Ordering number:EN3553

NPN Epitaxial Planar Silicon Transistor

2SC4433

HF Amplifier Applications

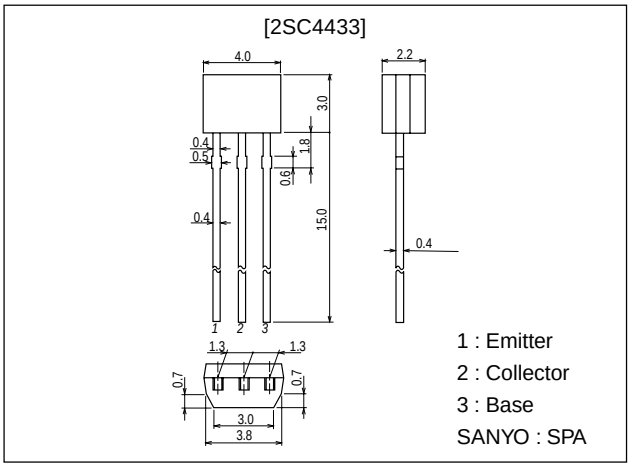
Features

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

Package Dimensions

unit:mm

2033A



Specifications

Absolute Maximum Ratings at Ta = 25˚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	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=18V, I_E=0			0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=2V, I_C=0			0.1	μA
DC Current Gain	h_{FE}	V_{CE}=10V, I_C=5mA	60*		320*	
Gain-Bandwidth Product	f_T	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
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

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

60	D	120	100	E	200	160	F	320

SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters

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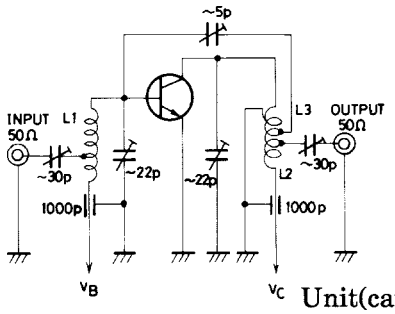
PG Test Circuit



Unit(capacitance : F)

L_1 : 1mmϕ plated wire, 10mmϕ 5T, pitch 15mm,
tap : 2T from base side

L_2 : 1mmϕ plated wire, 10mmϕ 7T, pitch 10mm,
tap : 2T from V_C side

L_3 : 1mmϕ enamel wire, 10mmϕ 3T pitch 10mm