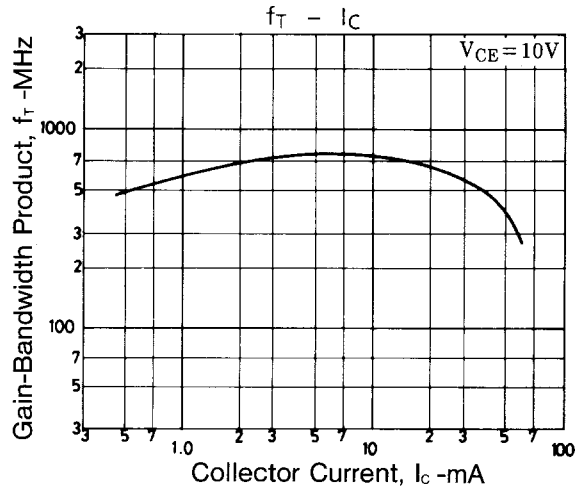
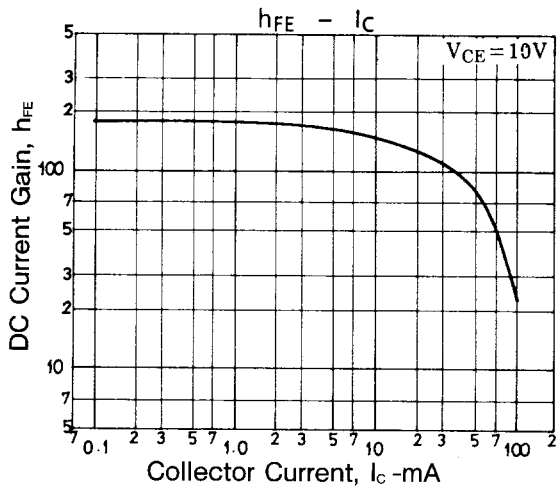
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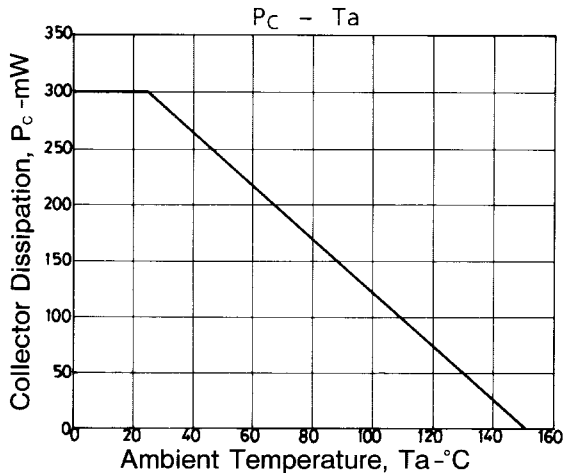
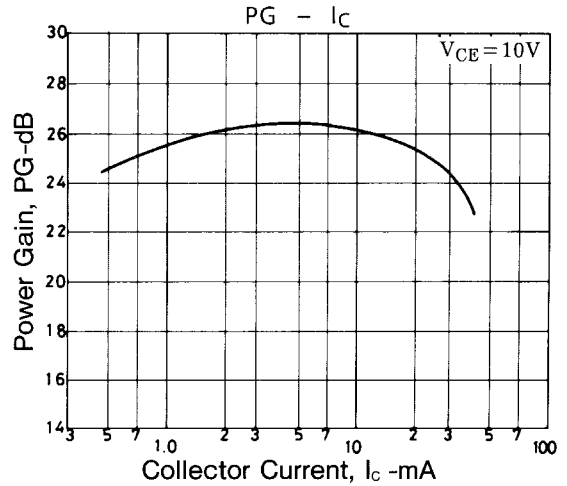
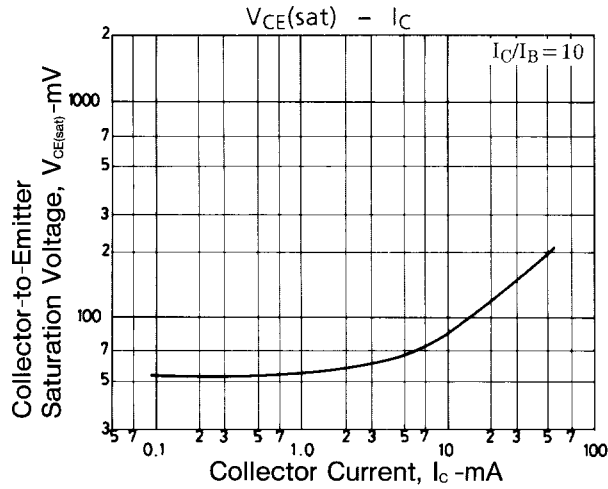
D2598HA (KT)/6040TA (CQ) No.3553-1/3

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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