
2SC1472(K)

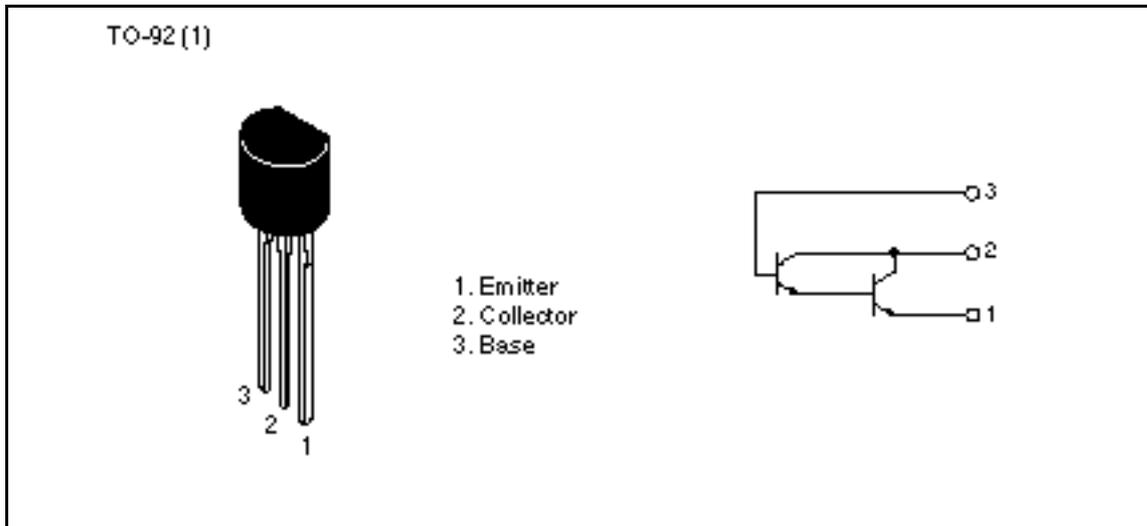
Silicon NPN Epitaxial, Darlington

HITACHI

Application

High gain amplifier

Outline



2SC1472 (K)

Absolute Maximum Ratings (Ta = 25°C)

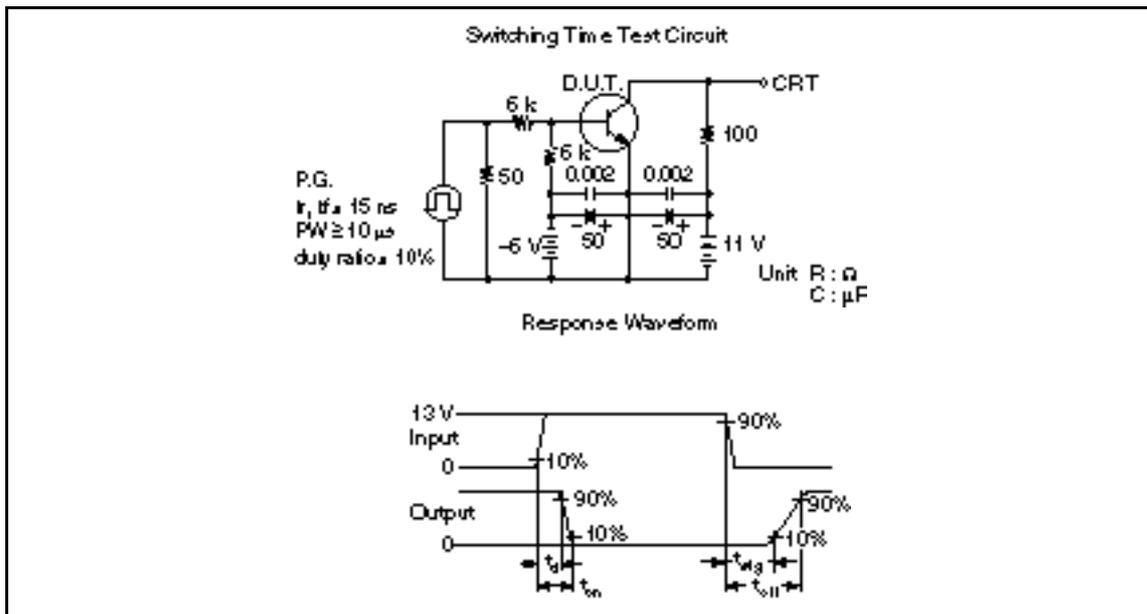
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	40	V
Collector to emitter voltage	V_{CEO}	30	V
Emitter to base voltage	V_{EBO}	10	V
Collector current	I_C	300	mA
Collector peak current	$i_{C(\text{peak})}$	500	mA
Collector power dissipation	P_C	500	mW
Junction temperature	T_j	150	°C
Storage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

