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# 2SC1515(K)

Silicon NPN Triple Diffused

# HITACHI

ADE-208-1055 (Z)

1st. Edition

Mar. 2001

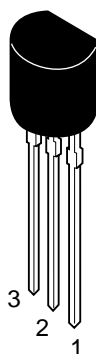
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## Application

High voltage switching

## Outline

TO-92 (1)



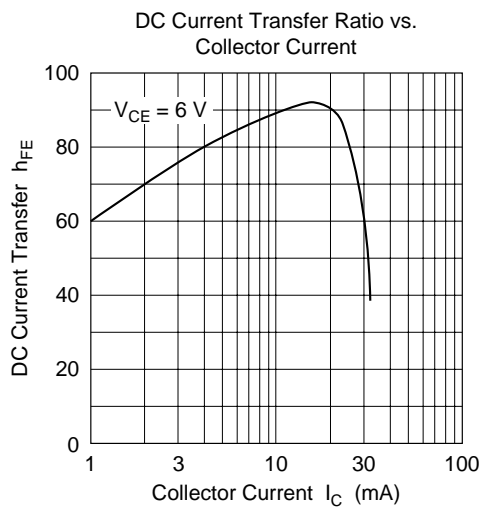
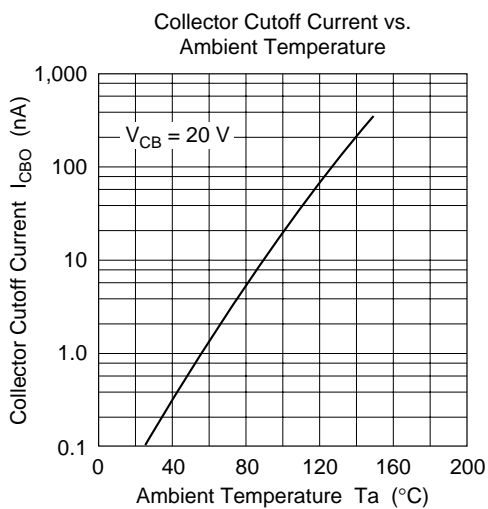
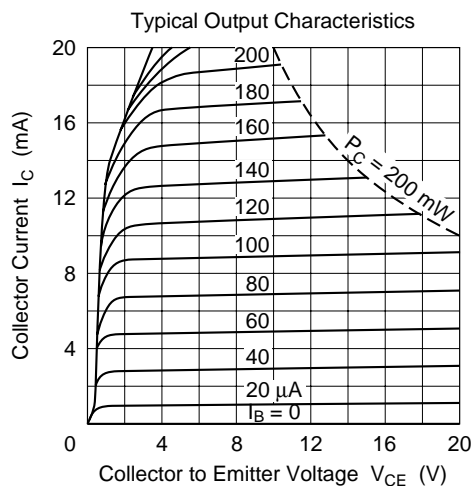
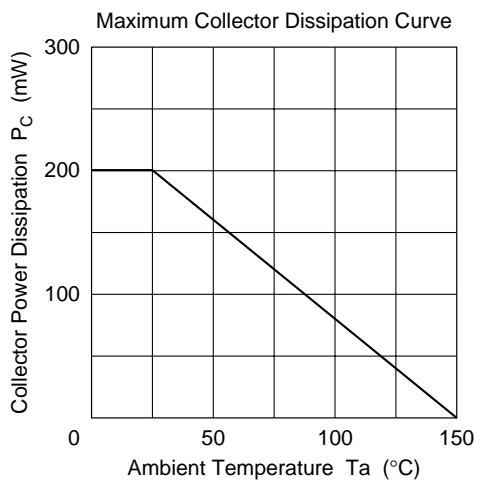
- 1. Emitter
- 2. Collector
- 3. Base

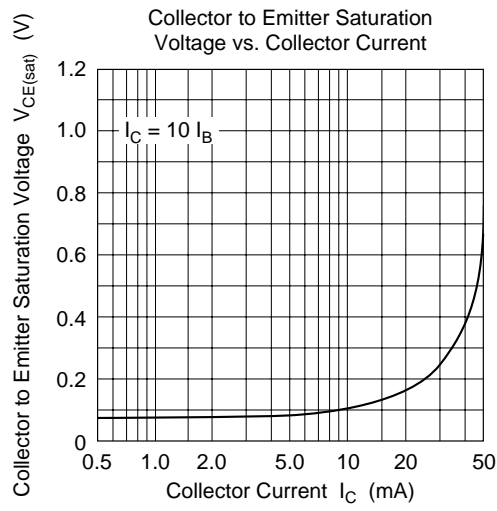
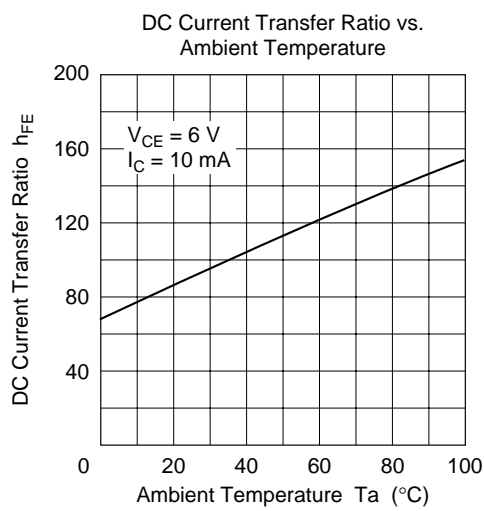
**Absolute Maximum Ratings** ( $T_a = 25^{\circ}\text{C}$ )

