



# 2SC5416

## Inverter Lighting Applications

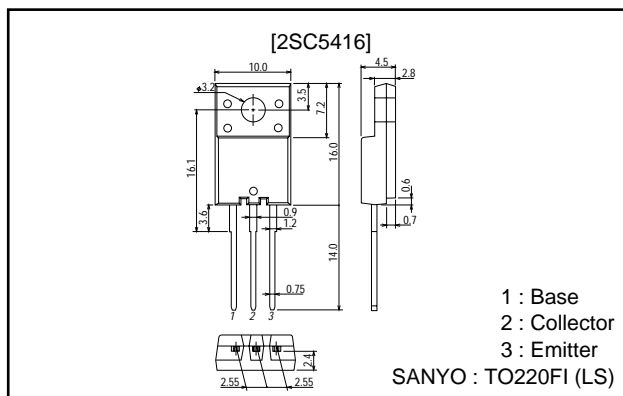
### Features

- High breakdown voltage.
- High reliability (Adoption of HVP process).
- Adoption of MBIT process.

### Package Dimensions

unit: mm

#### 2079B-TO220FI (LS)



### Specifications

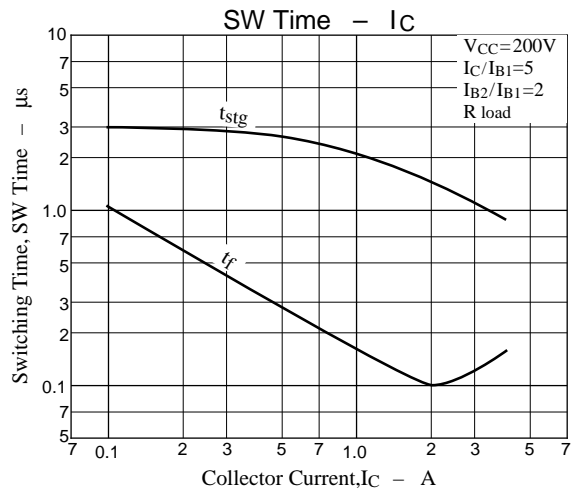
