
2SC1472(K)

Silicon NPN Epitaxial, Darlington

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Application

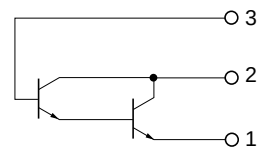
High gain amplifier

Outline

TO-92 (1)



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



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Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	40	V
Collector to emitter voltage	V_{CEO}	30	V
Emitter to base voltage	V_{EBO}	10	V
Collector current	I_C	300	mA
Collector peak current	$i_{C(peak)}$	500	mA
Collector power dissipation	P_C	500	mW
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	–55 to +150	°C

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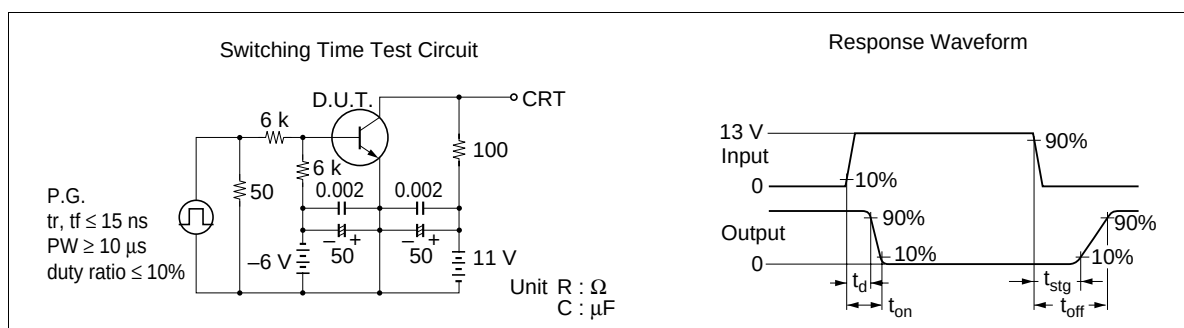
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Electrical Characteristics (Ta = 25°C)

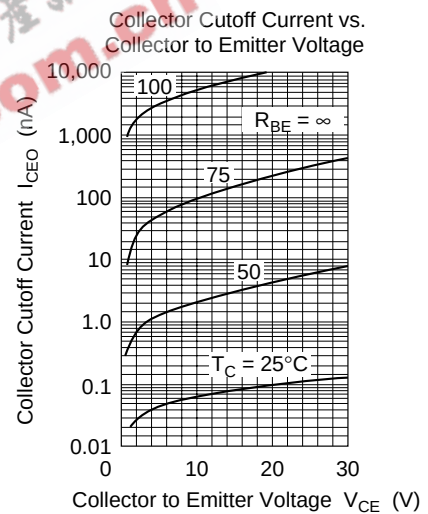
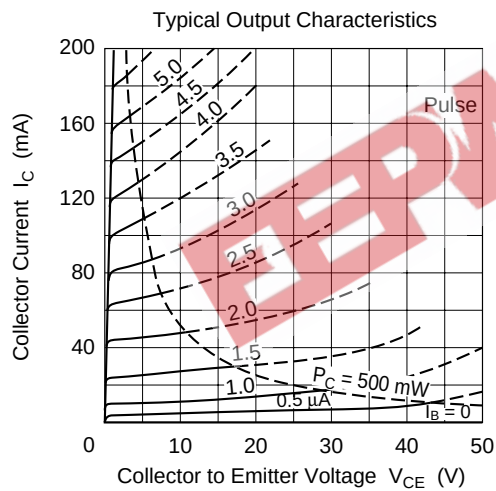
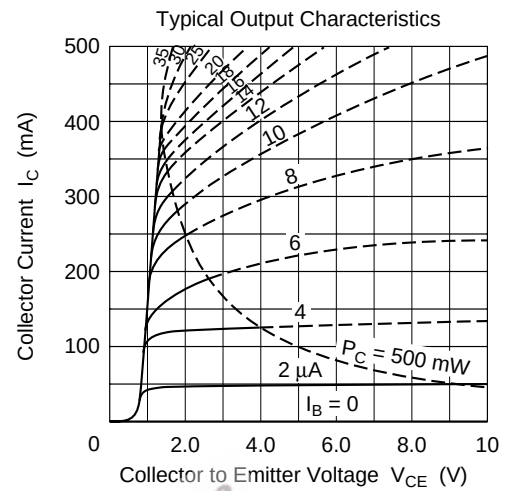
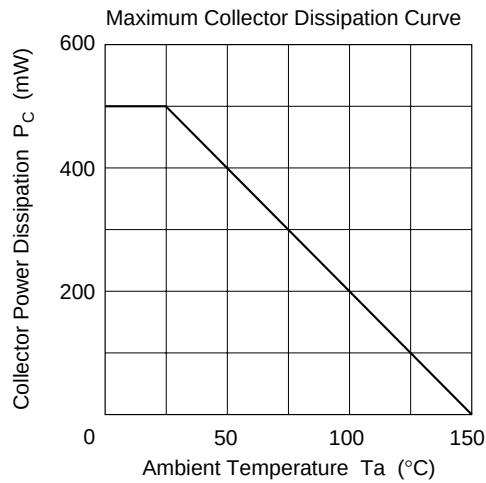
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	30	—	—	V	$I_C = 1 \text{ mA}$, $R_{BE} = \infty$
Collector cutoff current	I_{CBO}	—	—	100	nA	$V_{CB} = 30 \text{ V}$, $I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	100	nA	$V_{EB} = 10 \text{ V}$, $I_C = 0$
DC current transfer ratio	h_{FE1}^{*1}	2000	—	100000		$I_C = 10 \text{ mA}$, $V_{CE} = 5 \text{ V}$
	h_{FE2}^{*1}	3000	—	—		$I_C = 100 \text{ mA}$, $V_{CE} = 5 \text{ V}$ (Pulse Test)
	h_{FE3}^{*1}	3000	—	—		$I_C = 400 \text{ mA}$, $V_{CE} = 5 \text{ V}$ (Pulse Test)
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.5	V	$I_C = 100 \text{ mA}$, $I_B = 0.1 \text{ mA}$
Base to emitter voltage	$V_{BE(sat)}$	—	—	2.0	V	$I_C = 100 \text{ mA}$, $I_B = 0.1 \text{ mA}$
Gain bandwidth product	f_T	50	—	—	MHz	$V_{CE} = 5 \text{ V}$, $I_C = 10 \text{ mA}$
Collector output capacitance	C_{ob}	—	—	10	pF	$V_{CB} = 10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$
Turn on time	t_{on}	—	60	—	ns	$V_{CC} = 11 \text{ V}$ $I_C = 100 \text{ mA}$, $I_{B1} = 100 \text{ mA}$ $I_{B2} = -I_{B1}$
Turn off time	t_{off}	—	800	—	ns	
Storage time	t_{stg}	—	350	—	ns	

