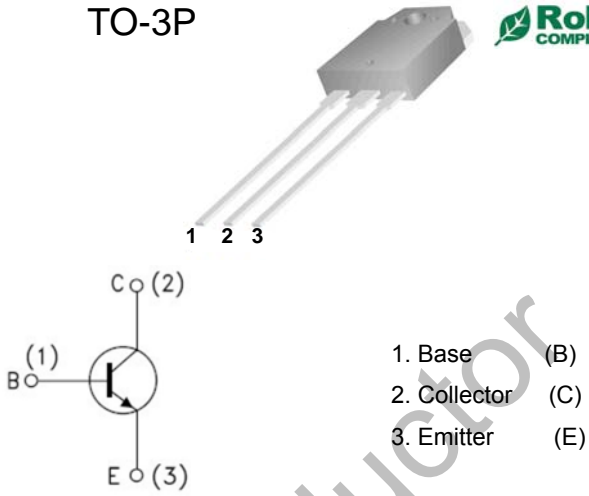


## WGE13009L


**Features:**

- High Voltage Capability
- High Switching Speed
- Suitable for Electronic Ballast and Switching Mode Power Supply
- 100% Avalanche Tested

**TO-3P**



1. Base (B)  
2. Collector (C)  
3. Emitter (E)



### Absolute Maximum Ratings\* T<sub>C</sub> = 25°C unless otherwise noted

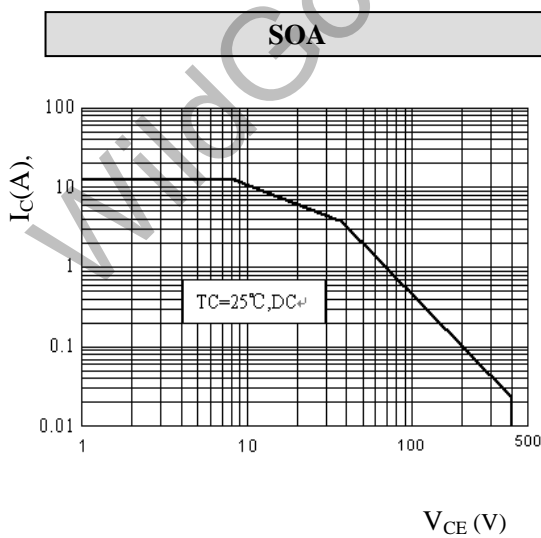
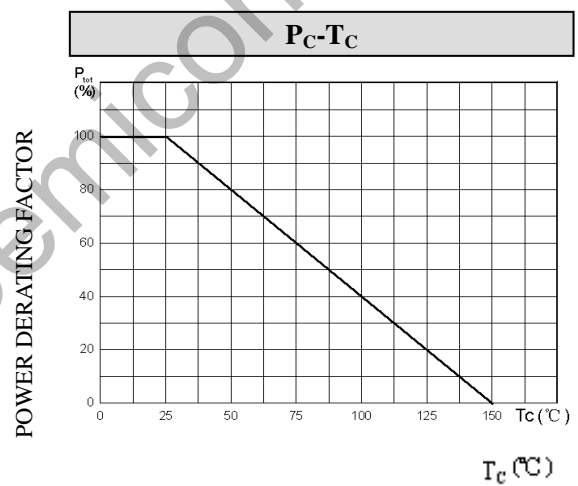
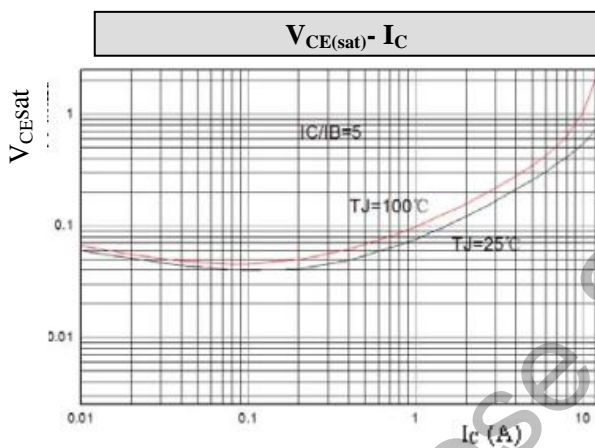
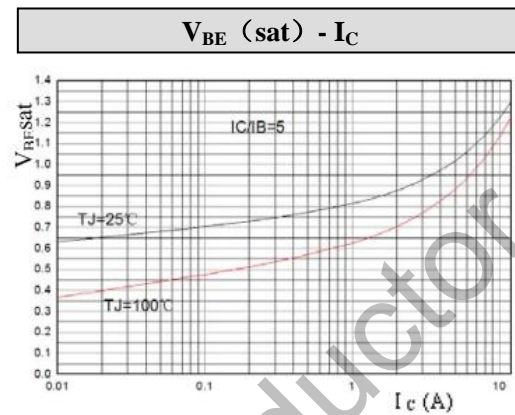
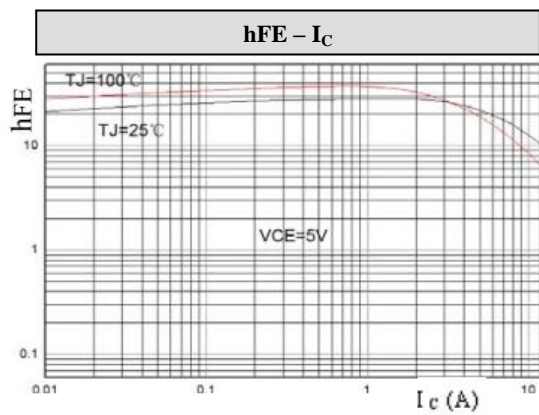
Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage	700	V
V <sub>CEO</sub>	Collector-Emitter Voltage	400	V
V <sub>EBO</sub>	Emitter-Base Voltage	9	V
I <sub>C</sub>	Collector Current (DC)	12	A
I <sub>CP</sub>	Collector Current (Pulse)	24	A
I <sub>B</sub>	Base Current	6	A
P <sub>C</sub>	Collector Dissipation (T <sub>C</sub> = 25°C)	100	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-65 ~ 150	°C

