

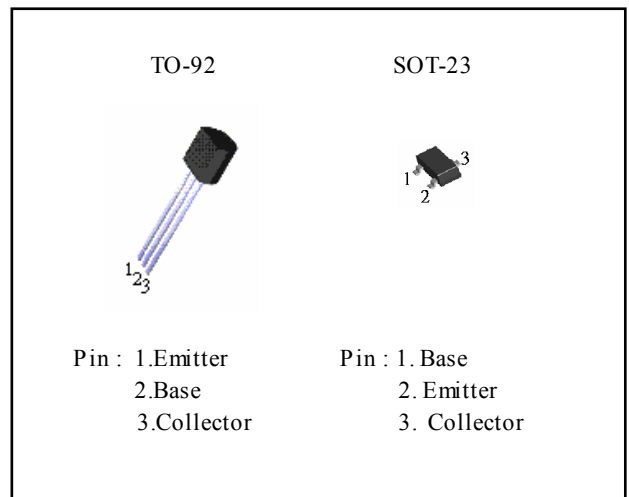
PNP Epitaxial Silicon Transistor

1W OUTPUT AMPLIFIER OF POTABLE RADIOS IN CLASS B PUSH-PULL OPERATION

- High total power dissipation($P_T=625\text{mW}$)
- High collector Current ($I_C=-500\text{mA}$)
- Complementary to 2N9013
- Excellent h_{FE} Linearity

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

Rating	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	-40	V
Collector Emitter Voltage	V_{CEO}	-20	V
Emitter Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-500	A
Collector Dissipation	P_C	625	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~150	$^\circ\text{C}$



ORDERING INFORMATION

Device	Operating Temperature	Package
PJ2N9012CT	-20 $^\circ\text{C}$ ~ +85 $^\circ\text{C}$	TO-92
PJ2N9012CX		SOT-23

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

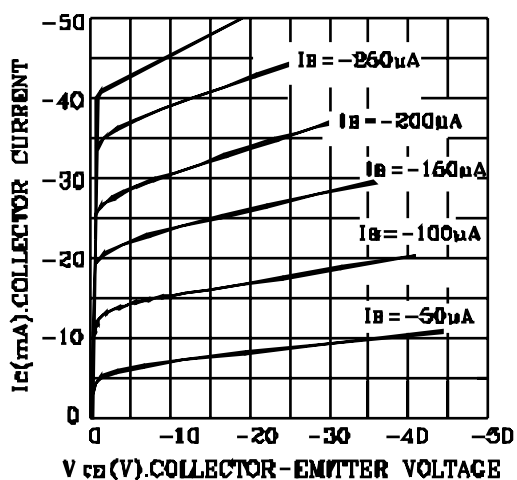
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = -100\ \mu\text{A}$, $I_E = 0$	-40			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = -1\text{mA}$, $I_B = 0$	-20			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = -100\ \mu\text{A}$, $I_C = 0$	-5			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -25\text{V}$, $I_E = 0$			-100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -3\text{V}$, $I_C = 0$			-100	nA
DC Current Gain	h_{FE1}	$V_{EB} = -1\text{V}$, $I_C = -50\text{mA}$	64	120	202	
	h_{FE2}	$V_{EB} = -1\text{V}$, $I_C = -500\text{mA}$	40	90		
Collector- Base Saturation Voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}$, $I_B = -50\text{mA}$		0.14	0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -500\text{mA}$, $I_B = -50\text{mA}$	0.58	0.84	1.0	V
Base-Emitter On Voltage	$V_{BE(ON)}$	$V_{CE} = -1\text{V}$, $I_C = -10\text{mA}$		0.63	0.7	V

