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# 2SC1472(K)

Silicon NPN Epitaxial, Darlington

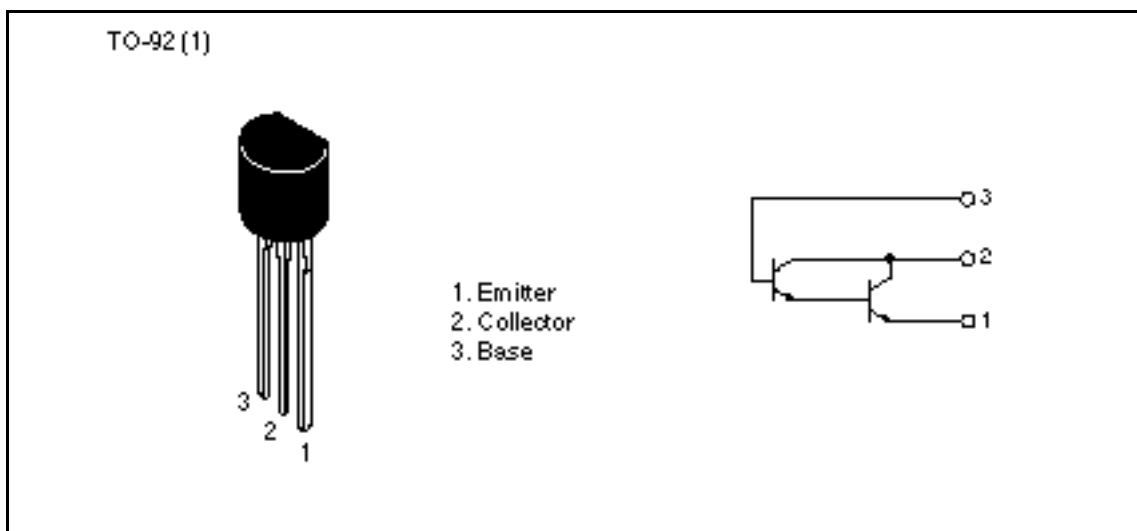
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## Application

High gain amplifier

## Outline



## 2SC1472 (K)

### Absolute Maximum Ratings (Ta = 25°C)

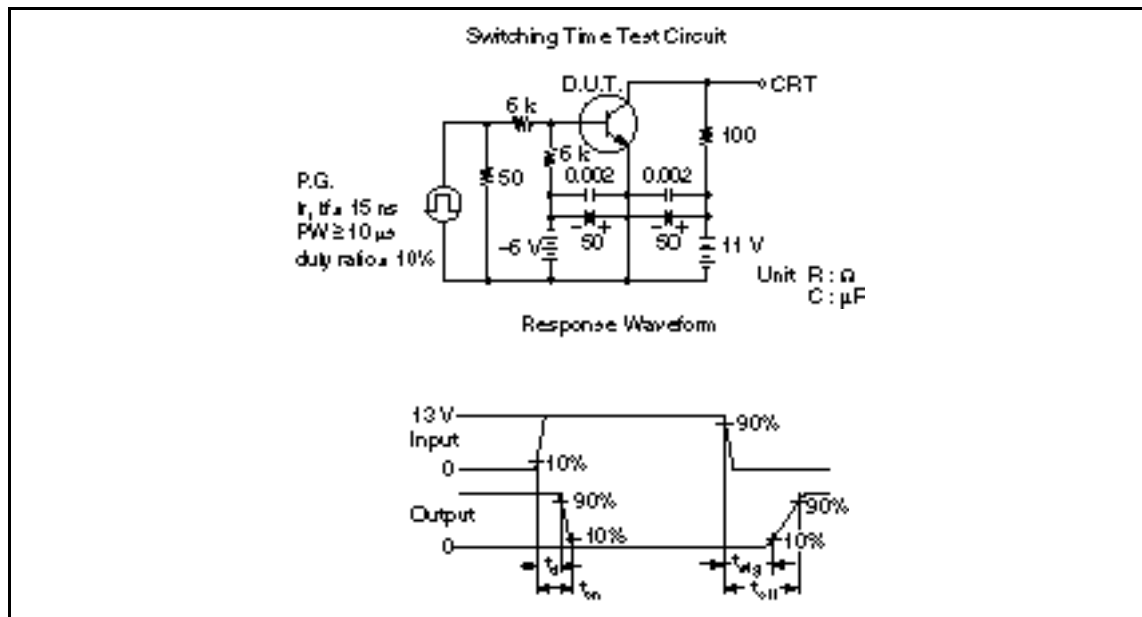
Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	40	V
Collector to emitter voltage	$V_{CEO}$	30	V
Emitter to base voltage	$V_{EBO}$	10	V
Collector current	$I_C$	300	mA
Collector peak current	$i_{C(peak)}$	500	mA
Collector power dissipation	$P_C$	500	mW
Junction temperature	$T_j$	150	°C
Storage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

