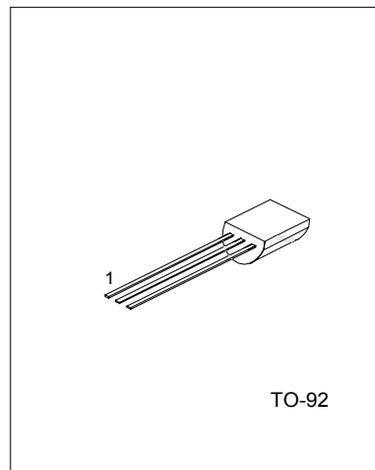


## UTC 9014 NPN EPITAXIAL SILICON TRANSISTOR

PRE-AMPLIFIER, LOW LEVEL &  
LOW NOISE

### FEATURES

- \*High total power dissipation. (450mW)
- \*Excellent hFE linearity.
- \*Complementary to UTC 9015



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>	50	V
Collector-emitter voltage	V <sub>CEO</sub>	45	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>c</sub>	100	mA
Collector dissipation	P <sub>c</sub>	450	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	50			V
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	I <sub>c</sub> =1mA, I <sub>B</sub> =0	45			V
Emitter-base breakdown voltage	BV <sub>EBO</sub>	I <sub>E</sub> =100μA, I <sub>c</sub> =0	5			V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> =50V, I <sub>E</sub> =0			50	nA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>c</sub> =0			100	nA
DC current gain	hFE	V <sub>CE</sub> =5V, I <sub>c</sub> =1mA	60	280	1000	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =100mA, I <sub>B</sub> =5mA		0.14	0.3	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> =100mA, I <sub>B</sub> =5mA		0.84	1.0	V
Base-emitter on voltage	V <sub>BE(on)</sub>	V <sub>CE</sub> =5V, I <sub>c</sub> =2mA	0.58	0.63	0.7	V
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		2.2	3.5	pF
Current gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =5V, I <sub>c</sub> =10mA	150	270		MHz
Noise Figure	NF	V <sub>CE</sub> =5V, I <sub>c</sub> =0.2mA f=1KHz, R <sub>s</sub> =2KΩ		0.9	10	dB

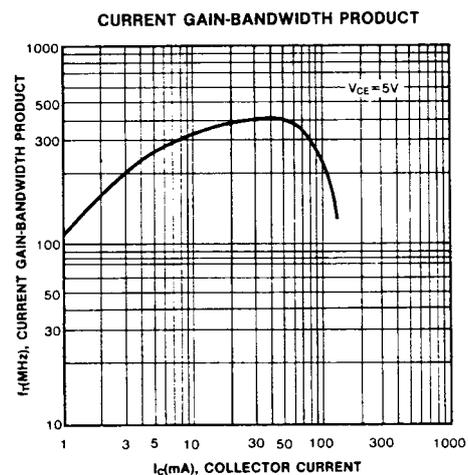
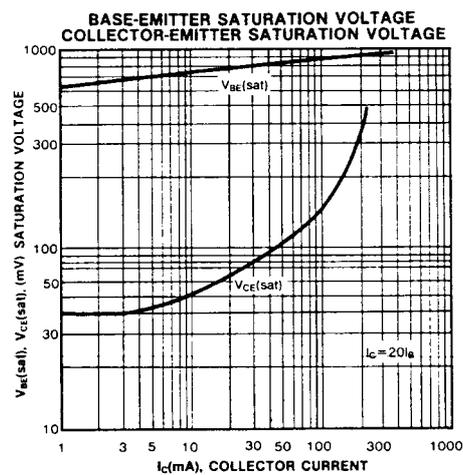
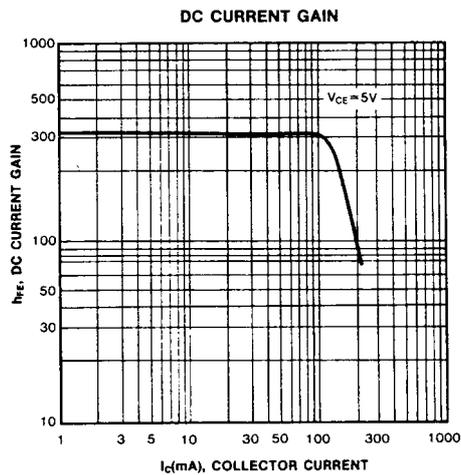
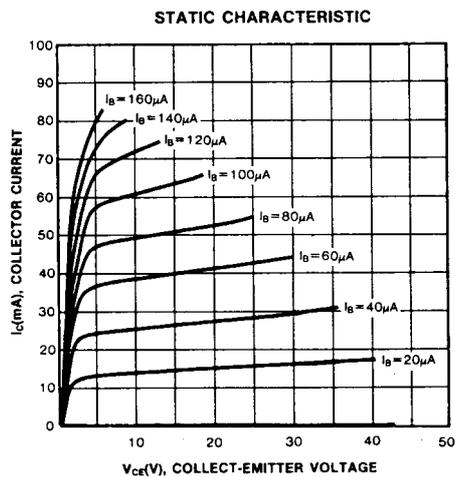
**UTC** UNISONIC TECHNOLOGIES CO., LTD. 1

QW-R201-031,A

# UTC 9014 NPN EPITAXIAL SILICON TRANSISTOR

## CLASSIFICATION OF hFE

RANK	A	B	C	D
RANGE	60-150	100-300	200-600	400-1000



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