h_{FE} CLASSIFICATION

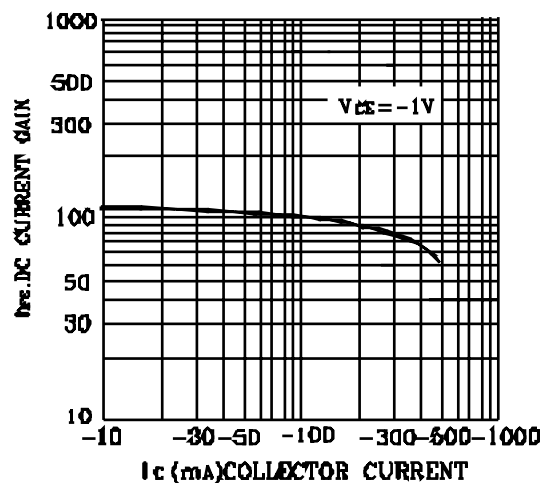
Classification	D	E	F	G	H
h_{FE}	64-91	78-112	96-135	112-166	144-202

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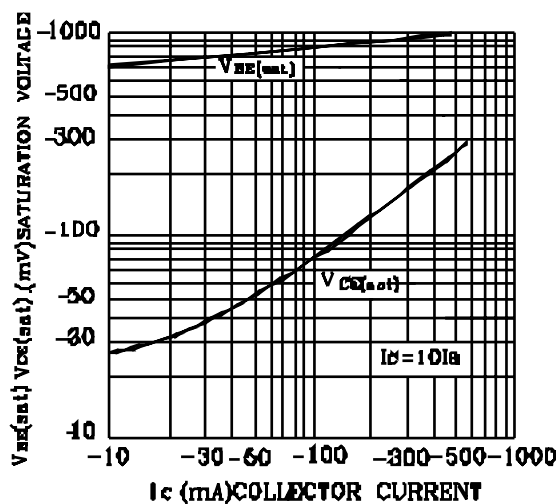
STATIC CHARACTERISTIC



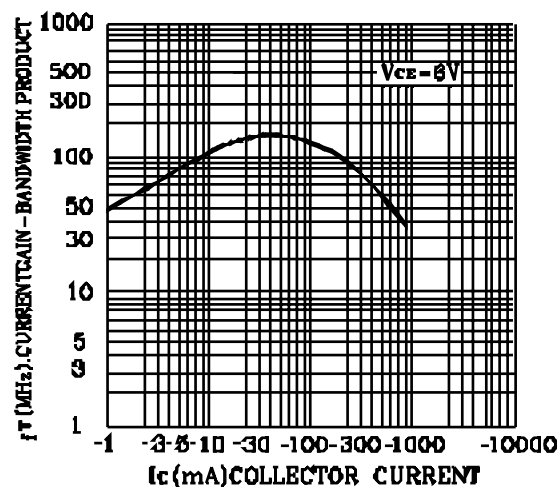
DC CURRENT GAIN



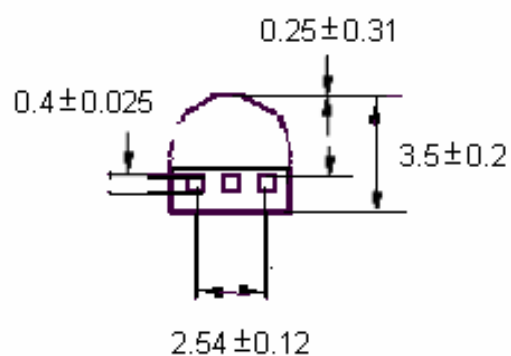
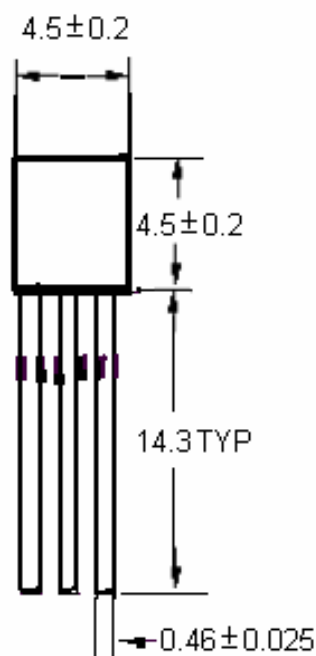
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



CURRENT GAIN-BANDWIDTH PRODUCT



TO-92 Unit:mm



SOT-23 Unit:mm

