

TO-92 Plastic-Encapsulate Transistors

KTC3192 TRANSISTOR(NPN)

FEATURE

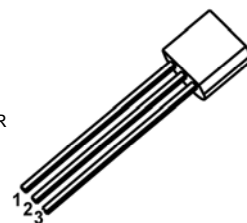
- High Power Gain: $G_{pe}=29\text{dB(Typ)}(f=10.7\text{MHz})$

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

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	35	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current -Continuous	50	mA
P_C	Collector Power Dissipation	625	mW
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$

TO-92

1. EMITTER
2. COLLECTOR
3. BASE



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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	35			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	4			V
Collector cut-off current	I_{CBO}	$V_{CB}=35\text{V}, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			1.0	μA
DC current gain	h_{FE}	$V_{CE}=12\text{V}, I_C=2\text{mA}$	40		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			1.0	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=1\text{mA}$	100		400	MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	1.4		3.2	pF
Collector-base time constant	$C_{c,rb}$	$V_{CE}=10\text{V}, I_C=1\text{mA}, f=30\text{MHz}$	10		50	pS
Power gain	G_{pe}	$V_{CC}=6\text{V}, I_C=1\text{mA}, f=10.7\text{MHz}$	27		33	dB

CLASSIFICATION OF h_{FE}

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