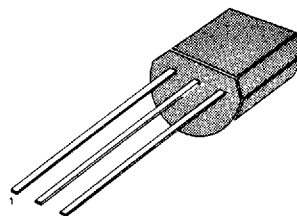


HIGH VOLTAGE TRANSISTOR

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage : KSP92	V_{CB0}	-300	V
: KSP93		-200	V
Collector-Emitter Voltage: KSP92	V_{CE0}	-300	V
: KSP93		-200	V
Emitter-Base Voltage	V_{EB0}	-5	V
Collector Current	I_C	-500	mA
Collector Dissipation ($T_a = 25^\circ\text{C}$)	P_C	625	mW
Derate above 25°C		5	mW/ $^\circ\text{C}$
Collector Dissipation ($T_c = 25^\circ\text{C}$)	P_C	1.5	W
Derate above 25°C		12	mW/ $^\circ\text{C}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~150	$^\circ\text{C}$

TO-92



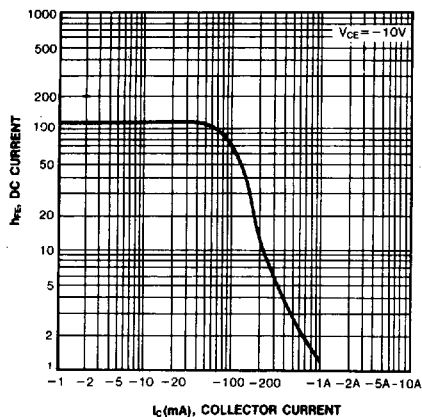
1. Emitter 2. Base 3. Collector

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

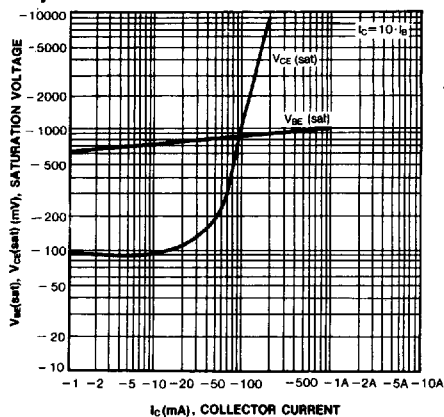
Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C = -100\mu\text{A}, I_E = 0$	-300		V
KSP92			-200		V
*Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C = -1\text{mA}, I_B = 0$	-300		V
KSP92			-200		V
KSP93			-5		V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E = -100\mu\text{A}, I_C = 0$			V
Collector Cut-off Current	I_{CB0}				μA
KSP92		$V_{CB} = -200\text{V}, I_E = 0$		-0.25	μA
KSP93		$V_{CB} = -160\text{V}, I_E = 0$		-0.25	μA
Emitter Cut-off Current	I_{EB0}	$V_{EB} = -3\text{V}, I_C = 0$		-0.10	μA
*DC Current Gain	h_{FE}	$V_{CE} = -10\text{V}, I_C = -1\text{mA}$	25		
		$V_{CE} = -10\text{V}, I_C = -10\text{mA}$	40		
		$V_{CE} = -10\text{V}, I_C = -30\text{mA}$	25		
*Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -20\text{mA}, I_B = -2\text{mA}$		-0.50	V
*Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -20\text{mA}, I_B = -2\text{mA}$		-0.90	V
Current Gain Bandwidth Product	f_T	$V_{CE} = -20\text{V}, I_C = -10\text{mA}$ $f = 100\text{MHz}$	50		MHz
Collector Base Capacitance	C_{cb}				pF
KSP92		$V_{CB} = -20\text{V}, I_E = 0$		6	pF
KSP93		$f = 1\text{MHz}$		8	pF

* Pulse Test : $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

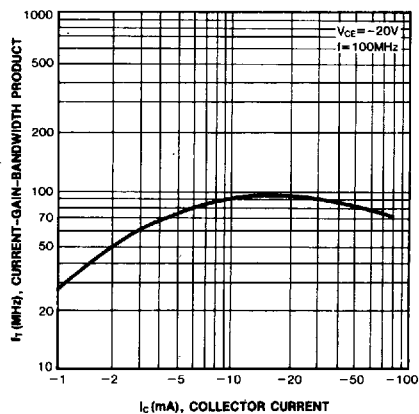
DC CURRENT GAIN



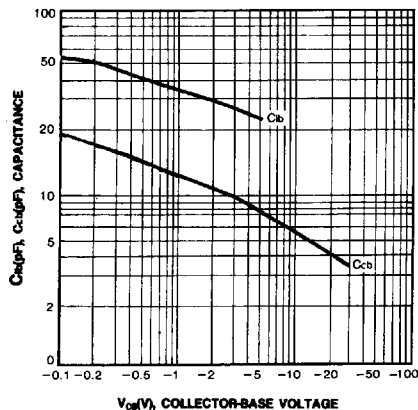
SATURATION VOLTAGES



CURRENT-GAIN-BANDWIDTH PRODUCT



CAPACITANCE

ACTIVE-REGION SAFE
OPERATING AREA