### Electrical Characteristics T<sub>C</sub> = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Typ.	Max	Units
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 10mA, I <sub>B</sub> = 0	400			V
I <sub>EBO</sub>	Emitter Cut-off Current	V <sub>EB</sub> = 9V, I <sub>C</sub> = 0			1	mA
h <sub>FE1</sub> h <sub>FE2</sub>	DC Current Gain *	V <sub>CE</sub> = 5V, I <sub>C</sub> = 2A V <sub>CE</sub> = 5V, I <sub>C</sub> = 5A	8 5		60 30	
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 2A, I <sub>B</sub> = 0.4A I <sub>C</sub> = 5A, I <sub>B</sub> = 1A I <sub>C</sub> = 8A, I <sub>B</sub> = 2A			1.0 2.0 3.0	V V V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 2A, I <sub>B</sub> = 0.4A I <sub>C</sub> = 5A, I <sub>B</sub> = 1A			1.2 1.6	V V
f <sub>T</sub>	Current Gain Bandwidth Product	V <sub>CE</sub> = 10V, I <sub>C</sub> = 0.5A	4			MHz
C <sub>ob</sub>	Output Capacitance	V <sub>CB</sub> = 10V, f = 0.1MHz		110		pF
t <sub>ON</sub>	Turn On Time	V <sub>CC</sub> = 125V, I <sub>C</sub> = 5A			1.6	μs
t <sub>STG</sub>	Storage Time	I <sub>B1</sub> = -I <sub>B2</sub> = 1A R <sub>L</sub> = 25Ω			3.0	μs
t <sub>F</sub>	Fall Time				0.7	μs

\* Pulse Test: PW ≤ 300μs, Duty Cycle ≤ 2%

Typical Characteristics



**Package Dimension**

TO-3P

Unit: mm

