

# UTC2SA1507 PNP EPITAXIAL SILICON TRANSISTORS

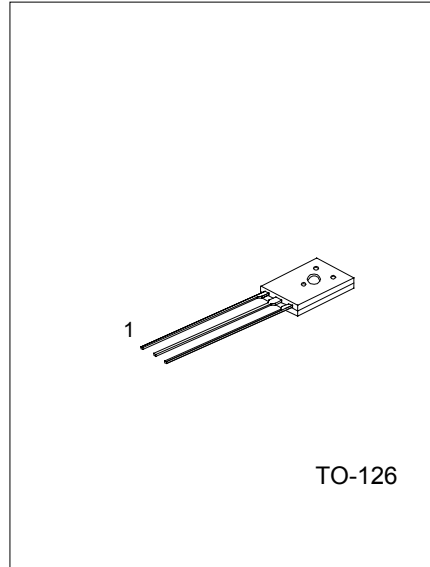
## SWITCHING TRANSISTOR

### APPLICAITONS

\*Color TV audio output, converters, inverters.

### FEATURES

- \*High breakdown voltage
- \*Large current capacitance.
- \*High-speed switching



1:EMITTER 2:COLLECTOR 3:BASE

### ABSOLUTE MAXIMUM RATINGS ( Ta=25°C )

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	-180	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-160	V
Emitter-Base Voltage	V <sub>EBO</sub>	-6	V
Collector Current	I <sub>c</sub>	-1.5	A
Collector Current (Peak)	I <sub>cp</sub>	-2.5	A
Collector Dissipation	P <sub>c</sub>	1.5	W
Collector Dissipation(T <sub>c</sub> =25°C)	P <sub>c</sub>	10	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55 to +150	°C

### ELECTRICAL CHARACTERISTICS ( Ta=25°C )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-to-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>c</sub> =-10μA, I <sub>E</sub> =0	-180			V
Collector-to-Base Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>c</sub> = -1mA, R <sub>BE</sub> =∞	-160			V
Emitter-to-Base Breakdown Voltage	V <sub>(BR) EBO</sub>	I <sub>c</sub> =0, I <sub>E</sub> = -10μA	-6			V
Collector Cut-Off Current	I <sub>CBO</sub>	V <sub>CB</sub> = -120V, I <sub>E</sub> =0			-0.1	μA
Emitter Cut-Off Current	I <sub>EBO</sub>	V <sub>EB</sub> = -4V, I <sub>c</sub> =0			-0.1	μA
DC Current Gain	h <sub>FE1</sub>	V <sub>CE</sub> = -5V, I <sub>c</sub> = -100mA	100		400	
	h <sub>FE2</sub>	V <sub>CE</sub> = -5V, I <sub>c</sub> = -10mA	90			
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> = -500mA, I <sub>B</sub> = -50mA		-0.2	-0.5	V
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> = -500mA, I <sub>B</sub> = -50mA		-0.83	-1.2	V
Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = -10V, I <sub>c</sub> = -50mA		120		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10V, f=1MHz		22		pF
Turn-On Time	t <sub>on</sub>	See specified Test Circuit		0.04		μs

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QW-R204-009,A

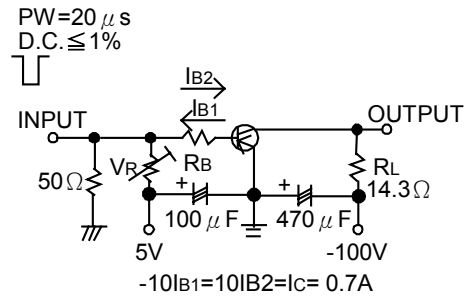
## UTC2SA1507 PNP EPITAXIAL SILICON TRANSISTORS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Storage Time	tstg	See specified Test Circuit		0.7		$\mu$ s
Fall Time	tf	See specified Test Circuit		0.04		$\mu$ s

