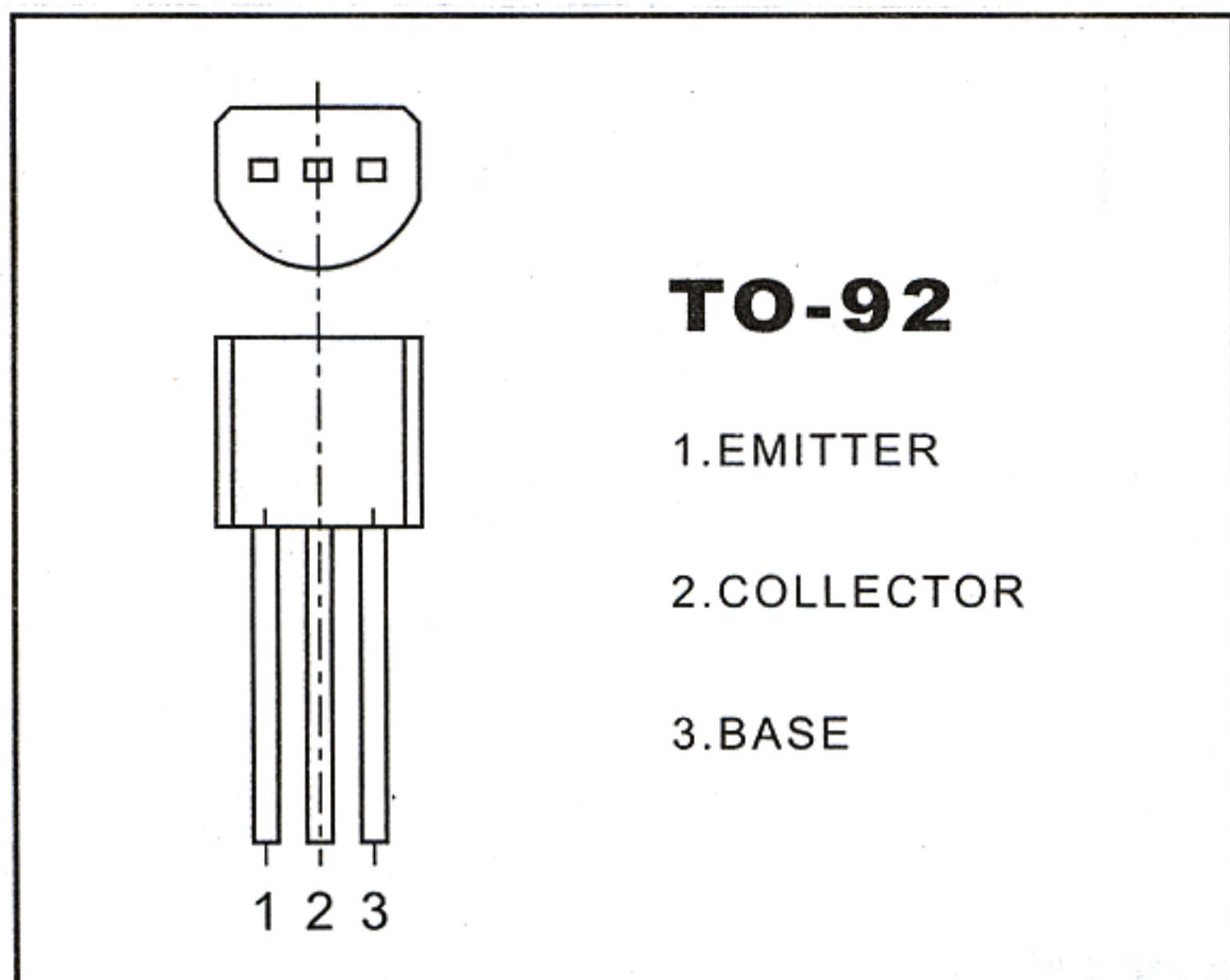


3DD13001 TRANSISTOR(NPN)



FEATURES

Power dissipation

P_{CM} : 0.75W ($T_{amb}=25^{\circ}C$)

Collector current

I_{CM} : 0.2 A

Collector-base voltage

$V_{(BR)CBO}$: 600 V

Operating and storage junction temperature range

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

ELECTRICAL CHARACTERISTICS

($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100 \mu A, I_E = 0$	600		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1 mA, I_B = 0$	400		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100 \mu A, I_C = 0$	7		V
Collector cut-off current	I_{CBO}	$V_{CB} = 600 V, I_E = 0$		100	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 400 V, I_B = 0$		200	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 7 V, I_C = 0$		100	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 20 V, I_C = 20 mA$	10	70	
	$h_{FE(2)}$	$V_{CE} = 10 V, I_C = 0.25 mA$	5		
Collector-emitter saturation voltage	V_{CEsat}	$I_C = 50 mA, I_B = 10 mA$		0.5	V
Base-emitter saturation voltage	V_{BEsat}	$I_C = 50 mA, I_B = 10 mA$		1.2	V
Base-emitter voltage	V_{BE}	$I_E = 100 mA$		1.1	V
Transition frequency	f_T	$V_{CE} = 20 V, I_C = 20 mA$ $f = 1 MHz$	8		MHz
Fall time	t_f	$I_C = 50 mA, I_{B1} = -I_{B2} = 5 mA,$		0.3	μS
Storage time	t_s	$V_{CC} = 45V$		1.5	μS

CLASSIFICATION OF $h_{FE(1)}$

Rank												
Range	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70