

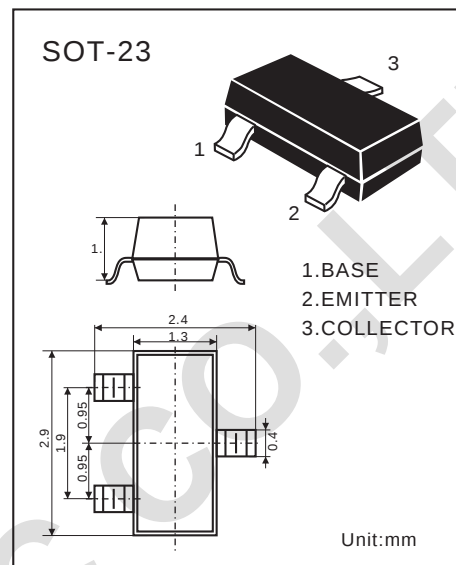
NPN EPITAXIAL SILICON TRANSISTOR

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

Complement to 9012

Collector Current :I_c=500mA

High Total Power Dissipation P_c=225mW



ABSOLUTE MAXIMUM RATINGS

(T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	40	V
Collector-Emitter Voltage	V _{CEO}	20	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	500	mA
Collector Dissipation T _a =25°C*	P _D	225	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55~150	°C

Electrical Characteristics

(T_a=25°C)

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Condition
Collector-Base Breakdown Voltage	BV _{CB0}	40			V	I _C =100μA I _E =0
Collector-Emitter Breakdown Voltage#	BV _{CEO}	20			V	I _C =1mA I _B =0
Emitter-Base Breakdown Voltage	BV _{EBO}	5			V	I _E =100μA I _C =0
Collector-Base Cutoff Current	I _{CB0}			100	nA	V _{CB} =25V, V _C =0
Emitter-Base Cutoff Current	I _{EBO}			100	nA	V _{CB} =3V, I _C =0
DC Current Gain	H _{FE1}	64	120	300		V _{CE} =1V, I _C =50mA
DC Current Gain	H _{FE2}	30				V _{CE} =1V, I _C =500mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}		0.18	0.6	V	I _C =500mA, I _B =50mA
Base-Emitter Saturation Voltage	V _{BE(sat)}		0.95	1.2	V	I _C =500mA, I _B =50mA
Base-Emitter On Voltage	V _{BE(on)}	0.6	0.67	0.7	V	V _{CE} =1V, I _C =10mA

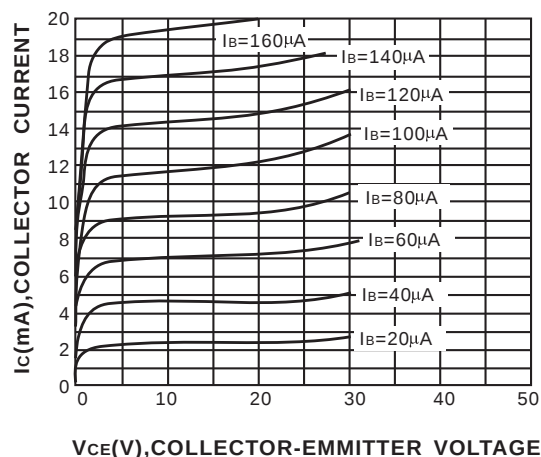
*Total Device Dissipation:FR=1X0.75X0.062 in Board Derate 25°C

#Pulse Test: Pulse Width≤300uS Duty cycle ≤2%

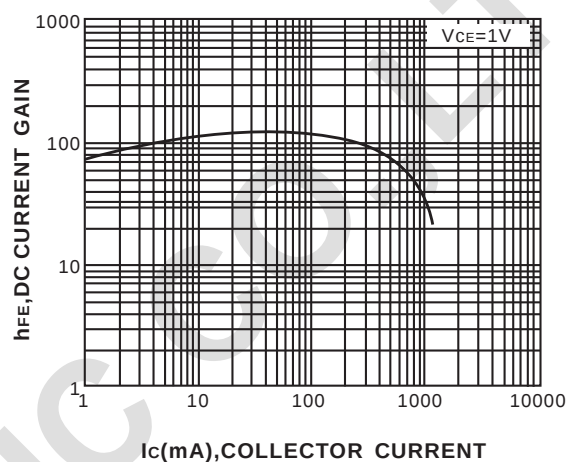
DEVICE MARKING:

9013=K6

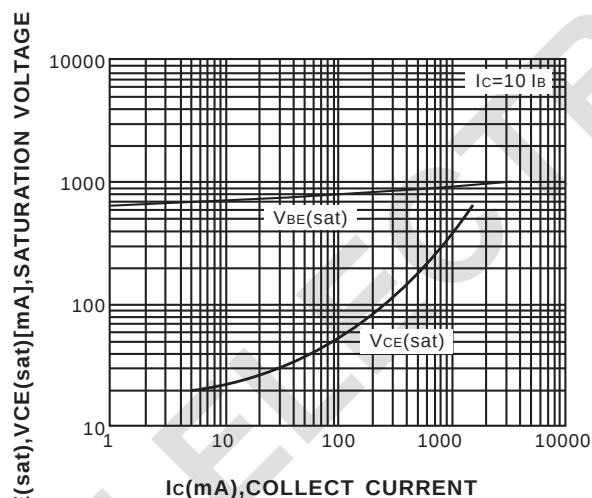
Typical Characteristics



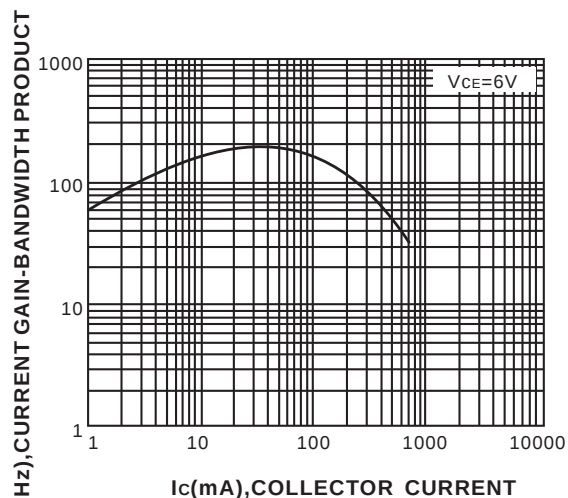
Static Characteristic



DC Current Gain



Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage



Current Gain Bandwidth Product