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{\text{CBO}}$	200	V
Collector to emitter voltage	$V_{\text{CES}}$	200	V
	$V_{\text{CEO}}$	150	V
Emitter to base voltage	$V_{\text{EBO}}$	5	V
Collector current	$I_{\text{C}}$	50	mA
Collector power dissipation	$P_{\text{C}}$	200	mW
Junction temperature	$T_{\text{j}}$	150	$^{\circ}\text{C}$
Storage temperature	$T_{\text{stg}}$	-55 to +150	$^{\circ}\text{C}$

**Electrical Characteristics** ( $T_a = 25^{\circ}\text{C}$ )

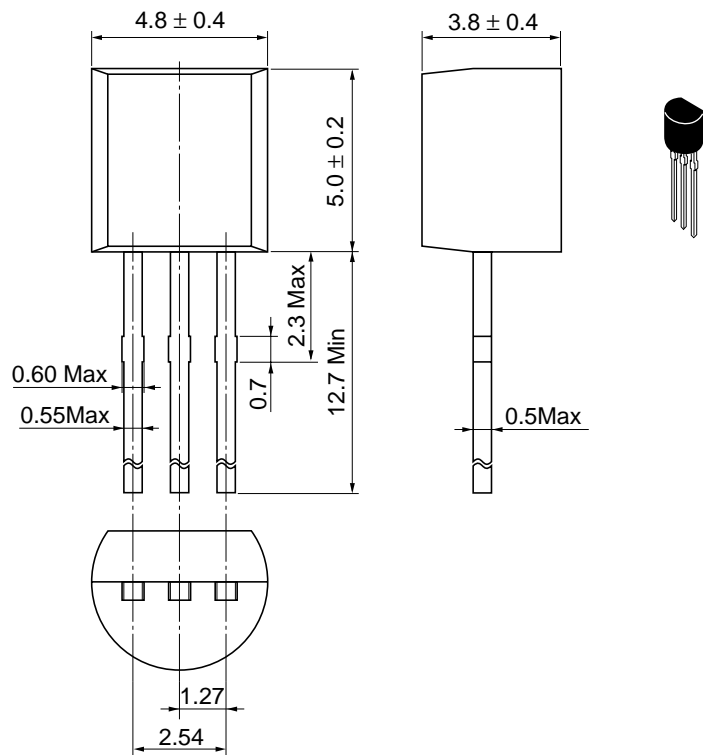
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(\text{BR})\text{CES}}$	200	—	—	V	$I_{\text{C}} = 10\text{ }\mu\text{A}$ , $R_{\text{BE}} = 0$
	$V_{(\text{BR})\text{CEO}}$	150	—	—	V	$I_{\text{C}} = 1\text{ mA}$ , $R_{\text{BE}} = \infty$
Emitter to base breakdown voltage	$V_{(\text{BR})\text{EBO}}$	5	—	—	V	$I_{\text{E}} = 10\text{ }\mu\text{A}$ , $I_{\text{C}} = 0$
Collector cutoff current	$I_{\text{CBO}}$	—	—	0.1	$\mu\text{A}$	$V_{\text{CB}} = 20\text{ V}$ , $I_{\text{E}} = 0$
DC current transfer ratio	$h_{\text{FE}}$	30	—	300		$V_{\text{CE}} = 6\text{ V}$ , $I_{\text{C}} = 10\text{ mA}$
Collector to emitter saturation voltage	$V_{\text{CE}(\text{sat})}$	—	—	1.0	V	$I_{\text{C}} = 10\text{ mA}$ , $I_{\text{B}} = 1\text{ mA}$
Base to emitter saturation voltage	$V_{\text{BE}(\text{sat})}$	—	—	1.5	V	$I_{\text{C}} = 10\text{ mA}$ , $I_{\text{B}} = 1\text{ mA}$
Gain bandwidth product	$f_{\text{T}}$	60	—	—	MHz	$V_{\text{CE}} = 6\text{ V}$ , $I_{\text{C}} = 10\text{ mA}$
Collector output capacitance	$C_{\text{ob}}$	—	—	10	pF	$V_{\text{CB}} = 6\text{ V}$ , $I_{\text{E}} = 0$ , $f = 1\text{ MHz}$





Package Dimensions

As of January, 2001  
Unit: mm



Hitachi Code	TO-92 (1)
JEDEC	Conforms
EIAJ	Conforms
Mass (reference value)	0.25 g

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