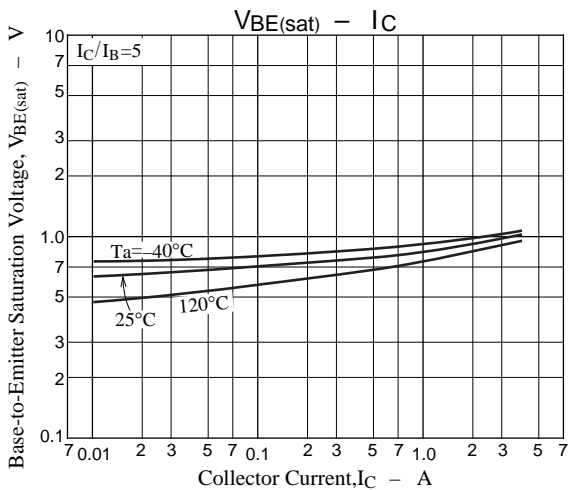
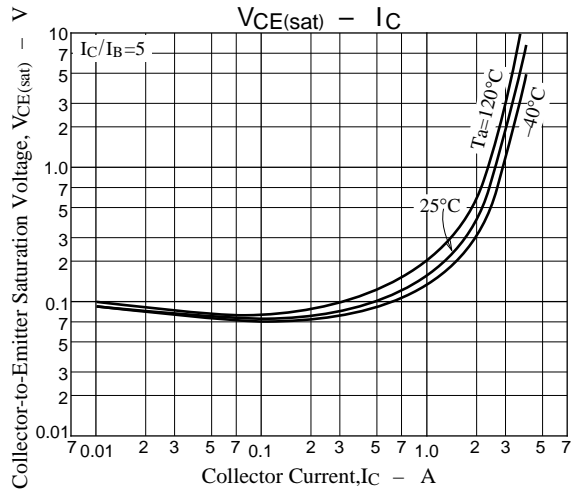
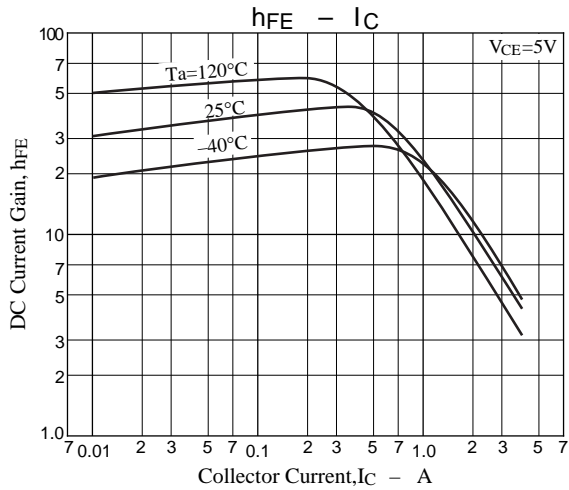
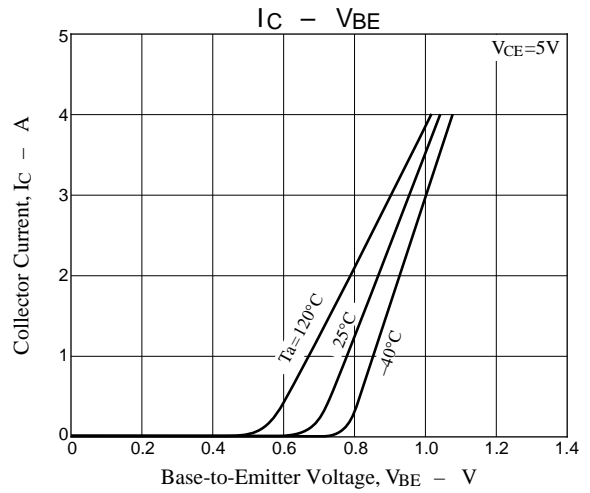
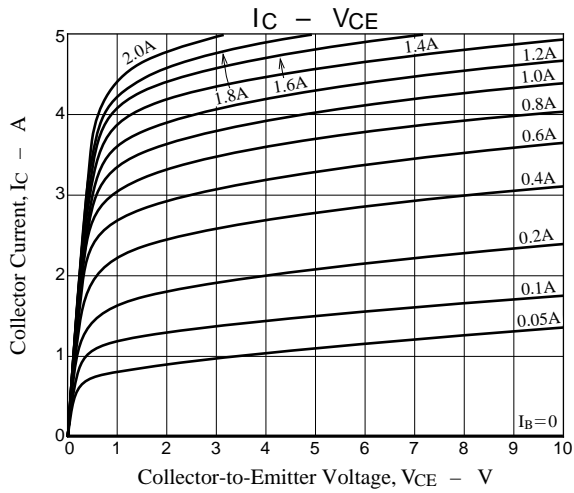
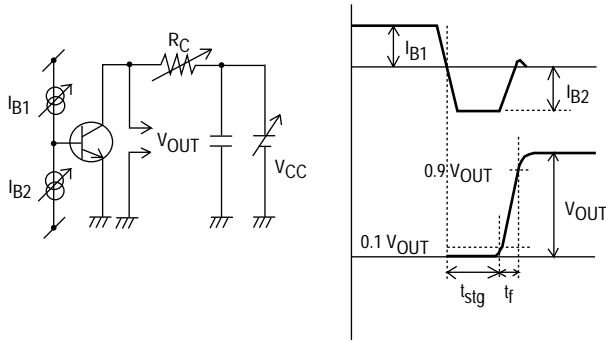
#### Absolute Maximum Ratings at Ta=25°C

