

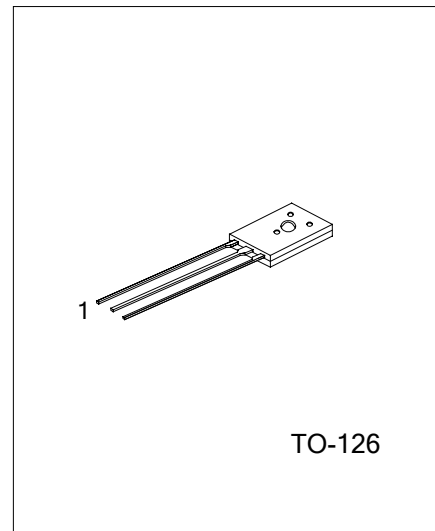
## HIGH FREQUENCY SWITCHING TRANSISTORS FOR BALLASTERS

### DESCRIPTION

UTC 4128 is designed for specially used for electronic ballasters in 110VAC environment.

### FEATURES

- \* Triple diffused technology.
- \* High switching speed



TO-126

1: BASE 2: COLLECTOR 3: EMITTER  
\*Pb-free plating product number: 4128L

### ABSOLUTE MAXIMUM RATINGS

(T<sub>c</sub> = 25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V <sub>CBO</sub>	400	V
Collector-Emitter Voltage	V <sub>CEO</sub>	200	V
Collector-Emitter Voltage	V <sub>EBO</sub>	7	V
Peak Collector Current	I <sub>C</sub>	5	A
Peak Collector Consume Dissipation	P <sub>C</sub>	40	W
Peak Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-40 ~ +150	°C

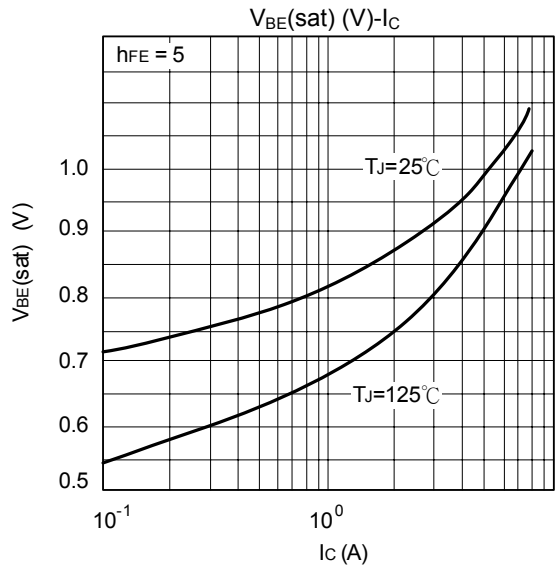
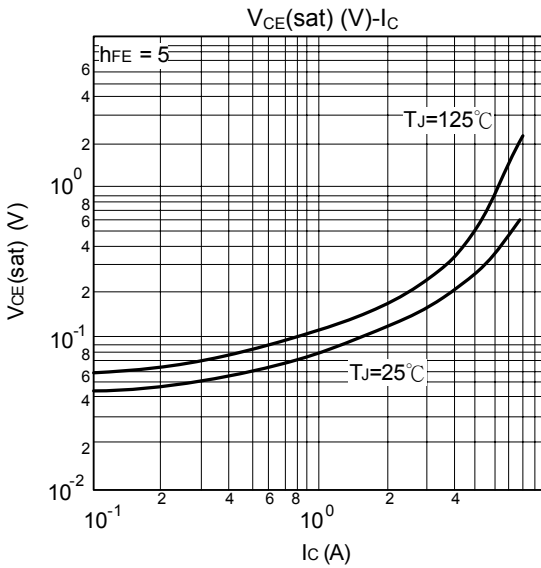
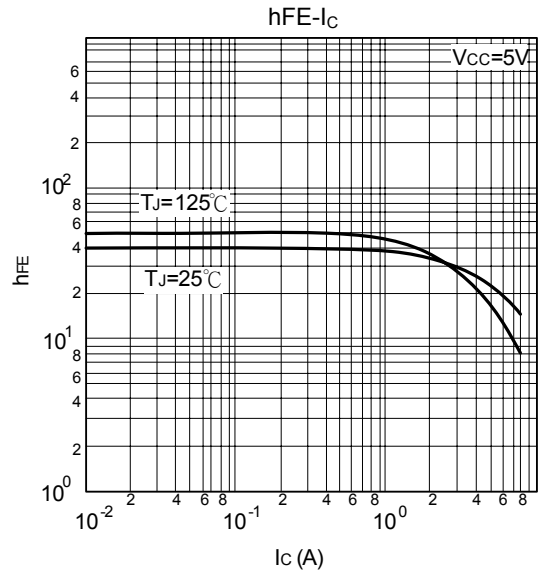
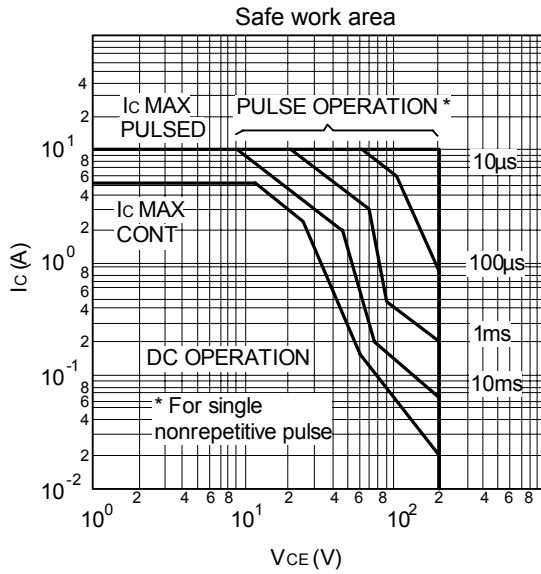
### ELECTRICAL CHARACTERISTICS

(T<sub>a</sub> = 25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Maintenance Voltage	V <sub>CEO(SUS)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0	200			V
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =1mA, I <sub>B</sub> =0	400			V
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =1mA, I <sub>C</sub> =0	7			V
Collector-Base Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =400V, I <sub>E</sub> =0			100	μA
Collector-Emitter Cutoff Current	I <sub>CEO</sub>	V <sub>CE</sub> =200V, I <sub>B</sub> =0			100	μA
Emitter-Base Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =7V, I <sub>C</sub> =0			100	μA
DC Current Gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =0.5A	10		60	
	h <sub>FE(2)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =2A	10		40	
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =0.2A			0.8	V
		I <sub>C</sub> =4A, I <sub>B</sub> =1A			2	V
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =2A, I <sub>B</sub> =0.5A			1.6	V
Fall Time	t <sub>f</sub>	I <sub>C</sub> =2A, I <sub>B1</sub> = -I <sub>B2</sub> = 0.4A			0.9	μs
Storage Time	t <sub>s</sub>	I <sub>C</sub> =2A, I <sub>B1</sub> = -I <sub>B2</sub> = 0.4A			4	μs
Feature Frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =0.5A	4			MHz

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

CHARACTERISTICS CURVES



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