

RoHS Compliant Product

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

TO-92

FEATURE

Power dissipation

$$P_{CM} : 0.4 \text{ W (Tamb=25}^\circ\text{C)}$$

Collector current

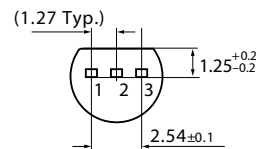
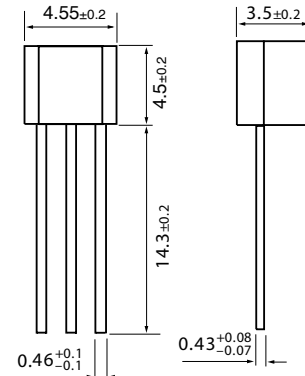
$$I_{CM} : 0.05 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO} : 25 \text{ V}$$

Operating and storage junction temperature range

$$T_j, T_{stg} : -55^\circ\text{C to } +150^\circ\text{C}$$



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

ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	25			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 0.1\text{mA}, I_B = 0$	18			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	4			V
Collector cut-off current	I_{CBO}	$V_{CB} = 20\text{V}, I_E = 0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 15\text{V}, I_B = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 3\text{V}, I_C = 0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 5\text{V}, I_C = 1\text{mA}$	28		270	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$			1.4	V
Transition frequency	f_T	$V_{CE} = 5\text{V}, I_C = 5\text{mA}$ $f = 400\text{MHz}$	600			MHz

CLASSIFICATION OF $h_{FE(1)}$

Rank	D	E	F	G	H	I	J
Range	28-45	39-60	54-80	72-108	97-146	132-198	180-270