### CLASSIFICATION OF hFE1

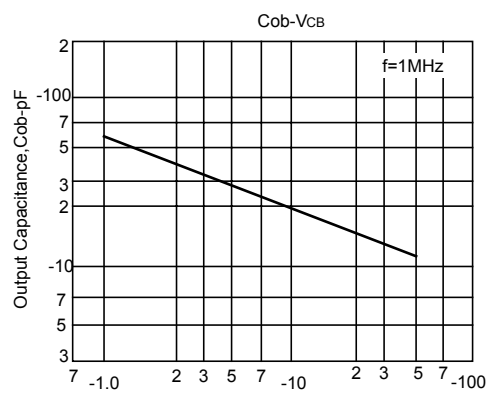
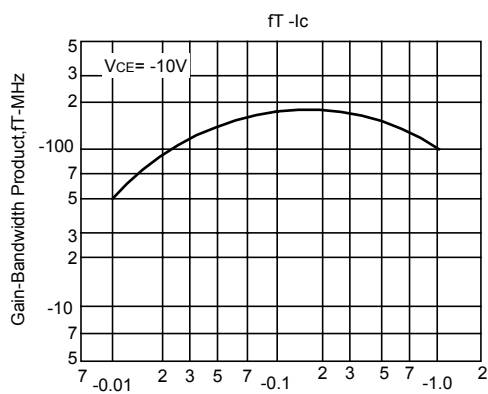
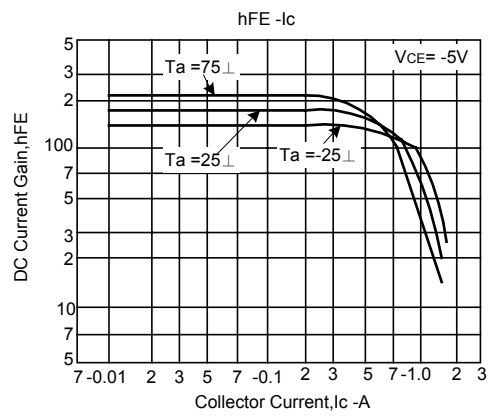
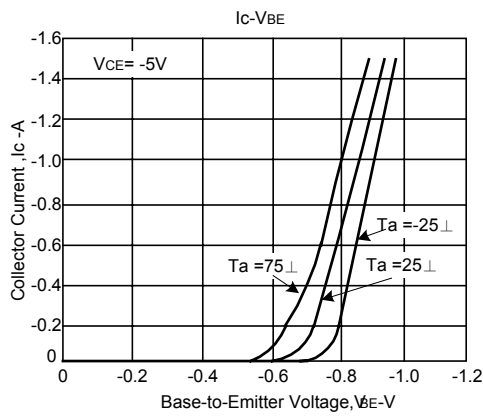
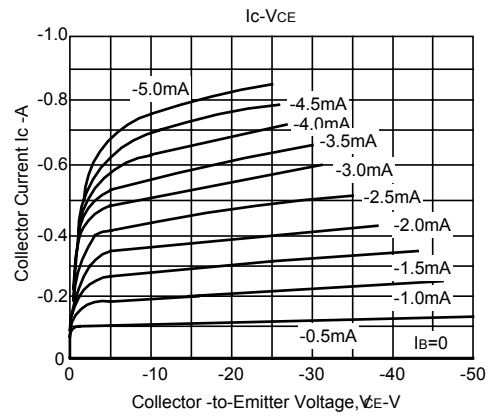
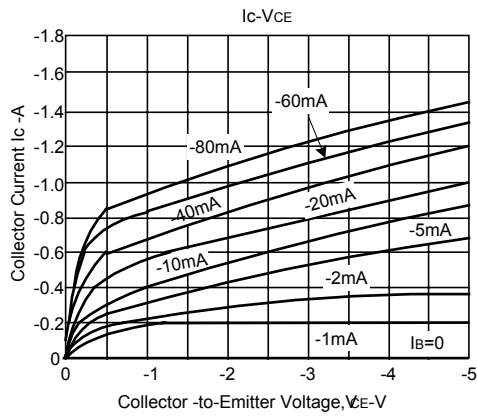
RANK	R	S	T
RANGE	100-200	140-280	200-400