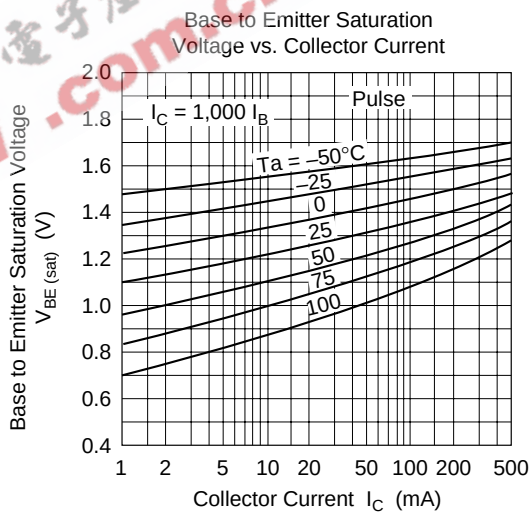
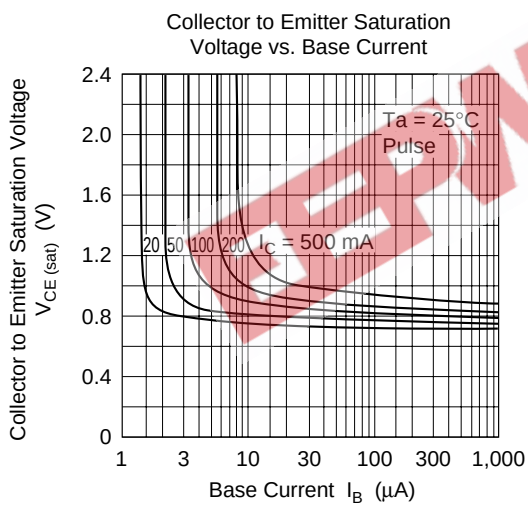
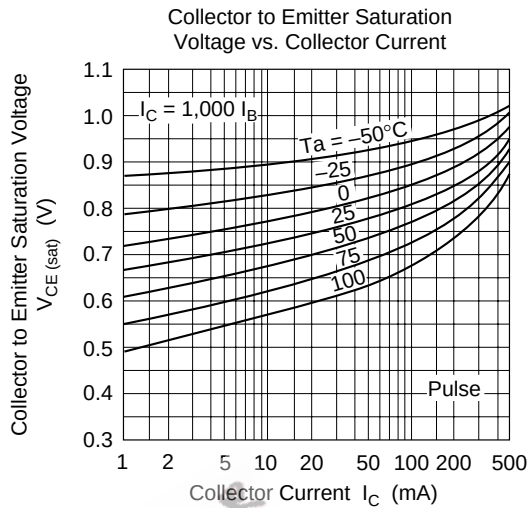
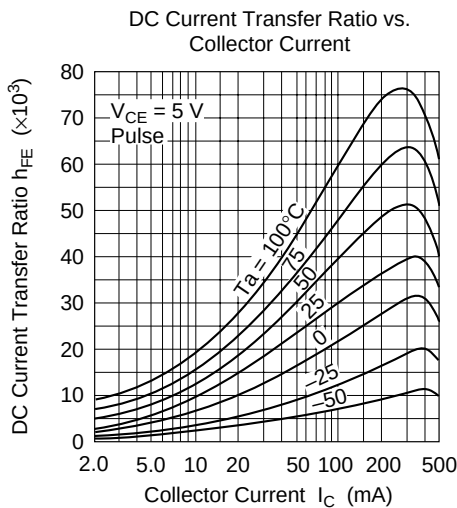
Note: 1. The 2SC1472(K) is grouped by h_{FE} as follows.