### Electrical Characteristics (Ta = 25°C)

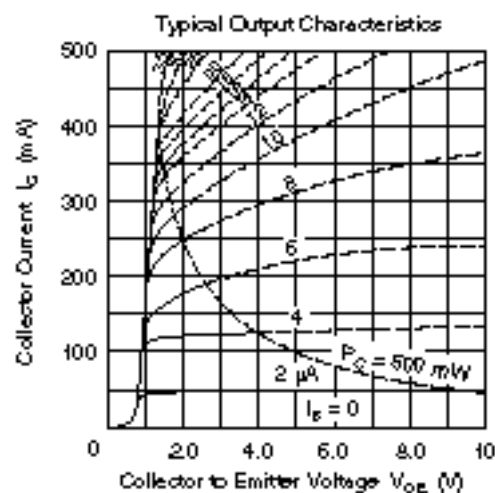
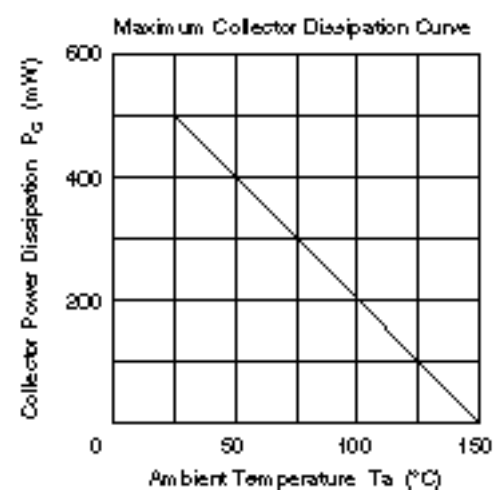
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	30	—	—	V	$I_C = 1 \text{ mA}$ , $R_{BE} =$
Collector cutoff current	$I_{CBO}$	—	—	100	nA	$V_{CB} = 30 \text{ V}$ , $I_E = 0$
Emitter cutoff current	$I_{EBO}$	—	—	100	nA	$V_{EB} = 10 \text{ V}$ , $I_C = 0$
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	$V_{CC} = 11 \text{ V}$ $I_C = 100$ , $I_{B1} = 100 \text{ mA}$ $I_{B2} = -I_{B1}$
Turn off time	$t_{off}$	—	800	—	ns	
Storage time	$t_{stg}$	—	350	—	ns	

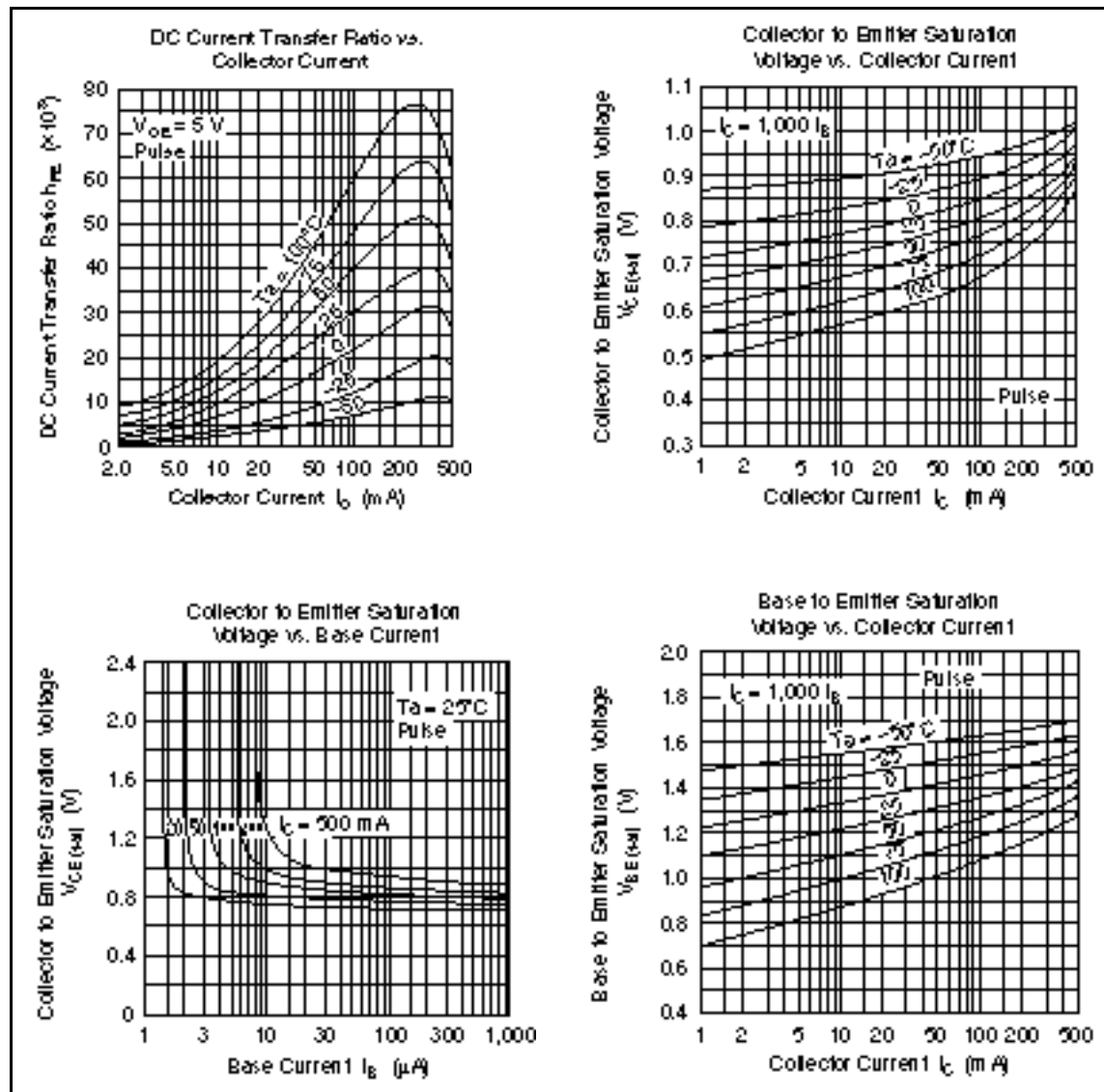
Note: 1. The 2SC1472(K) is grouped by  $h_{FE}$  as follows.

