

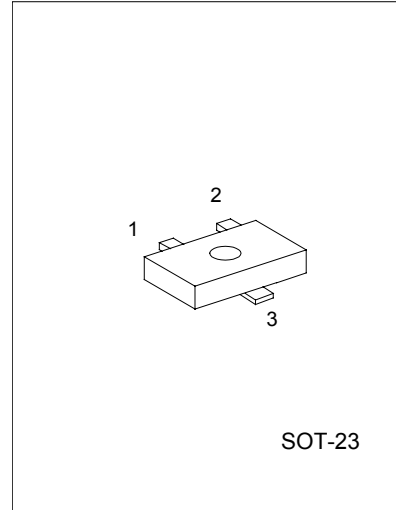
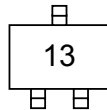
UTC MMBT9013 NPN EPITAXIAL SILICON TRANSISTOR

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 MMBT9012

MARKING



1: EMITTER 2: BASE 3: COLLECTOR

*Pb-free plating product number: MMBT9013L

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

PARAMETER	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	P _c	225	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{CB0}	I _c =100μA, I _E =0	40			V
Collector-emitter breakdown voltage	V _{CE0}	I _c =1mA, I _B =0	20			V
Emitter-base breakdown voltage	V _{EB0}	I _E =100μA, I _c =0	5			V
Collector cutoff current	I _{CB0}	V _{CB} =25V, I _E =0			100	nA
Emitter cutoff current	I _{EB0}	V _{EB} =3V, I _c =0			100	nA
DC current gain	h _{FE1}	V _{CE} =1V, I _c =50mA	64	120	300	
	h _{FE2}	V _{CE} =1V, I _c =500mA	40	120		
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =500mA, I _B =50mA		0.16	0.6	V
Base-emitter saturation voltage	V _{BE(sat)}	I _c =500mA, I _B =50mA		0.91	1.2	V
Base-emitter on voltage	V _{BE(on)}	V _{CE} =1V, I _c =10mA	0.6	0.67	0.7	V

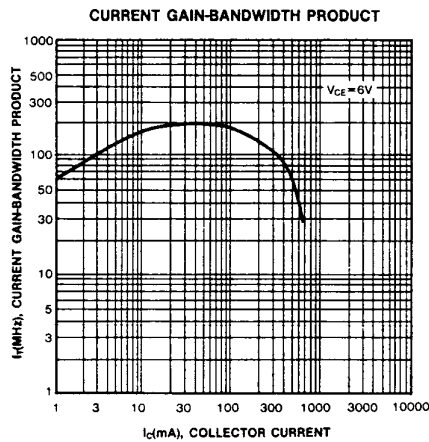
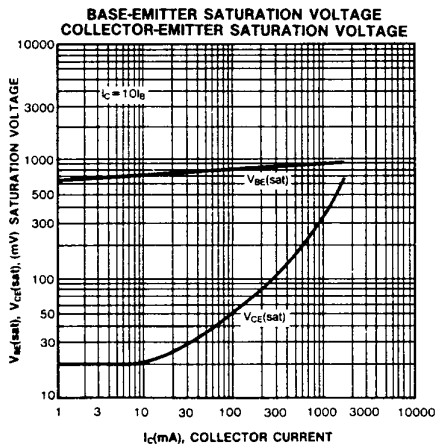
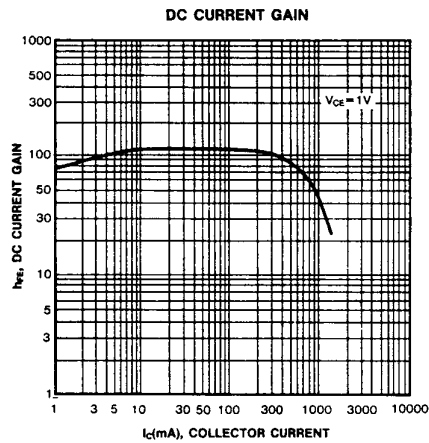
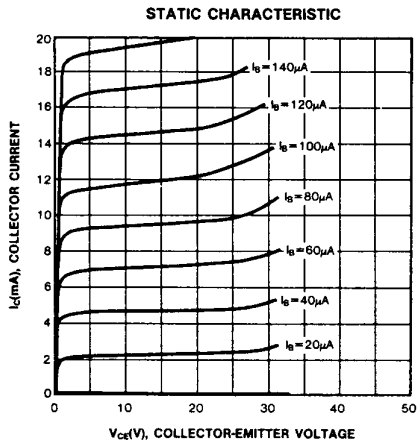
UTC UNISONIC TECHNOLOGIES CO., LTD. 1

QW-R206-021,A

UTC MMBT9013 NPN EPITAXIAL SILICON TRANSISTOR

CLASSIFICATION OF hFE1

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



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