	A	B
h_{FE1}	2000 to 100000	5000 to 100000
h_{FE2}	3000 min	10000 min
h_{FE3}	3000 min	10000 min

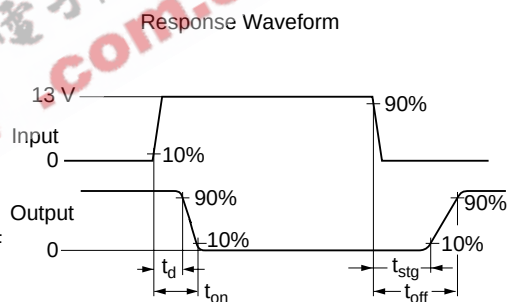
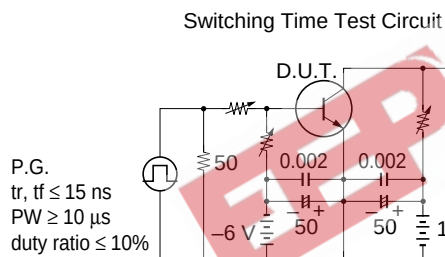
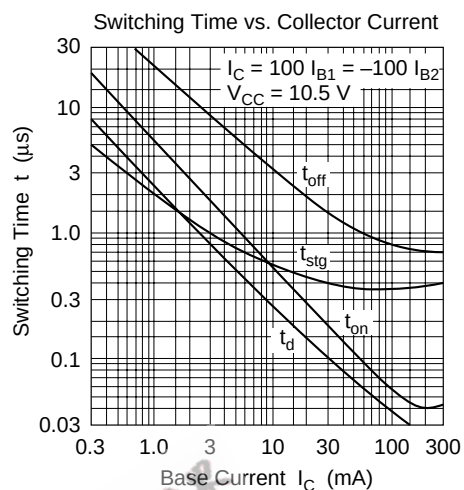
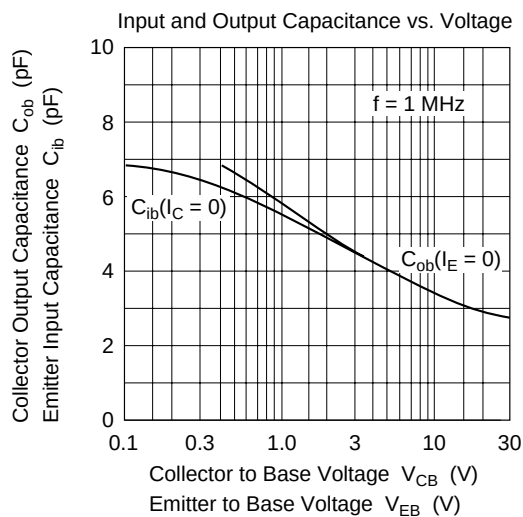


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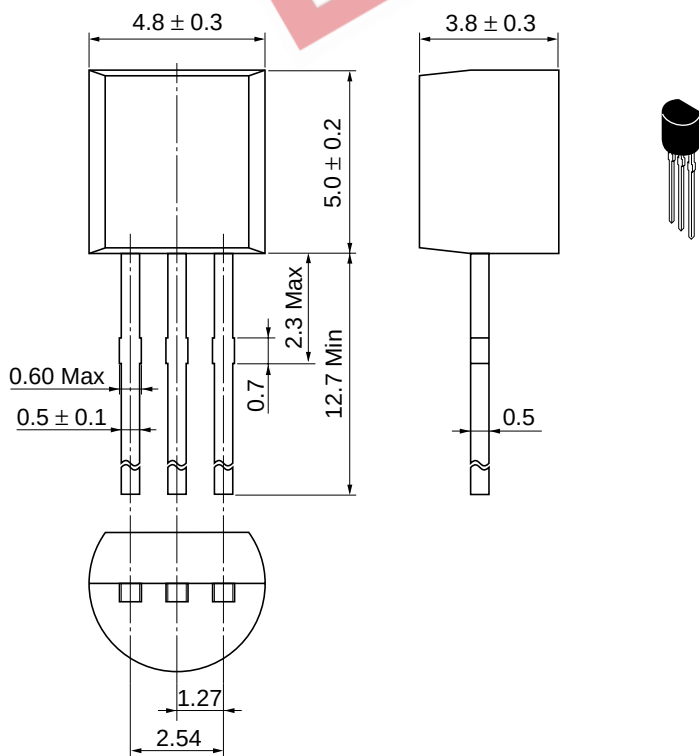


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Unit: mm



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

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