

2SC4433

HF Amplifier Applications

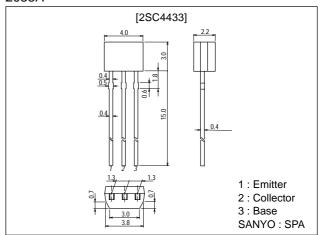
Features

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

Package Dimensions

unit:mm

2033A



Specifications

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

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	l _C		50	mA
Collector Dissipation	PC		300	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
	Symbol		min	typ	max	Offic
Collector Cutoff Current	I _{CBO}	V _{CB} =18V, I _E =0			0.1	μΑ
Emitter Cutoff Current	I _{EBO}	V _{EB} =2V, I _C =0			0.1	μΑ
DC Current Gain	h _{FE}	V _{CE} =10V, I _C =5mA	60*		320*	
Gain-Bandwidth Product	fT	$V_{CE}=10V$, $I_{C}=5mA$		750		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		1.0	1.5	pF
Reverse transfer Capacitance	C _{re}	V _{CB} =10V, f=1MHz		0.65		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =10mA, I _B =1mA			0.2	V

^{*:} The 2SC4433 is classified by 5mA h_{FE} as follows:

 Rank
 D
 E
 F

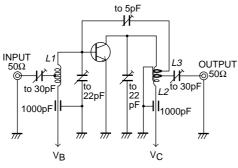
 hFE
 60 to 120
 100 to 200
 160 to 320

- Continued on next page.
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Oille
Base-to-Collector Time Constant	r _{bb} 'C _c	V _{CE} =10V, I _C =5mA, f=31.9MHz			25	ps
Power Gain	PG	V _{CE} =10V, I _C =10mA, f=100MHz		26		dB

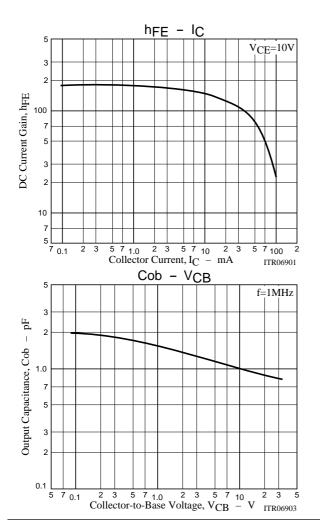
PG Test Circuit

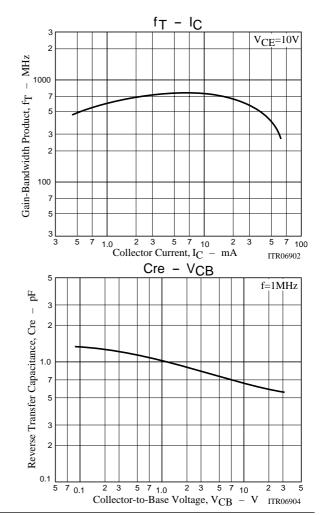


L1 : 1mmø plated wire, 10mmø 5T, pitch 15mm, tap : 2T from base side.

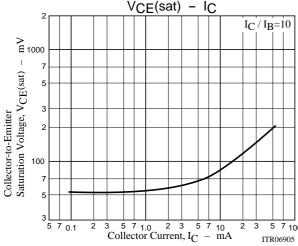
L2: 1mmø plated wire, 10mmø 7T, pitch 10mm, tap: 2T from V_C side.

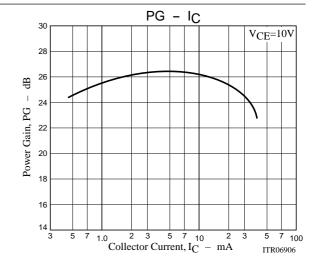
L3: 1mmø enamel wire, 10mmø 3T pitch 10mm.

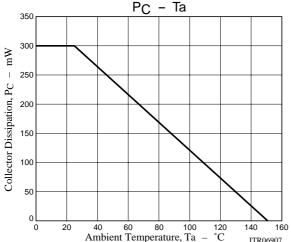




2SC4433







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