

TO-92 Plastic-Encapsulate Transistors

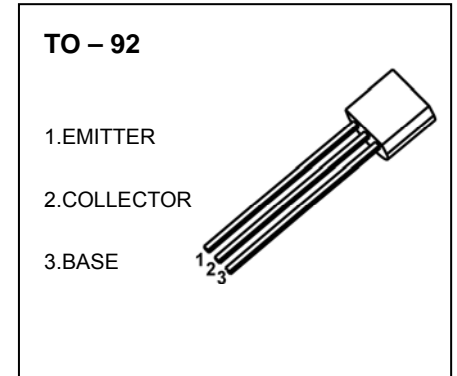
KSC1730 TRANSISTOR (NPN)

FEATURES

- High Transition Frequency
- LOW $V_{CE(sat)}$

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	15	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	50	mA
P_C	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	$^{\circ}\text{C}/\text{W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$



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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=0.01\text{mA}, I_E=0$	30			V
Collector-emitter breakdown	$V_{(BR)CEO}$	$I_C=5\text{mA}, I_B=0$	15			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=0.01\text{mA}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=12\text{V}, I_E=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=10\text{V}, I_C=5\text{mA}$	40		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.5	V
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			1.5	pF
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=5\text{mA}$	800			MHz

CLASSIFICATION OF h_{FE}

RANK	R	O	Y
RANGE	40-80	70-140	120-240