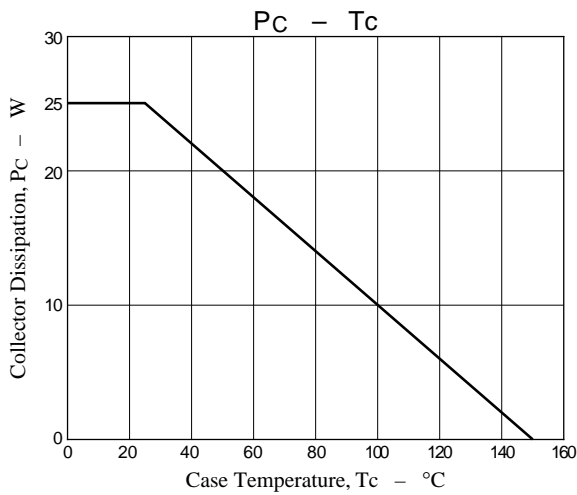
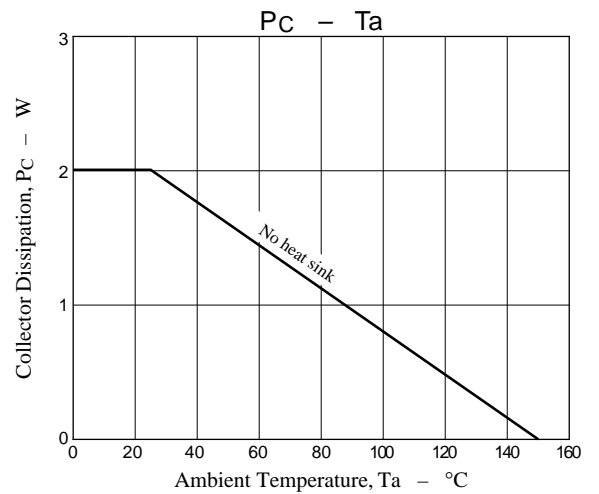
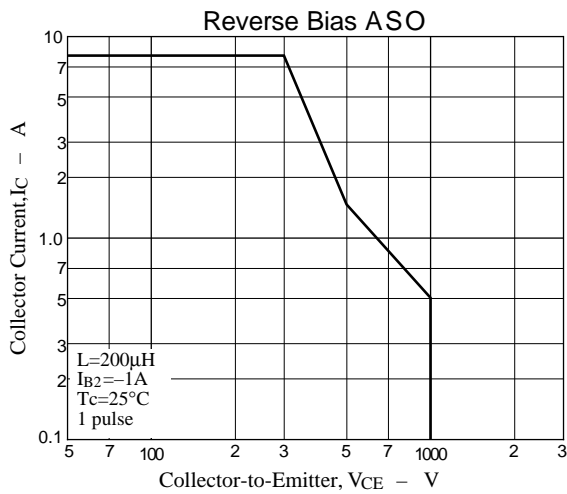
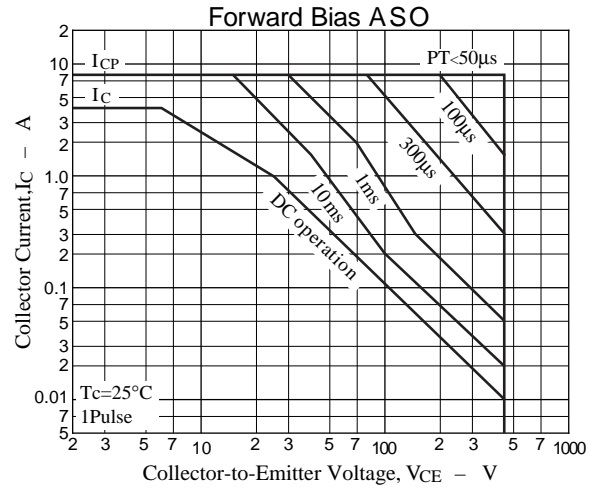
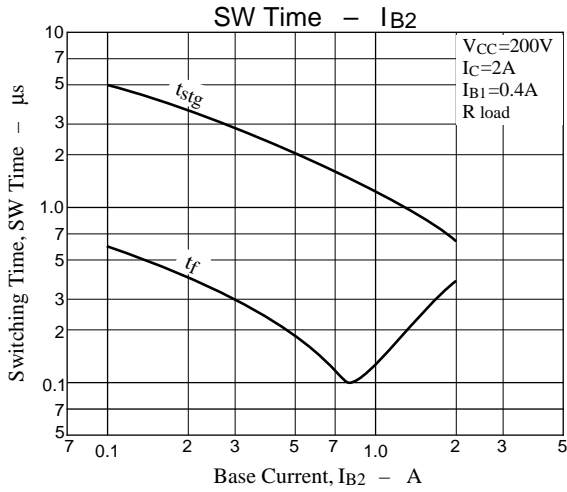
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CB0</sub>		1000	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		450	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		9	V
Collector Current	I <sub>C</sub>		4	A
Collector Current (Pulse)	I <sub>CP</sub>		8	A
Collector Dissipation	P <sub>C</sub>		2	W
		T <sub>c</sub> =25°C	25	W
Junction Temperature	T <sub>j</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

#### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =450V, I <sub>E</sub> =0			10	μA
Collector Cutoff Current	I <sub>CES</sub>	V <sub>CE</sub> =1000V, R <sub>BE</sub> =0			1.0	mA
Collector Sustain Voltage	V <sub>CEO(sus)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =0	450			V
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =9V, I <sub>C</sub> =0			1.0	mA
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =2A, I <sub>B</sub> =0.4A			1.0	V
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =2A, I <sub>B</sub> =0.4A			1.5	V
DC Current Gain	h <sub>FE</sub> (1)	V <sub>CE</sub> =5V, I <sub>C</sub> =0.1A	30	40	50	
	h <sub>FE</sub> (2)	V <sub>CE</sub> =5V, I <sub>C</sub> =1.5A	10			
Storage Time	t <sub>stg</sub>	I <sub>C</sub> =2A, I <sub>B1</sub> =0.4A, I <sub>B2</sub> =-0.8A			2.5	μs
Fall Time	t <sub>f</sub>	I <sub>C</sub> =2A, I <sub>B1</sub> =0.4A, I <sub>B2</sub> =-0.8A			0.15	μs

Switching Time Test Circuit





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