

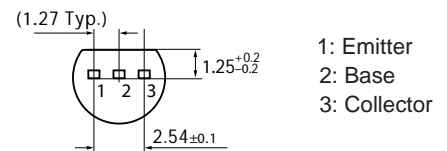
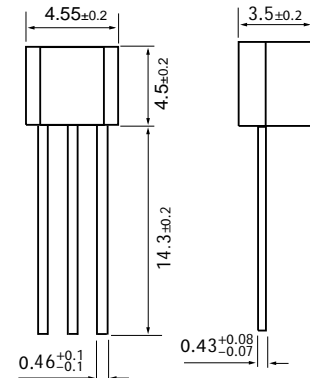
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

TO-92

**FEATURES**

- \* Switching and amplification in high voltage
- \* Low current(max. 600mA)
- \* High voltage(max.180v)



- 1: Emitter
- 2: Base
- 3: Collector

**MAXIMUM RATINGS\* T<sub>A</sub>=25°C unless otherwise noted**

Symbol	Para	meter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage		180	V
V <sub>CEO</sub>	Collector-Emitter Voltage		160	V
V <sub>EBO</sub>	Emitter-Base Voltage		6	V
I <sub>C</sub>	Collector Current -Continuous		0.6	A
P <sub>C</sub>	Collector Dissipation		0.625	W
T <sub>J</sub> , T <sub>stg</sub>	Junction and Storage Temperature		-55-150	°C

**ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 100 μ A, I <sub>E</sub> =0	180			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub> *	I <sub>C</sub> = 1mA, I <sub>B</sub> =0	160			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 10 μ A, I <sub>C</sub> =0	6			V
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 120V I <sub>E</sub> =0			50	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 4V, I <sub>C</sub> =0			50	nA
DC current gain	h <sub>FE (1)</sub> *	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 1 mA	80			
	h <sub>FE (2)</sub> *	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 10 mA	80		250	
	h <sub>FE (3)</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 50 mA	30			
Collector-emitter saturation voltage	V <sub>CEsat</sub> *	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 1 mA			0.15	V
		I <sub>C</sub> = 50 mA, I <sub>B</sub> = 5 mA			0.2	
Base-emitter saturation voltage	V <sub>BEsat</sub> *	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 1 mA			1	V
		I <sub>C</sub> = 50 mA, I <sub>B</sub> = 5 mA			1	
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =10 mA, f=100MHz	100		300	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz			6	pF
Input capacitance	C <sub>ib</sub>	V <sub>BE</sub> =0.5V, I <sub>C</sub> =0, f=1MHz			20	pF
Noise figure	NF	V <sub>CE</sub> =5V, I <sub>C</sub> =0.25mA, f=1KHZ, R <sub>g</sub> =1kΩ			8	dB

\*Pulse test

**ELECTRICAL CHARACTERISTIC CURVES**