Electrical Characteristics (Ta = 25°C)

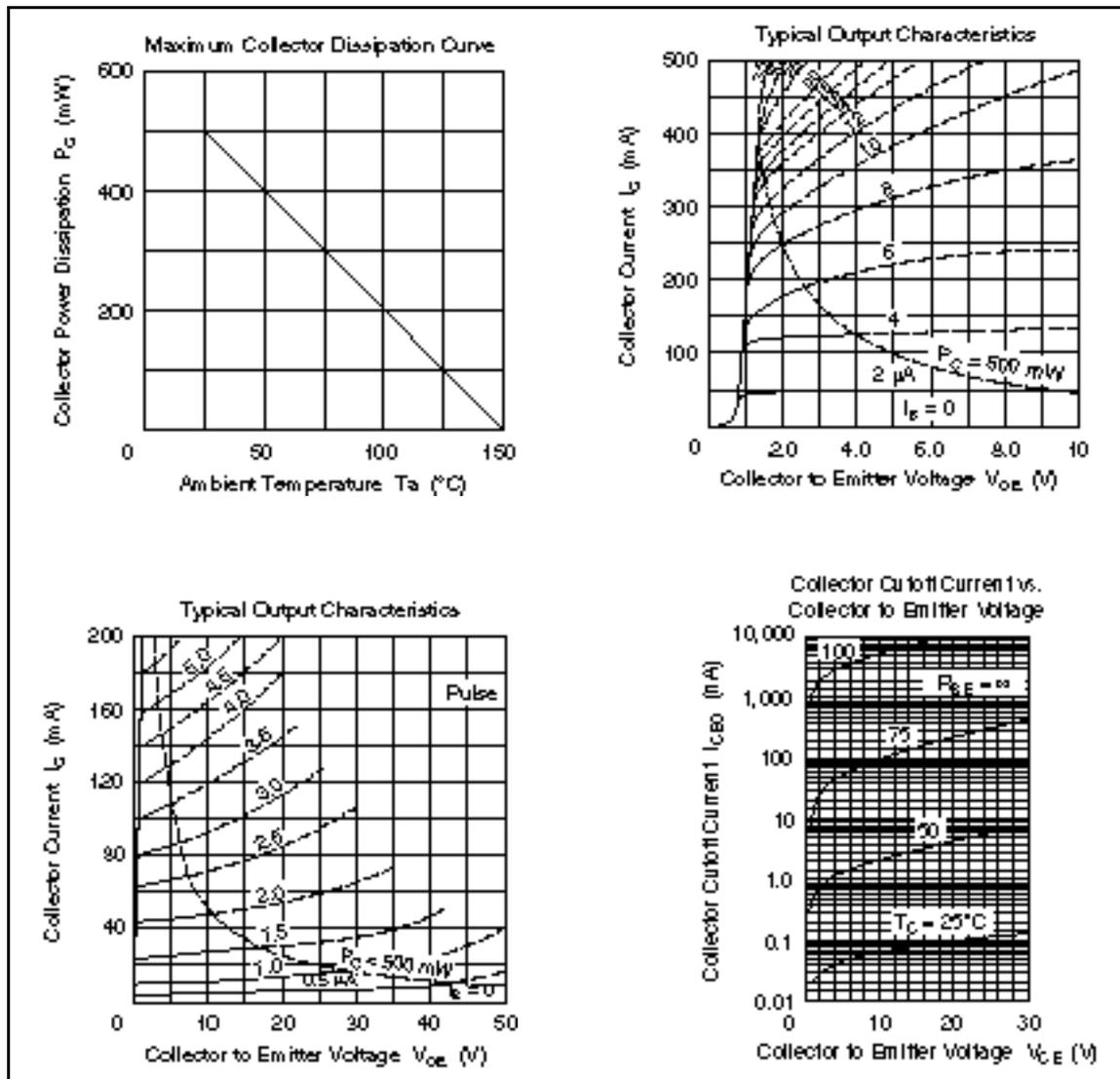
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	30	—	—	V	$I_C = 1 \text{ mA}$, $R_{BE} =$
Collector cutoff current	I_{CBO}	—	—	100	nA	$V_{CB} = 30 \text{ V}$, $I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	100	nA	$V_{EB} = 10 \text{ V}$, $I_C = 0$
DC current 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	$V_{CE(\text{sat})}$	—	—	1.5	V	$I_C = 100 \text{ mA}$, $I_B = 0.1 \text{ mA}$
Base to emitter voltage	$V_{BE(\text{sat})}$	—	—	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.

