NPN Epitaxial Silicon Transistors

AMPLIFIER TRANSISTOR

- Collector-Base Voltage: V_{CEO}=160V
- Collector Dissipation Pc=0.625W(Tc=25℃)

TO-92

Pin : 1. Emitter
2.Base
3.Collector

ABSOLUTE MAXIMUM RATINGS (Ta = 25℃)

Characteristic	Symbol	Rating	Unit
Collector-base Voltage	V_{CBO}	180	V
Collector-Emitter Voltage	V_{CEO}	160	V
Emitter-base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	0.6	A
* Collector Dissipation	P_C	0.625	W
Junction Temperature	T_J	150	℃
Storage Temperature	Tstg	-55~150	℃

ORDERING INFORMATION

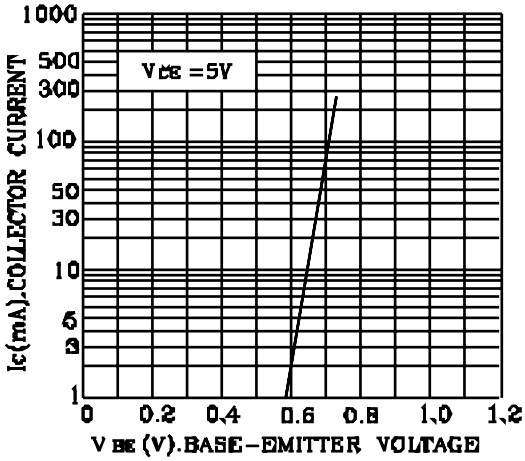
Device	Operating Temperature	Package
PJ2N5551CT	-20℃～+85℃	TO-92

ELECTRICAL CHARACTERISTICS (Ta=25℃)

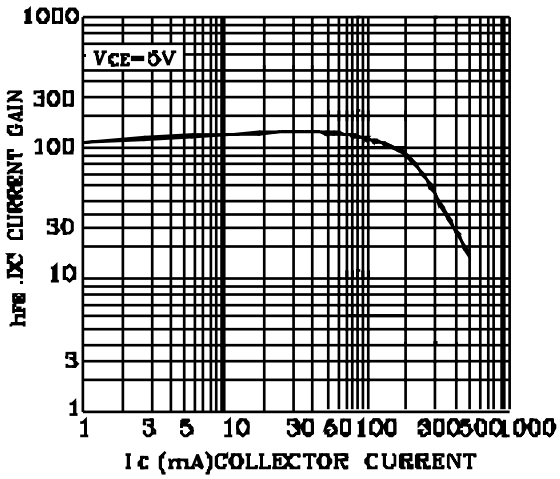
Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	Ic=100μA,I_E=0	180			V
Collector- Emitter Breakdown	BV_{CEO}	Ic=1mA,I_B=0	160			V
Voltage	BV_{EBO}	I_E=10μA,I_C=0	6			V
Emitter-Base Breakdown Voltage	I_{CBO}	V_{CB}=120V,I_E=0			50	nA
Collector Cutoff Current	I_{EBO}	V_{EB}=4V,Ic=0			50	nA
Emitter Cutoff Current	H_{EF1}	V_{CE}=5V,I_C=1 mA	80			
DC Current Gain	H_{EF2}	V_{CE}=5V,I_C=10mA	80			
	H_{EF3}	V_{CE}=5V,I_C=50mA	30			
	$V_{CE(SAT)}$	Ic=10 mA,I_B=1 mA			0.15	V
Collector-Emitter Saturation Voltage		Ic=50 mA,I_B=5 mA			0.2	V
	$V_{BE(SAT)}$	Ic=10 mA,I_B=1 mA			1	V
Base-Emitter Saturation Voltage		Ic=50 mA,I_B=5 mA			1	V
	Cob	V_{CB}=20V,I_E=0, f=1MHz			6	PF
Output Capacitance	f_T	V_{CE}=10V,Ic=10Ma,f=100 MHz	100		300	MHz
Current Gain-Bandwidth product	NF	V_{CE}=5V,I_C=250μA			8	dB
Noise Figure		Rs=1KΩ,f=10Hz to 15.7KHz				

- Pulse Test: Pulse Width≤300μs, Duty Cycle≤2%.

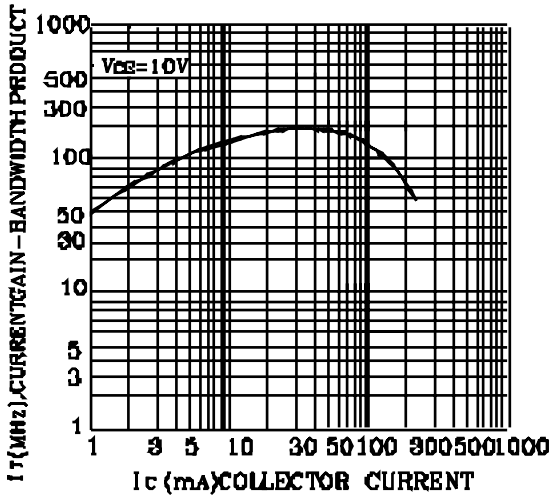
DC CURRENT GAIN



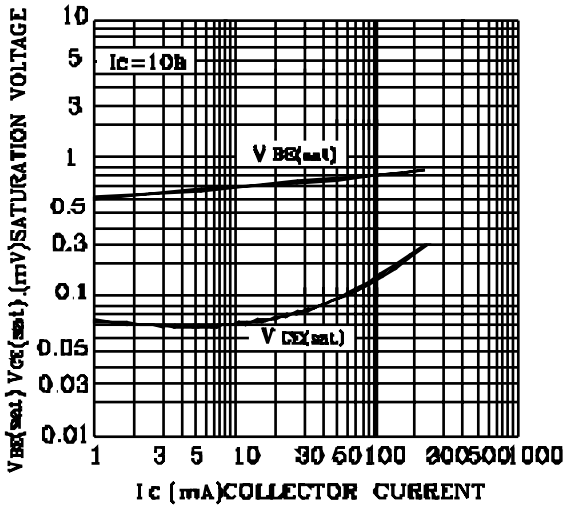
BASE-EMITTER ON VOLTAGE



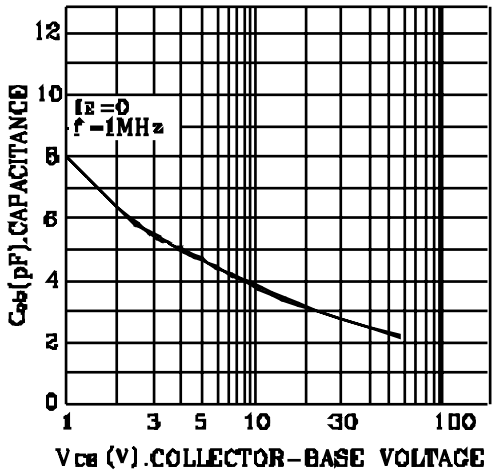
CURRENT GAIN-BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURANION VOLTAGE



OUTPUT CAPACITANCE



TO-92 Unit:mm