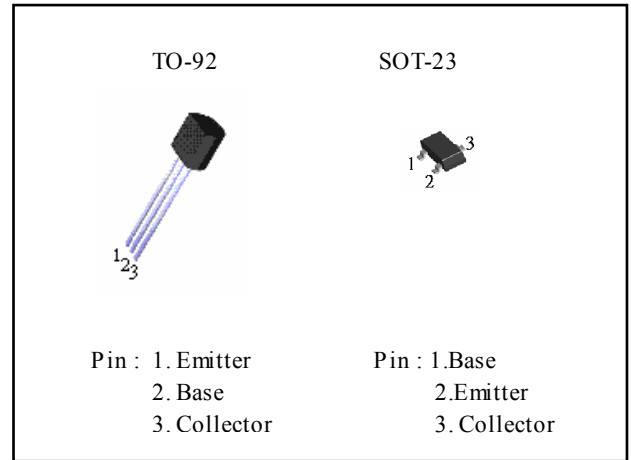


**PNP Epitaxial Silicon Transistor**

**PRE-AMPLIFIER, LOW LEVEL & LOW NOISE**

- High total power dissipation (PT=450mW)
- High  $h_{FE}$  and good linearity
- Complementary to PJ2N9014



**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>= 25°C)**

Characteristic	Symbol	Rating	Unit
Collector Base Voltage	V <sub>CBO</sub>	-50	V
Collector Emitter Voltage	V <sub>CEO</sub>	-45	V
Emitter Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current	I <sub>c</sub>	-100	mA
Collector Dissipation	P <sub>c</sub>	450	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 ~150	°C

**ORDERING INFORMATION**

Device	Operating Temperature	Package
PJ2N9015CT	-20°C ~+85°C	TO-92
PJ2N9015CX		SOT-23

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>= 25 °C)**

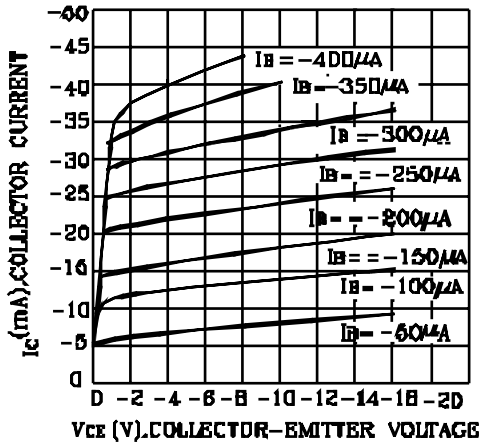
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV <sub>CBO</sub>	I <sub>c</sub> = -100 μ A , I <sub>E</sub> =0	-50			V
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>c</sub> = -1mA , I <sub>B</sub> =0	-45			V
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	I <sub>E</sub> = -100 μ A , I <sub>C</sub> =0	-5			V
Collector Cut-off Current	I <sub>CBO</sub>	V <sub>CB</sub> = -50V , I <sub>E</sub> = 0			-50	nA
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> = -5V , I <sub>C</sub> =0			-50	nA
DC Current Gain	h <sub>FE</sub>	V <sub>EB</sub> = -5V , I <sub>C</sub> = -1 mA	60	200	600	
Collector- Base Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> = -100 mA , I <sub>B</sub> = -5mA		-0.2	-0.7	V
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> = -100mA , I <sub>B</sub> = -5mA		-0.82	-1.0	V
Base-Emitter On Voltage	V <sub>BE(ON)</sub>	V <sub>CE</sub> = -5V, I <sub>c</sub> = -2 mA	-0.6	-0.65	-0.75	V
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10V, I <sub>E</sub> = 0 f=1MHz		4.5	7.0	pF
Current Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = -5V, I <sub>c</sub> = -10 mA	100	190		MHz
Noise Figure	NF	V <sub>CE</sub> = -5V, I <sub>c</sub> = -0.2 mA f=1KHz, R <sub>s</sub> =2KΩ		0.7	10	dB

**h<sub>FE</sub> CLASSIFICATION**

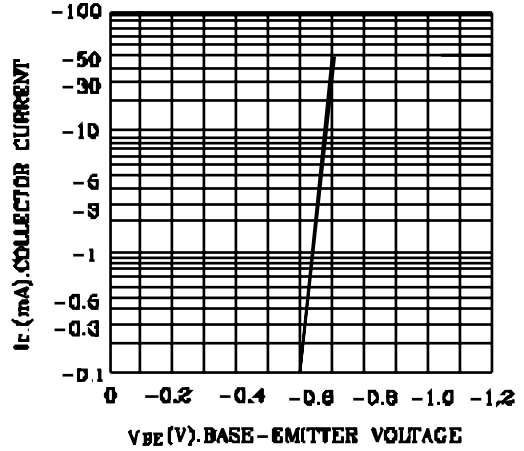
Classification	A	B	C	D
H <sub>FE</sub>	60-150	100-300	200-600	400-1000

