



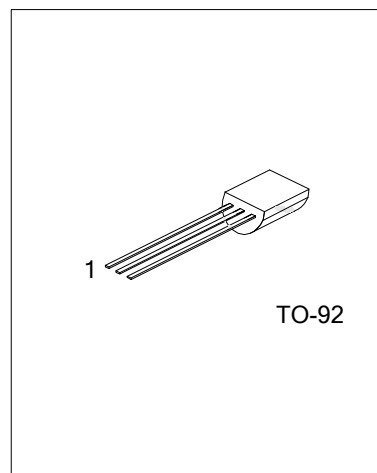
9012

PNP SILICON EPITAXIAL TRANSISTOR

1W OUTPUT AMPLIFIER OF PORTABLE 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

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

PACKAGE	MARKING
TO-92	U T C 9012 □ □ □ □ □ Rank ← 1 → Data Code L: Lead Free G: Halogen Free

■ **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.

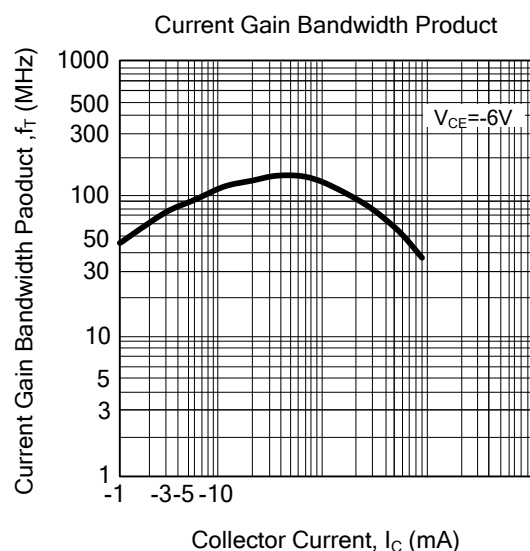
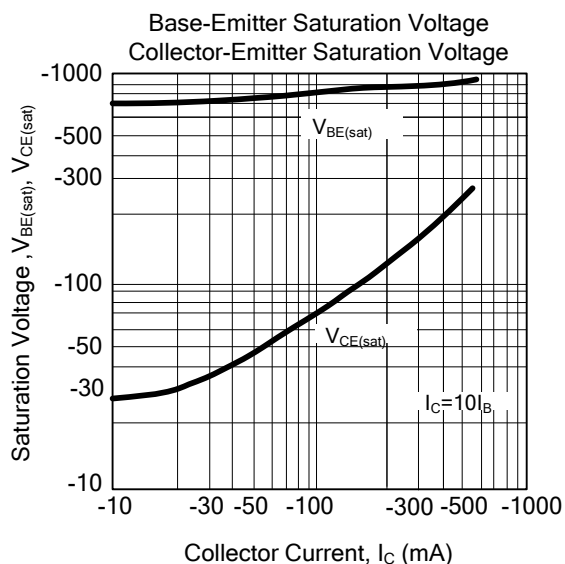
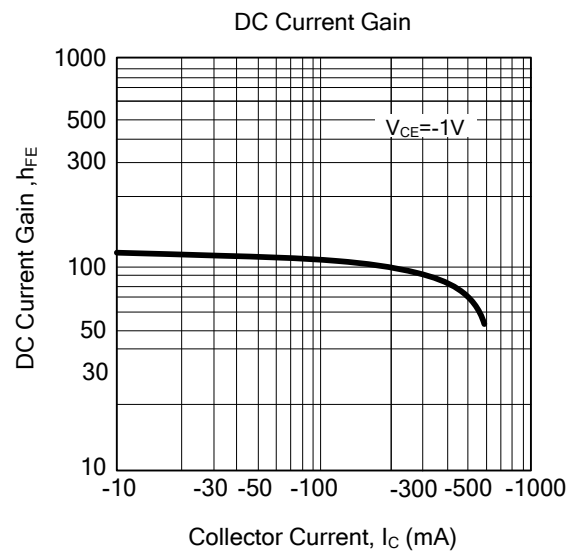
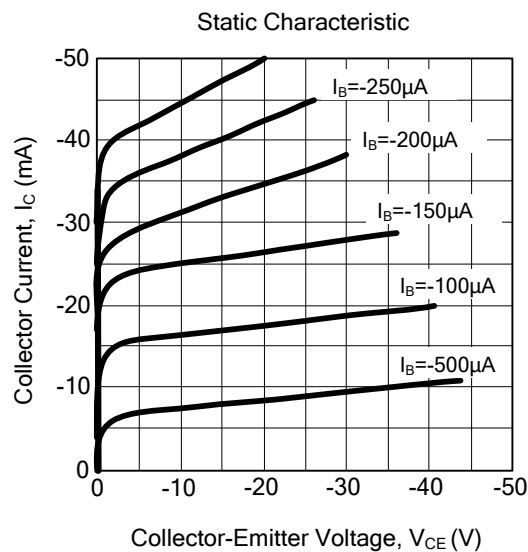
■ **ELECTRICAL CHARACTERISTICS** ($T_A=25^\circ\text{C}$, unless otherwise specified)

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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