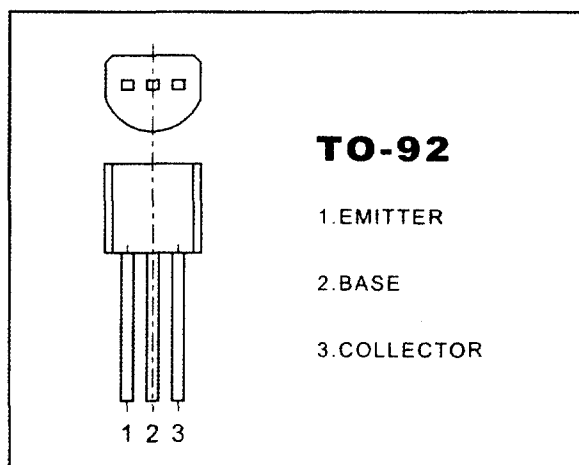


# TO-92 Plastic-Encapsulate Transistors

## A42 TRANSISTOR(NPN)



### FEATURES

#### Power dissipation

$P_{CM}$ : 0.625W ( $T_{amb}=25^{\circ}C$ )

#### Collector current

$I_{CM}$ : 0.5 A

#### Collector-base voltage

$V_{(BR)CBO}$ : 300V

#### 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)

Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100 \mu A, I_E = 0$	300		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1 mA, I_B = 0$	300		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10 \mu A, I_C = 0$	5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 200 V, I_E = 0$		0.25	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 3 V, I_C = 0$		0.25	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE} = 10 V, I_C = 1 mA$	25		
	$h_{FE(2)}$	$V_{CE} = 10 V, I_C = 10 mA$	80	250	
	$h_{FE(3)}$	$V_{CE} = 10 V, I_C = 50 mA$	25		
Collector-emitter saturation voltage	$V_{CEsat}$	$I_C = 20 mA, I_B = 2 mA$		0.5	V
Base-emitter saturation voltage	$V_{BEsat}$	$I_C = 20 mA, I_B = 2 mA$		0.9	V
Transition frequency	$f_T$	$V_{CE} = 5 V, I_C = 10 mA$ $f = 30 MHz$	50		MHz

### CLASSIFICATION OF $h_{FE(2)}$

Rank	A	B1	B2	C
Range	80-100	100-150	150-200	200-250

Typical Characteristics

A42

