

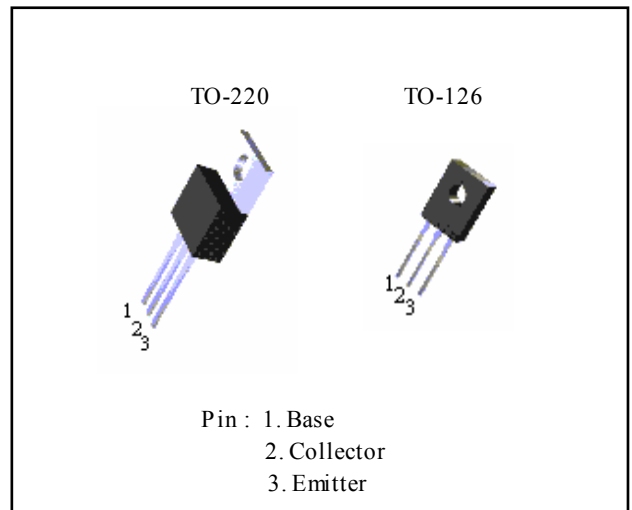
**NPN Epitaxial Silicon Transistor**

**HIGH VOLTAGE SWITCH MODE APPLICATION**

- High Speed Switching
- Suitable for Switching Regulator and Motor Control

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

Characteristic	Symbol	Rating	Unit
Collector Base Voltage(open emitter)	V <sub>CBO</sub>	700	V
Collector Emitter Voltage(open base)	V <sub>CEO</sub>	400	V
Emitter Base Voltage(open collector)	V <sub>EBO</sub>	9	V
Collector Current (DC)	I <sub>c</sub>	1.5	A
Collector Current (Pulse)	I <sub>c</sub>	3	A
Base Current	I <sub>B</sub>	0.75	A
Collector Dissipation	P <sub>c</sub>	20	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-65 ~150	°C



**ORDERING INFORMATION**

Device	Operating Temperature	Package
PJ13003CT	-20°C ~+85°C	TO-220
PJ13003CK		TO-126

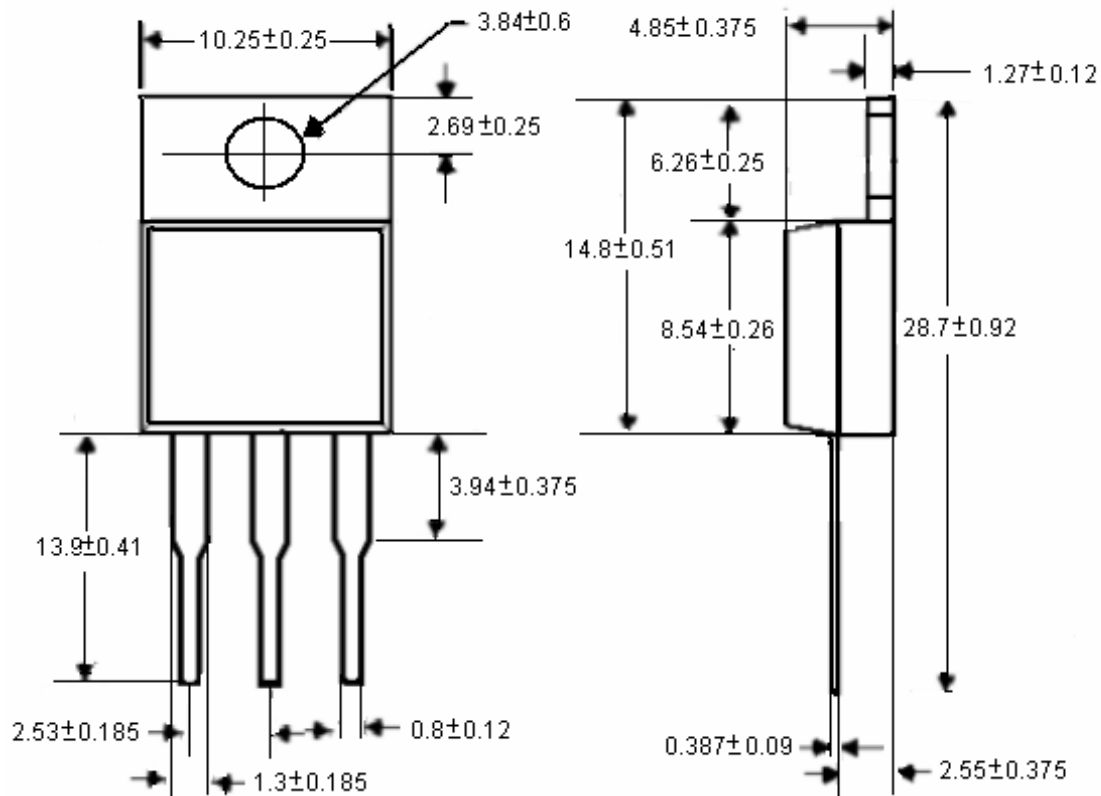
**ELECTRICAL CHARACTERISTICS(Ta = 25 °C)**

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
*Collector Emitter Sustaining Voltage	V <sub>CEO(SUS)</sub>	I <sub>c</sub> = 10mA, I <sub>B</sub> = 0	400			V
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =9V, I <sub>c</sub> =0			1	mA
	h <sub>FE</sub>	V <sub>CE</sub> =2V, I <sub>c</sub> =0.5A	8		40	
		V <sub>CE</sub> =2V, I <sub>c</sub> =1A	5		25	
* Saturation Voltage	V <sub>CE (sat)</sub>	I <sub>c</sub> =0.5A, I <sub>B</sub> =0.1A			0.5	V
		I <sub>c</sub> =1A, I <sub>B</sub> =0.25A			1.0	V
		I <sub>c</sub> =1.5A, I <sub>B</sub> =0.5A			3.0	V
*Base Emitter Saturation Voltage	V <sub>BE (sat)</sub>	I <sub>c</sub> =0.5A, I <sub>B</sub> =0.1A			1.0	V
		I <sub>c</sub> =1A, I <sub>B</sub> =0.25A			1.2	V
Output Capacitance	C <sub>OB</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0		21		pF
Current Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>c</sub> =0.5A	4.0			MHz
Rise Time	t <sub>r</sub>	V <sub>cc</sub> =125V,I <sub>c</sub> =2A			1.0	μ S
Storage Time	t <sub>s</sub>	I <sub>B1</sub> =-I <sub>B2</sub> =0.4A			4.0	μ S
Fall Time	t <sub>f</sub>				0.7	μ S

- Pulse Test: PW ≤300 μ S, Duty Cycle ≤2 %

NPN Epitaxial Silicon Transistor

TO-220 Unit:mm



TO-126 Unit:mm

