

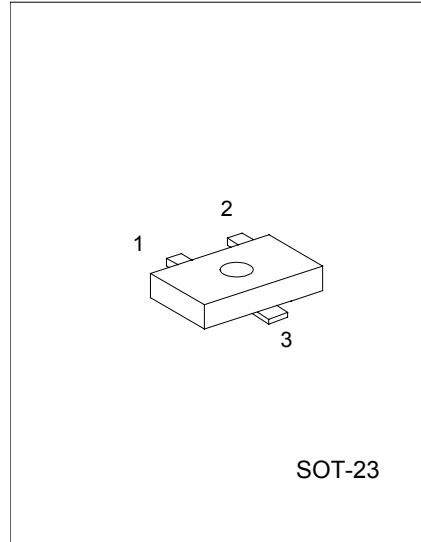
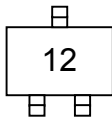
# UTC MMBT9012 PNP EPITAXIAL SILICON TRANSISTOR

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 MMBT9013

## MARKING



SOT-23

1: EMITTER 2: BASE 3: COLLECTOR

## ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise specified )

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V <sub>CB0</sub>	-40	V
Collector-emitter voltage	V <sub>CEO</sub>	-20	V
Emitter-base voltage	V <sub>EB0</sub>	-5	V
Collector current	I <sub>c</sub>	-500	mA
Collector dissipation	P <sub>c</sub>	225	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55 ~ +150	°C

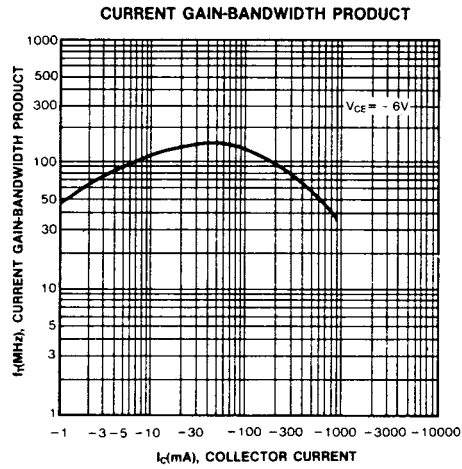
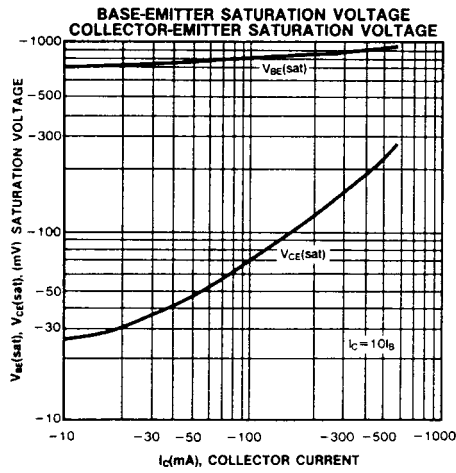
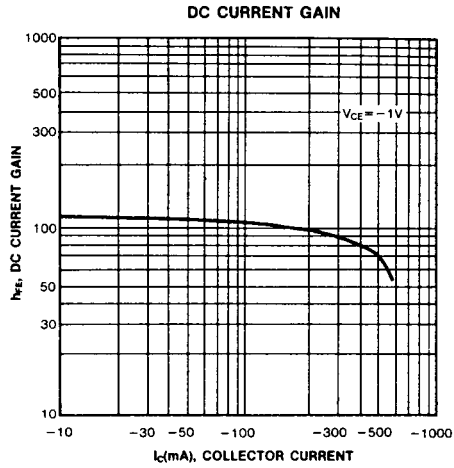
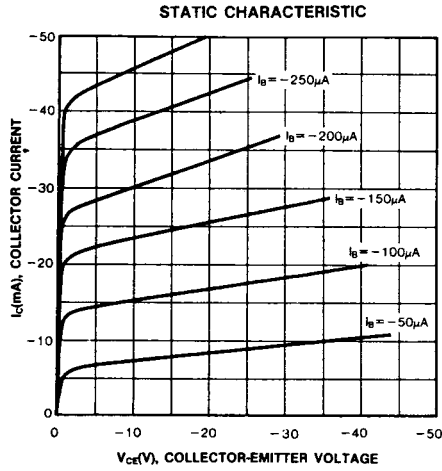
## ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BV <sub>CB0</sub>	I <sub>c</sub> =-100μA, I <sub>E</sub> =0	-40			V
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	I <sub>c</sub> =-1mA, I <sub>B</sub> =0	-20			V
Emitter-base breakdown voltage	BV <sub>EB0</sub>	I <sub>E</sub> =-100μA, I <sub>c</sub> =0	-5			V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> =-25V, I <sub>E</sub> =0			-100	nA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> =-3V, I <sub>c</sub> =0			-100	nA
DC current gain	hFE1	V <sub>CE</sub> =-1V, I <sub>c</sub> =-50mA	64	120	300	
	hFE2	V <sub>CE</sub> =-1V, I <sub>c</sub> =-500mA	40	90		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =-500mA, I <sub>B</sub> =-50mA		-0.18	-0.6	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> =-500mA, I <sub>B</sub> =-50mA		-0.95	-1.2	V
Base-emitter on voltage	V <sub>BE(on)</sub>	V <sub>CE</sub> =-1V, I <sub>c</sub> =-10mA	-0.6	-0.67	-0.7	V

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## CLASSIFICATION OF hFE1

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



## UTC MMBT9012 PNP EPITAXIAL SILICON TRANSISTOR

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