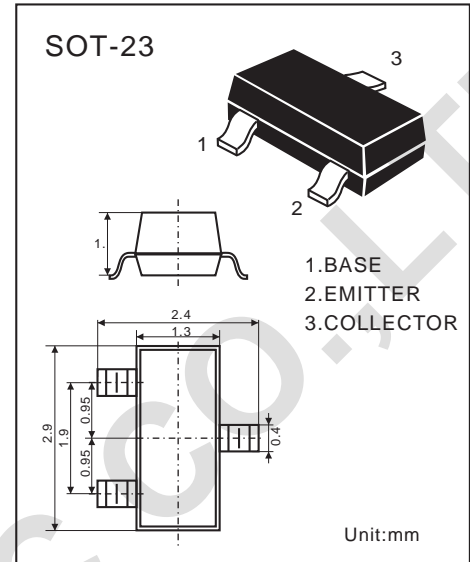


### PNP EPITAXIAL SILICON TRANSISTOR

**1W OUTPUT AMPLIFIER OF PORTABLE  
RADIO IN CLASS  
B PUSH-PULL OPERATION**

Complement to 9013G  
Collector Current :  $I_C = -500\text{mA}$   
High Total Power Dissipation  $P_C = 225\text{mW}$



#### ABSOLUTE MAXIMUM RATINGS

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	-40	V
Collector-Emitter Voltage	$V_{CE0}$	-20	V
Emitter-Base Voltage	$V_{EB0}$	-5	V
Collector Current	$I_C$	-500	mA
Collector Dissipation $T_a = 25^\circ\text{C}^*$	$P_D$	225	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55~150	$^\circ\text{C}$

#### Electrical Characteristics

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

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Condition
Collector-Base Breakdown Voltage	$BV_{CB0}$	-40			V	$I_C = -100\mu\text{A}$ $I_E = 0$
Collector-Emitter Breakdown Voltage#	$BV_{CE0}$	-20			V	$I_C = -1\text{mA}$ $I_B = 0$
Emitter-Base Breakdown Voltage	$BV_{EB0}$	-5			V	$I_E = -100\mu\text{A}$ $I_C = 0$
Collector-Base Cutoff Current	$I_{CB0}$			-100	nA	$V_{CB} = -25\text{V}$ , $V_C = 0$
Emitter-Base Cutoff Current	$I_{EB0}$			-100	nA	$V_{CB} = -3\text{V}$ , $I_C = 0$
DC Current Gain	$H_{FE1}$	64	120	300		$V_{CE} = -1\text{V}$ , $I_C = -50\text{mA}$
DC Current Gain	$H_{FE2}$	30				$V_{CE} = -1\text{V}$ , $I_C = -500\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.18	-0.6	V	$I_C = -500\text{mA}$ , $I_B = -50\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.95	-1.2	V	$I_C = -500\text{mA}$ , $I_B = -50\text{mA}$
Base-Emitter On Voltage	$V_{BE(on)}$	-0.6	-0.67	-0.7	V	$V_{CE} = -1\text{V}$ , $I_C = -10\text{mA}$

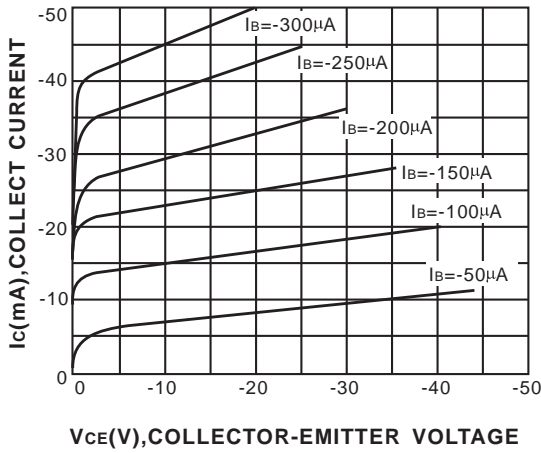
\*Total Device Dissipation:  $FR = 1 \times 0.75 \times 0.062$  in Board Derate  $25^\circ\text{C}$

#Pulse Test: Pulse Width  $\leq 300\mu\text{s}$  Duty cycle  $\leq 2\%$

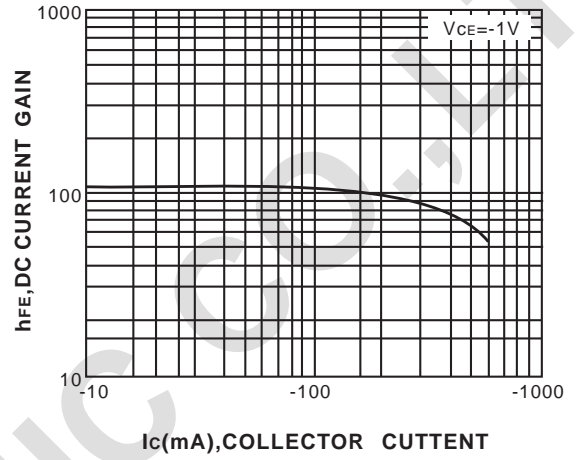
DEVICE MARKING:

9012=J6

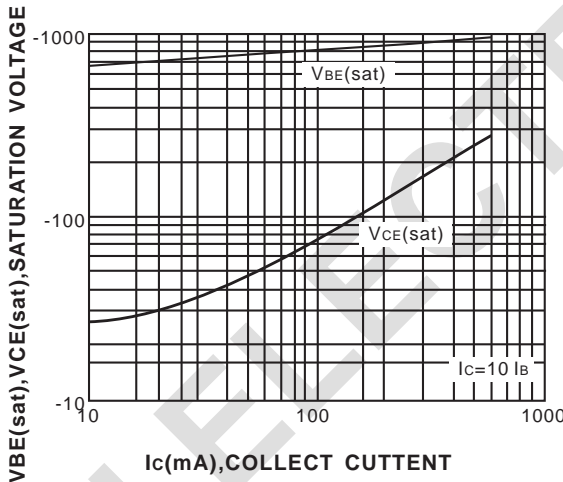
# Typical Characteristics



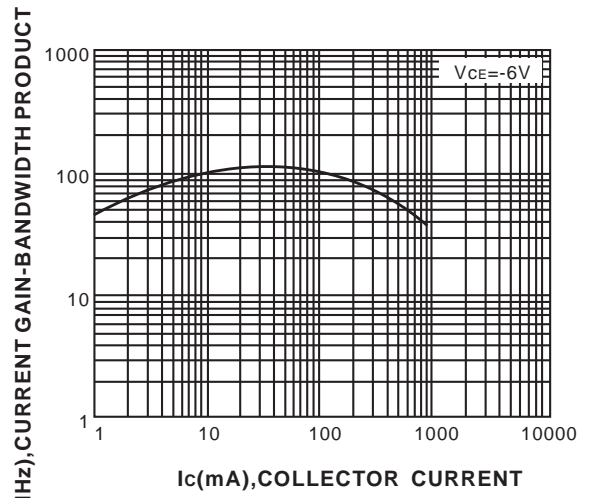
**Static Characteristic**



**DC Current Gain**



**Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage**



**Current Gain Bandwidth Product**