PNP Epitaxial Silicon Transistor

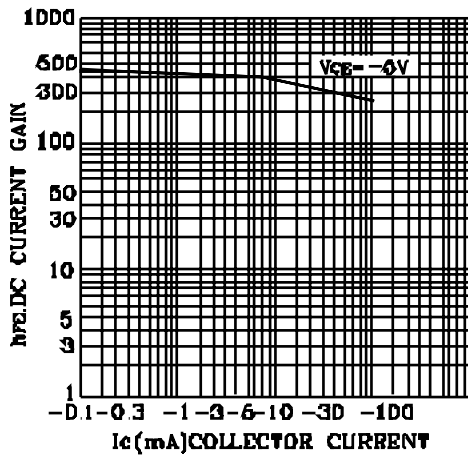
STATIC CHARACTERISTIC



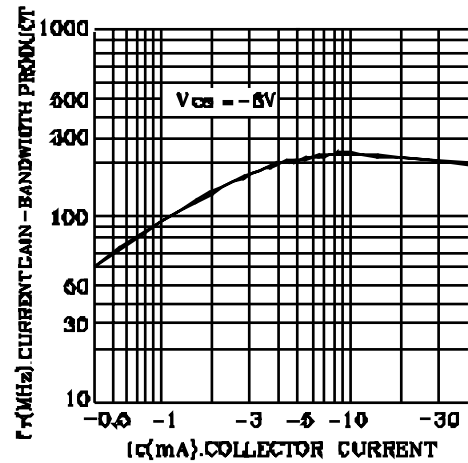
BASE-EMITTER VOLTAGE



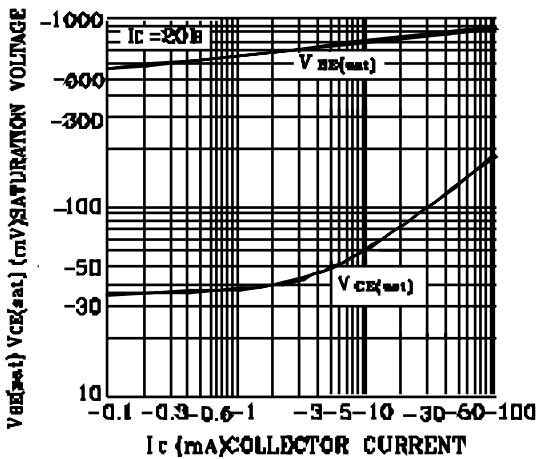
DC CURRENT GAIN



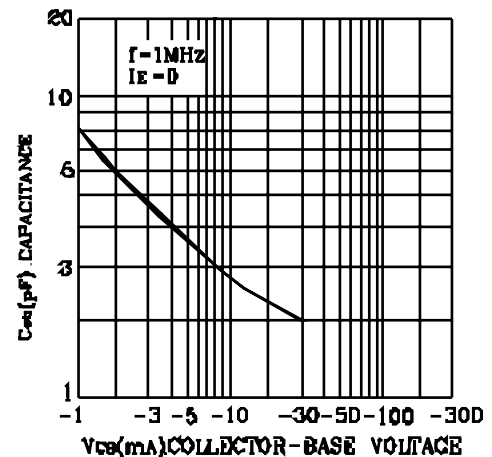
CURRENT GAIN-BANDWIDTH PRODUCT



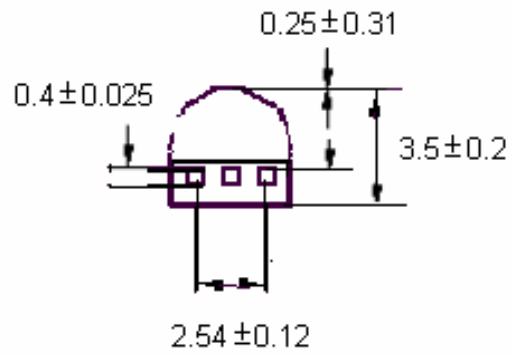
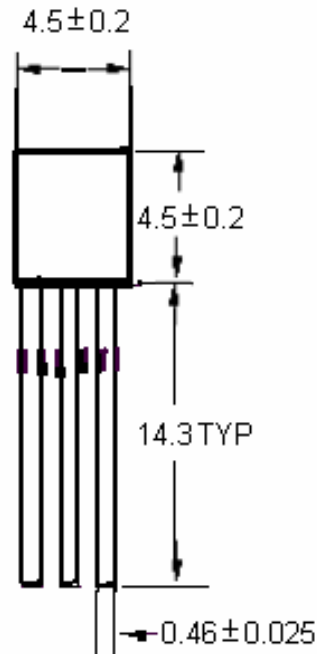
BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE



TO-92 Unit:mm



SOT-23 Unit:mm

