

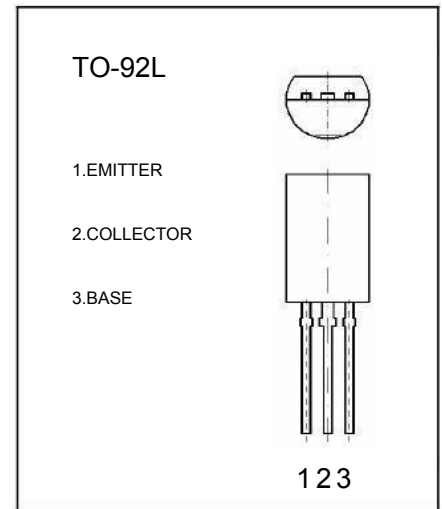


# TO-92L Plastic-Encapsulate Transistors

## A684 TRANSISTOR(PNP)

### FEATURES

Low collector to emitter saturation voltage  $V_{CE(sat)}$ .  
Complementary pair with C1384



### MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter		Units
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-1	A
$P_C$	Collector Power Dissipation	0.75	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^\circ\text{C}$

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-2\text{mA}, I_B=0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-20\text{V}, I_E=0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=-10\text{V}, I_C=-500\text{mA}$	85		340	
DC current gain	$h_{FE(2)}$	$V_{CE}=-5\text{V}, I_C=-1\text{A}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$		-0.2	-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$		-0.85	-1.2	V
Transition frequency	$f_T$	$V_{CB}=-10\text{V}, I_C=50\text{mA}$ $f=200\text{MHz}$		200		MHz

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

Rank	Q	R	S
Range	85-170	120-240	170-340

