



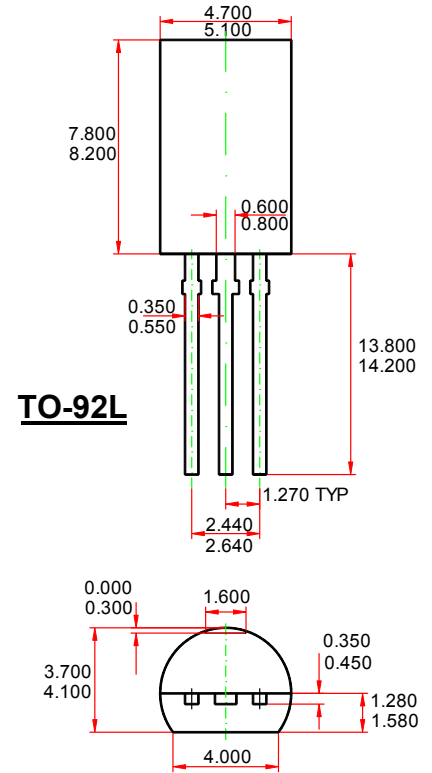
- 1. EMITTER
- 2. COLLECTOR
- 3. BASE

### Features

- ✧ Complement to KSA931
- ✧ High collector-Base Voltage:  $V_{CBO}=80V$
- ✧ Collector current:  $I_C=700mA$
- ✧ Collector dissipation:  $P_C=1W$

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	8	V
$I_C$	Collector Current -Continuous	700	mA
$P_C$	Collector Power Dissipation	1	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55-150	$^\circ C$



Dimensions in inches and (millimeters)

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

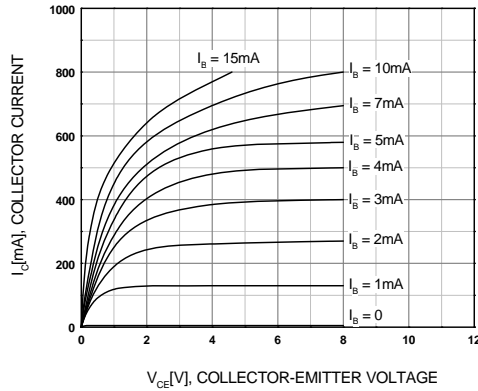
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CBO}$	$I_C=100\mu A, I_E=0$	80			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	$I_C=10mA, I_B=0$	60			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	$I_E=10\mu A, I_C=0$	8			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60V, I_E=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=2V, I_C=50mA$	40		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.7	V
Base-emitter voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$			1.2	V
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		8		pF
Transition frequency	$f_T$	$V_{CE}=10V, I_C=50mA$	30			MHz

### CLASSIFICATION OF $h_{FE}$

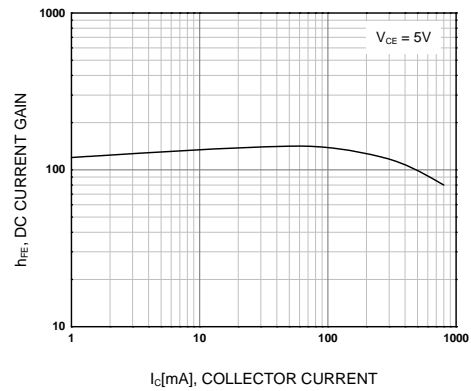
Rank	R	O	Y
Range	40-80	70-140	120-240



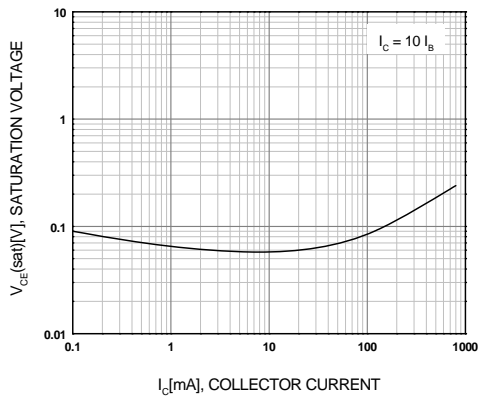
### Ratings and Characteristics Curve (TA=25°C unless otherwise noted)



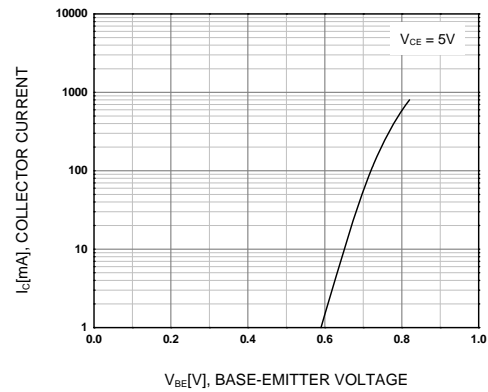
**Figure 1. Static Characteristic**



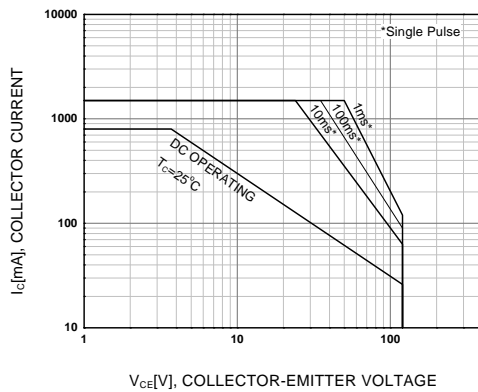
**Figure 2. DC Current Gain**



**Figure 3. Collector-Emitter Saturation Voltage**



**Figure 4. Base-Emitter On Voltage**



**Figure 5. Safe Operating Area**

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