



# TO-92L Plastic-Encapsulate Transistors

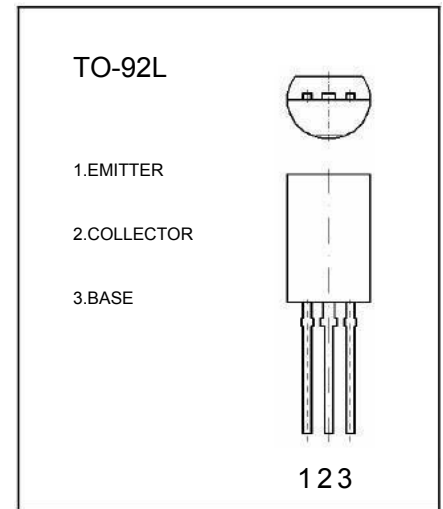
## A1680 TRANSISTOR(PNP)

### FEATURES

Low collector to emitter saturation voltage  $V_{CE(sat)}$ .  
Complementary pair with C4408

### 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	-6	V
$I_C$	Collector Current –Continuous	-2.0	A
$P_C$	Collector Power Dissipation	0.9	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-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10\text{mA}, I_B=0$	-50			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-60\text{V}, I_E=0$			-1.0	$\mu\text{A}$
<b>Emitter cut-off current</b>	$I_{EBO}$	$V_{EB}=-6\text{V}, I_C=0$			-1.0	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=-2\text{V}, I_C=-100\text{mA}$	120		400	
DC current gain	$h_{FE(2)}$	$V_{CE}=-2\text{V}, I_C=-1.5\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-1\text{A}, I_B=-0.05\text{mA}$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-1\text{A}, I_B=-0.05\text{mA}$			-1.2	V
Transition frequency	$f_T$	$V_{CE}=-2\text{V}, I_C=-100\text{mA}$		100		MHz

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

Rank	1	2	3
Range	40-120	120--250	250-400