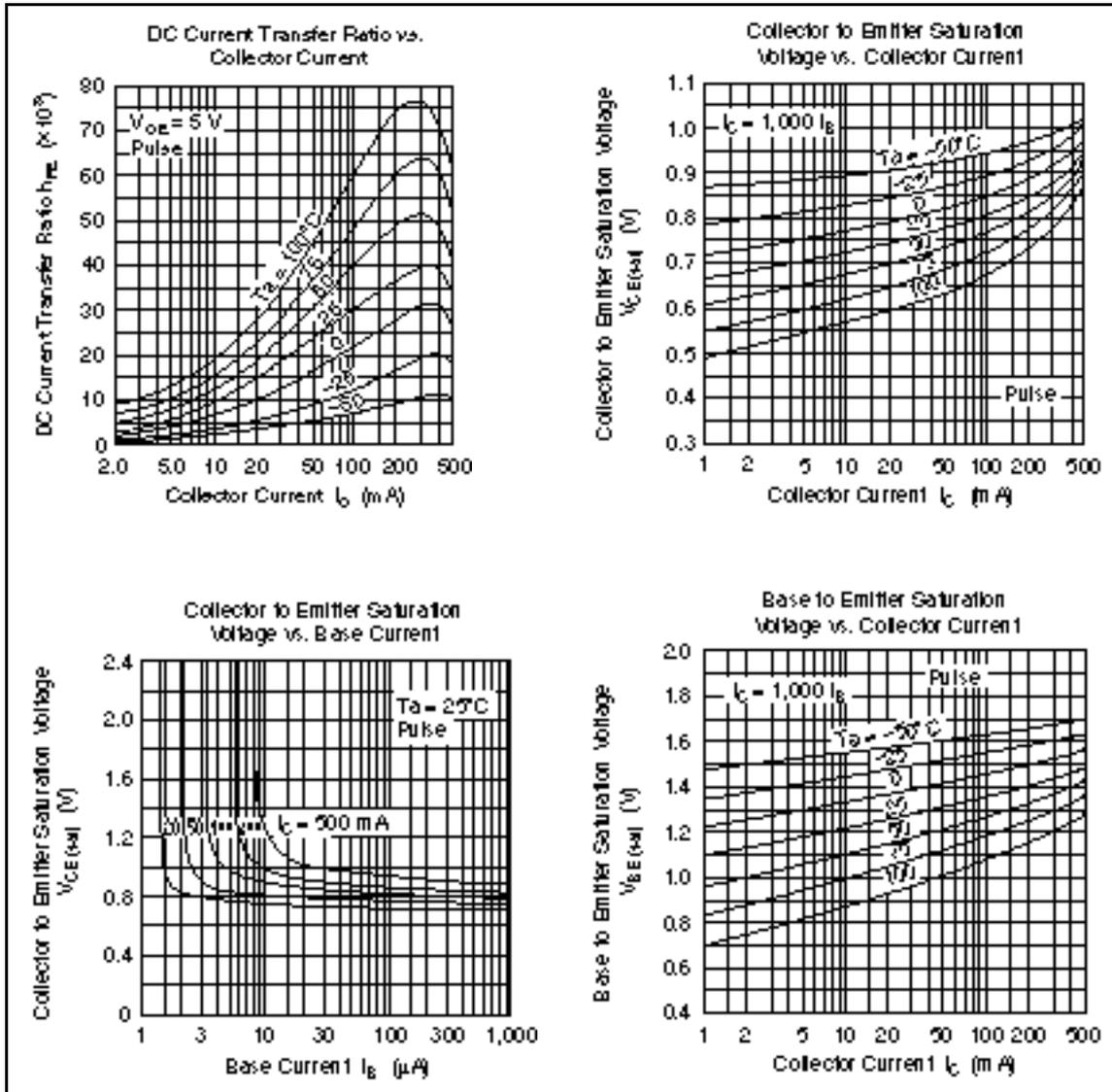
	A	B
h_{FE1}	2000 to 100000	5000 to 100000
h_{FE2}	3000 min	10000 min
h_{FE3}	3000 min	10000 min