### SWITCHING TIME TEST CIRCUIT

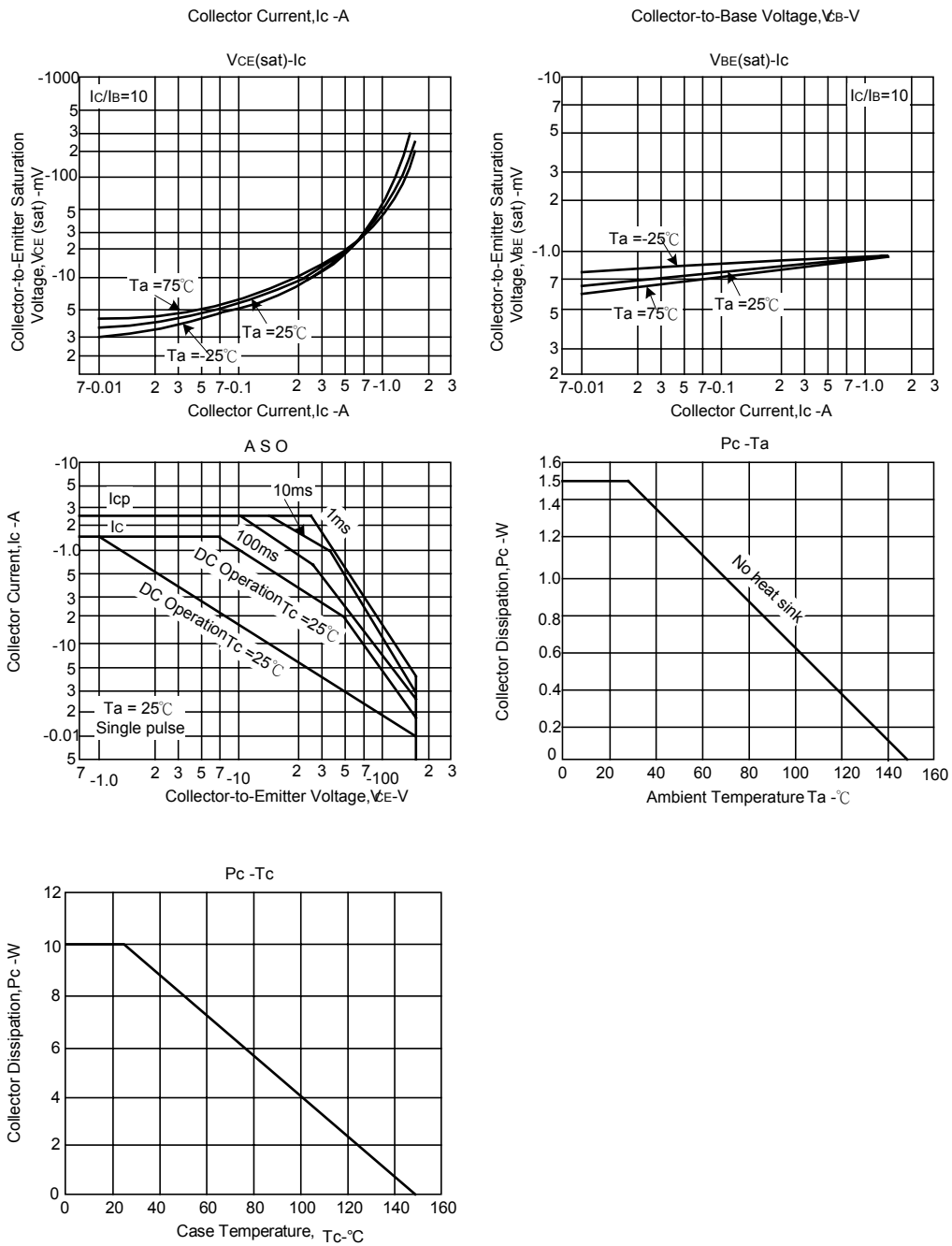


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## TYPICAL CHARACTERISTICS



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## UTC2SA1507 PNP EPITAXIAL SILICON TRANSISTORS

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