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

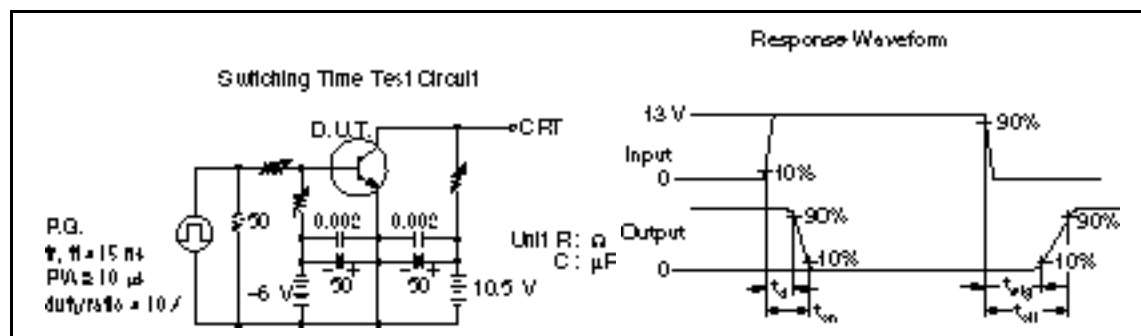
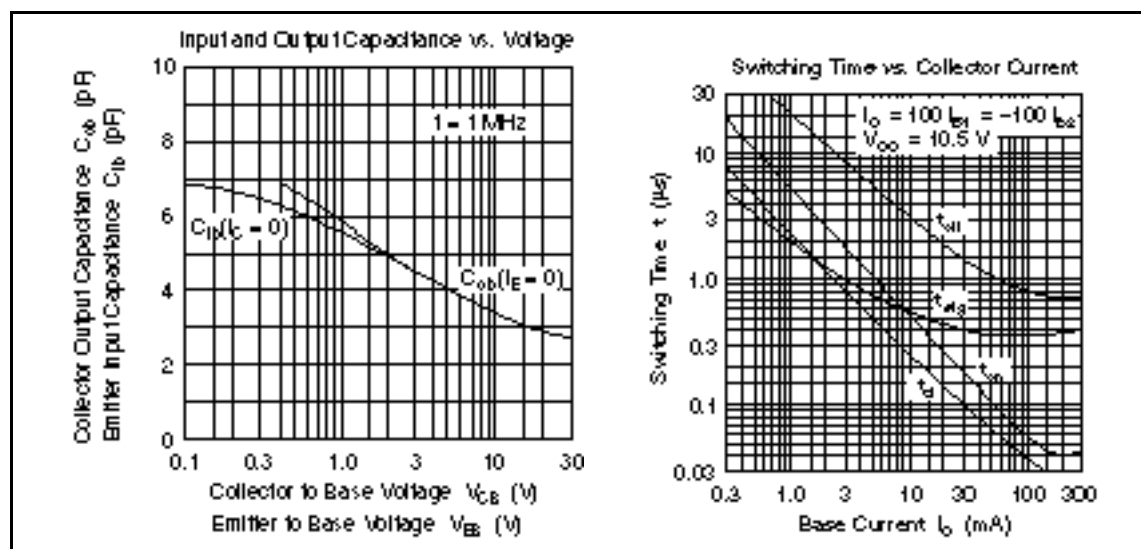


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