TPT5609

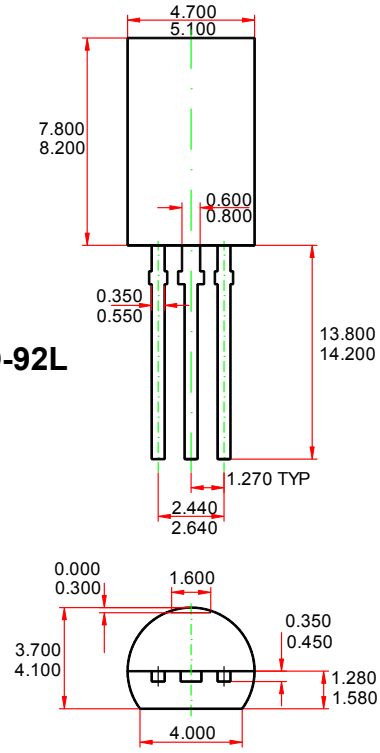
TO-92L Bipolar Transistor (NPN)

1. EMITTER
2. COLLECTOR
3. BASE

Features

- ✧ Excellent linearity of Current Gain
- ✧ Low saturation voltage
- ✧ Complementary to TPT5610

TO-92L



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector- Base Voltage	25	V
V_{CEO}	Collector-Emitter Voltage	20	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	℃
T_{stg}	Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C =10μA, I_E=0	25			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C =1mA, I_B=0	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=20V, I_E=0			1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0			1	μA
DC current gain	h_{FE}	V_{CE}=2V, I_C=500mA	60		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=800mA, I_B=80mA			0.5	V
Base-emitter voltage	V_{BE}	V_{CE}=2V, I_C=500mA			1	V
Transition frequency	f_T	V_{CE}=2V, I_C=500mA		190		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		22		pF

CLASSIFICATION OF h_{FE}

Rank	A	B	C
Range	60-120	85-170	120-240

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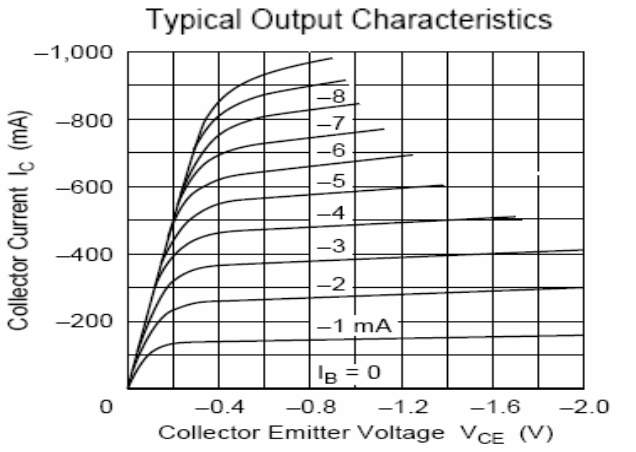
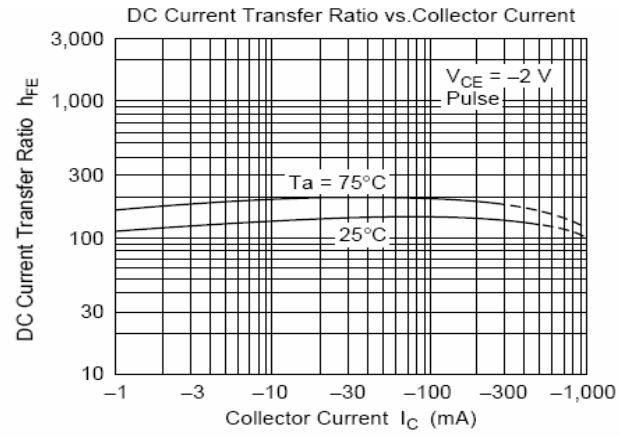
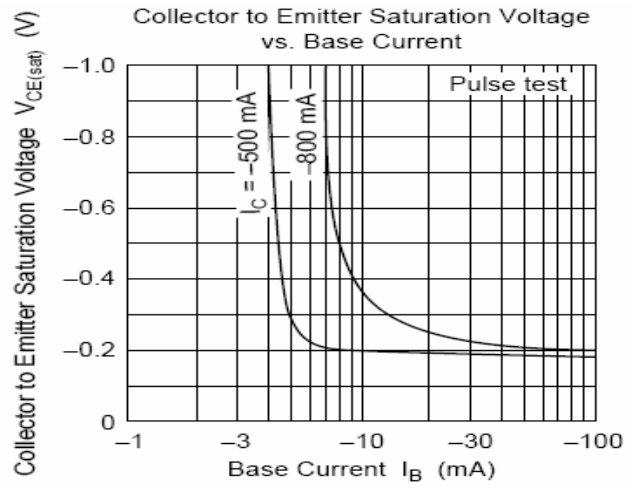
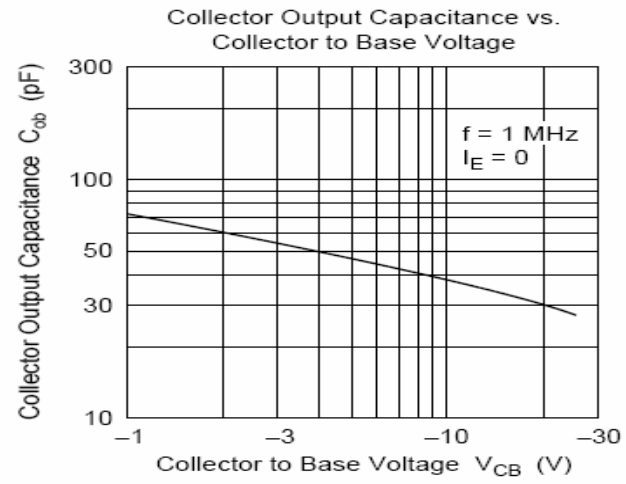
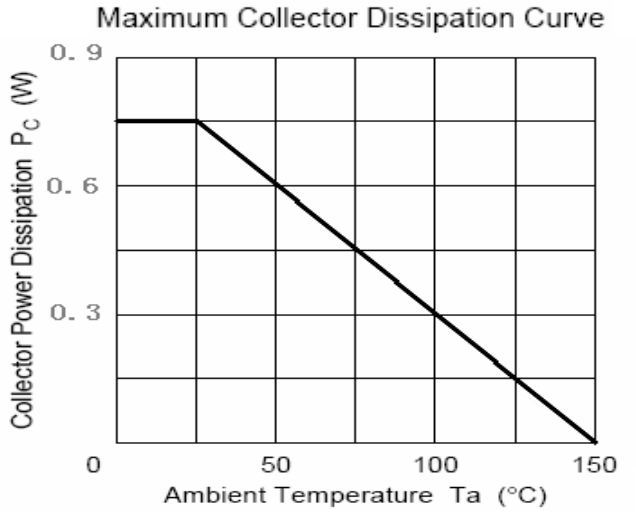
Typical Characteristics











Package	Packing	Quantity	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92L	Bulk	500pcs/Bag	5000pcs	245×170×100	50,000pcs	525×375×270
TO-92L	Tape	2000pcs/Tap	2000pcs	333×203×42	20,000pcs	493×400×264