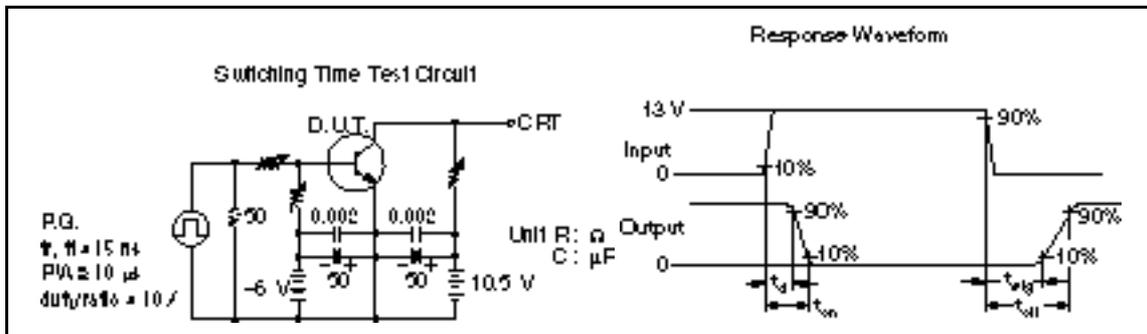
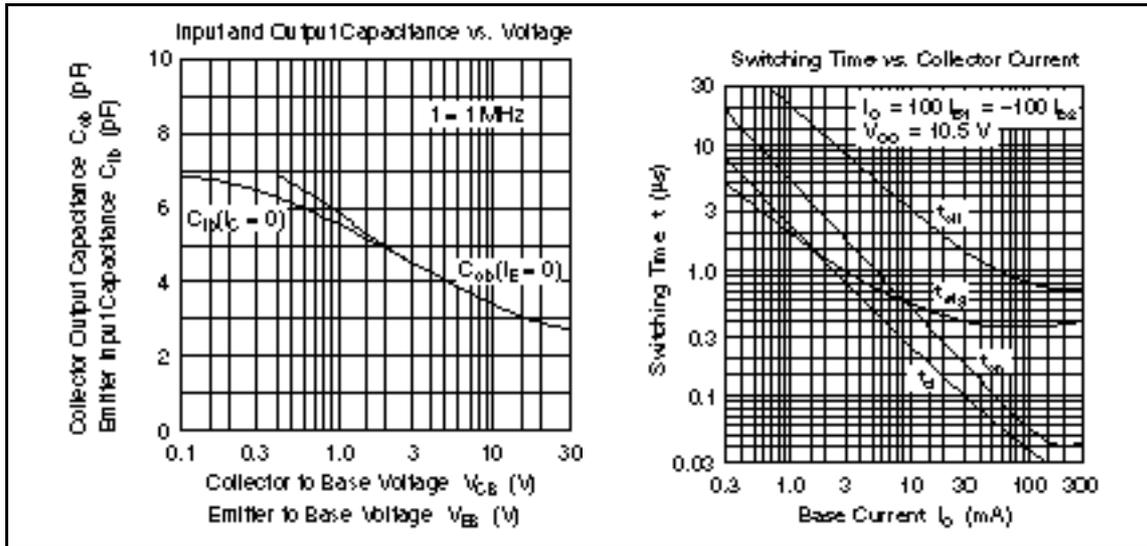
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