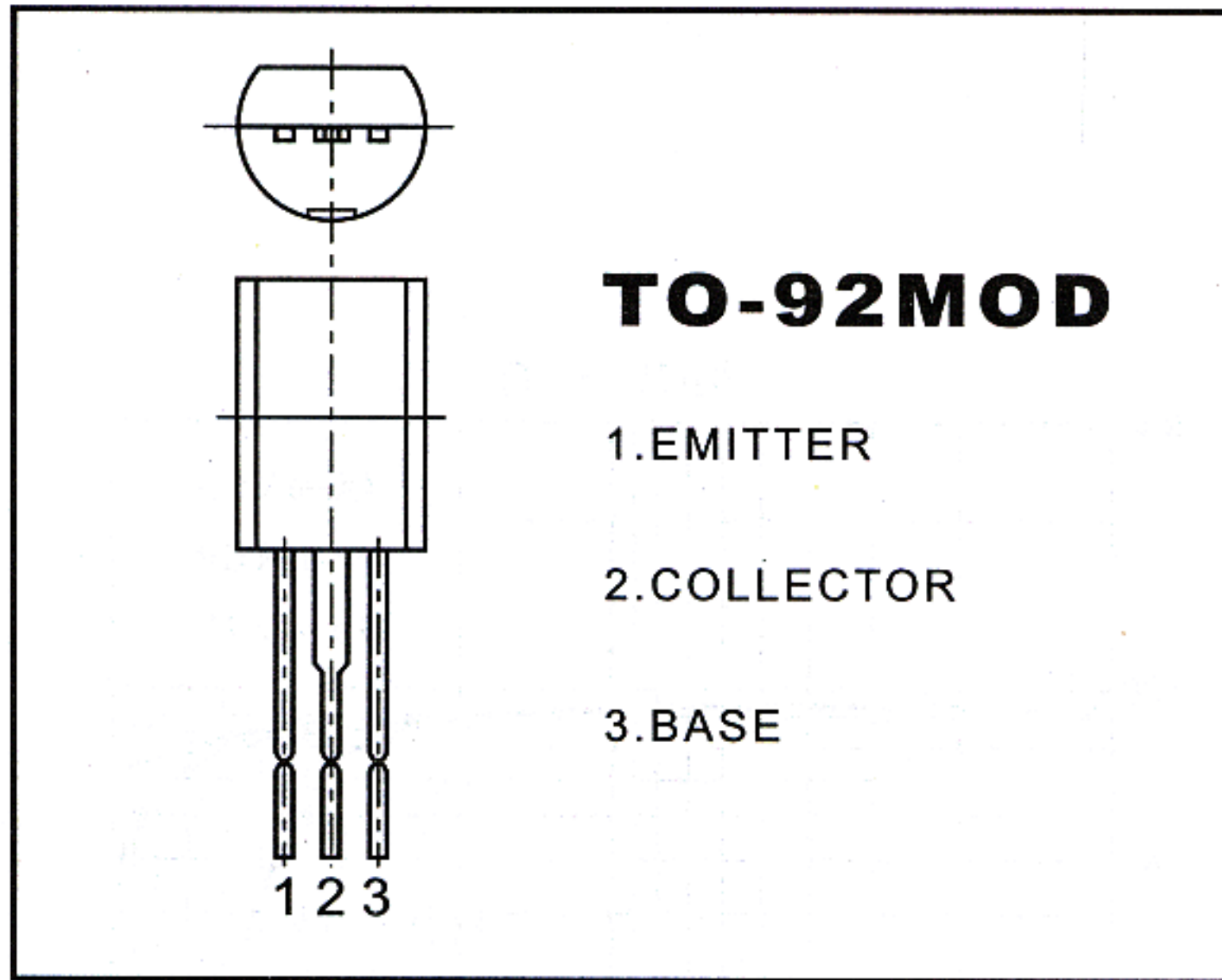


## 2SA1013 TRANSISTOR(PNP)



### FEATURES

#### Power dissipation

$P_{CM}$ : 0.9W ( $T_{amb}=25^{\circ}C$ )

#### Collector current

$I_{CM}$ : -1 A

#### Collector-base voltage

$V_{(BR)CBO}$ : -160 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	$V_{(BR)CBO}$	$I_C = -100 \mu A, I_E = 0$	-160		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1 mA, I_B = 0$	-160		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10 \mu A, I_C = 0$	-6		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -150 V, I_E = 0$		-1	$\mu A$
Collector cut-off current	$I_{CEO}$	$V_{CE} = -120 V, I_B = 0$		-10	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -6 V, I_C = 0$		-1	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE} = -5 V, I_C = -200 mA$	65	310	
	$h_{FE(2)}$	$V_{CE} = -5 V, I_C = -50 mA$	40		
Collector-emitter saturation voltage	$V_{CEsat}$	$I_C = -500 mA, I_B = -50 mA$		-1.5	V
Base-emitter voltage	$V_{BE}$	$I_C = -5 mA, I_{CE} = -5 V$		-0.75	V
Transition frequency	$f_T$	$V_{CE} = -5 V, I_C = -200 mA$	15		MHz

### CLASSIFICATION OF $h_{FE(1)}$

Rank	R	O	Y
Range	60-120	120-200	200-300

