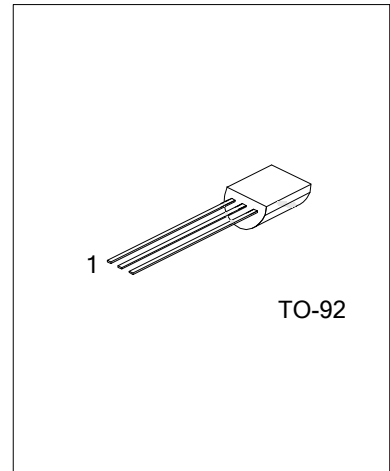




**9012**

**PNP SILICON EPITAXIAL TRANSISTOR**

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



■ FEATURES

- \*High total power dissipation. (625mW)
- \*High collector current. (-500mA)
- \*Excellent hFE linearity
- \*Complementary to UTC 9013

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
9012L-x-T92-B	9012G-x-T92-B	TO-92	E	B	C	Tape Box
9012L-x-T92-K	9012G-x-T92-K	TO-92	E	B	C	Bulk

Note: Pin Assignment: B: Base E: Emitter C: Collector

<p>9012L-x-T92-B</p> <p>(1)Packing Type (2)Package Type (3)Rank (3)Lead Free</p>	<p>(1) B: Tape Box, K: Bulk (2) T92: TO-92 (3) x: refer to Classification of <math>h_{FE1}</math> (4) L: Lead Free, G: Halogen Free</p>
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■ MARKING INFORMATION

PACKAGE	MARKING
TO-92	<p>Rank ← → Data Code</p> <p>1</p> <p>UTC 9012</p> <p>L: Lead Free G: Halogen Free</p>

■ ABSOLUTE MAXIMUM RATING ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	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	mA
Collector dissipation	$P_C$	625	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.  
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

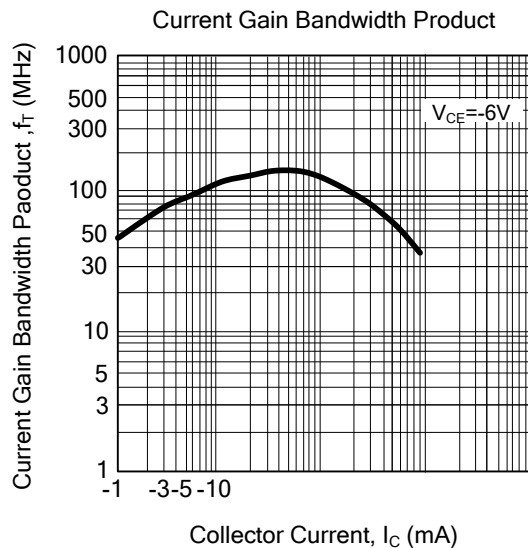
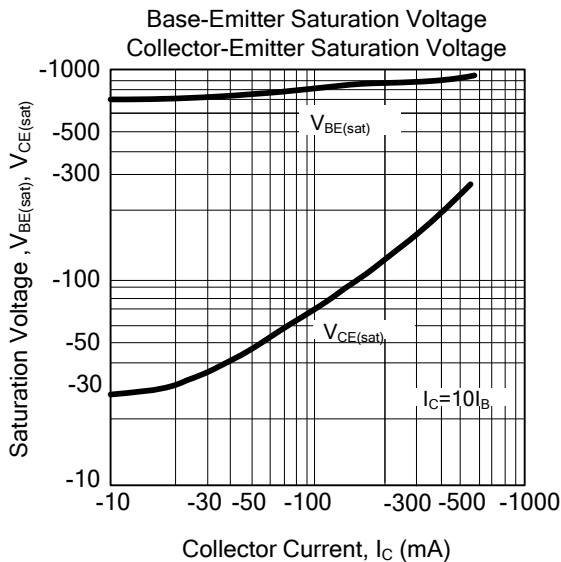
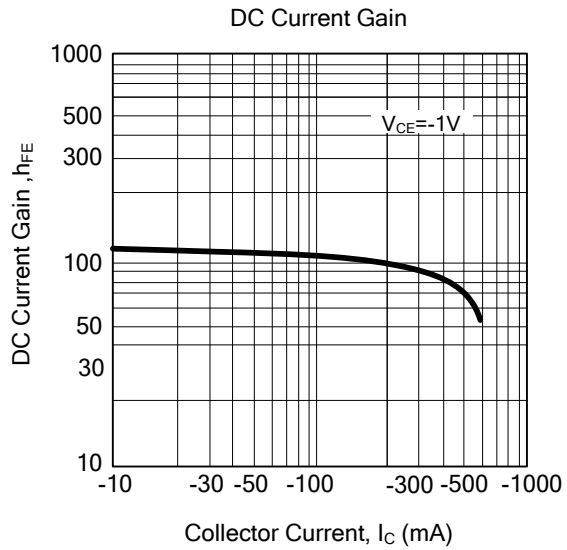
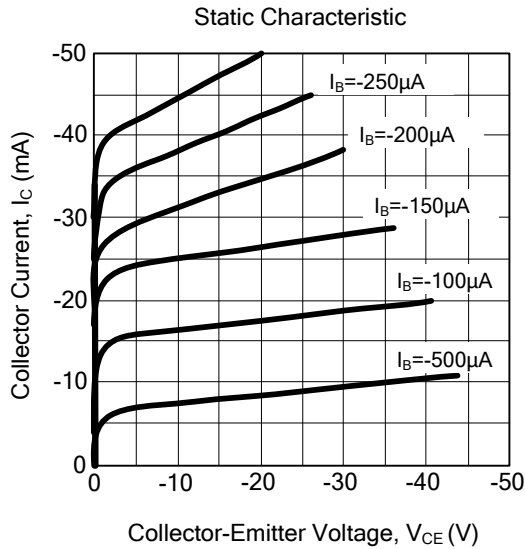
■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$B_{VCBO}$	$I_C=-100\mu\text{A}, I_E=0$	-40			V
Collector-emitter breakdown voltage	$B_{VCEO}$	$I_C=-1\text{mA}, I_B=0$	-20			V
Emitter-base breakdown voltage	$B_{VEBO}$	$I_E=-100\mu\text{A}, I_C=0$	-5			V
Collector cutoff current	$I_{CBO}$	$V_{CB}=-25\text{V}, I_E=0$			-100	nA
Emitter cutoff current	$I_{EBO}$	$V_{EB}=-3\text{V}, I_C=0$			-100	nA
DC current gain	$h_{FE1}$	$V_{CE}=-1\text{V}, I_C=-50\text{mA}$	64	120	300	
	$h_{FE2}$	$V_{CE}=-1\text{V}, I_C=-500\text{mA}$	40	90		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$		-0.18	-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$		-0.95	-1.2	V
Base-emitter on voltage	$V_{BE(on)}$	$V_{CE}=-1\text{V}, I_C=-10\text{mA}$	-0.6	-0.67	-0.7	V

■ CLASSIFICATION OF  $h_{FE1}$

RANK	D	E	F	G	H	I
RANGE	64-91	78-112	96-135	112-166	144-202	190-300

■ TYPICAL CHARACTERISTICS



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