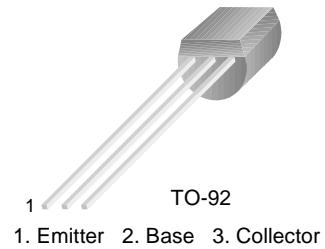


KSP42/43

High Voltage Transistor

- Collector-Emitter Voltage: $V_{CEO}=KSP42: 300V$
 $KSP43: 200V$
- Collector Power Dissipation: $P_C(\max)=625mW$



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector Base Voltage : KSP42 : KSP43	300 200	V
V_{CEO}	Collector-Emitter Voltage : KSP42 : KSP43	300 200	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	625	mW
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ C$

Electrical Characteristics $T_a=25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage : KSP42 : KSP43	$I_C=100\mu A, I_E=0$	300 200		V
BV_{CEO}	* Collector -Emitter Breakdown Voltage : KSP42 : KSP43	$I_C=1mA, I_B=0$	300 200		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=100\mu A, I_C=0$	6		V
I_{CBO}	Collector Cut-off Current : KSP42 : KSP43	$V_{CB}=200V, I_E=0$ $V_{CB}=160V, I_E=0$		100 100	nA
I_{EBO}	Emitter Cut-off Current : KSP42 : KSP43	$V_{BE}=6V, I_C=0$ $V_{BE}=4V, I_C=0$		100 100	nA
h_{FE}	* DC Current Gain	$V_{CE}=10V, I_C=1mA$ $V_{CE}=10V, I_C=10mA$ $V_{CE}=10V, I_C=30mA$	25 40 40		
$V_{CE}(\text{sat})$	* Collector-Emitter Saturation Voltage	$I_C=20mA, I_B=2mA$		0.5	V
$V_{BE}(\text{sat})$	* Base-Emitter Saturation Voltage	$I_C=20mA, I_B=2mA$		0.9	V
C_{ob}	Output Capacitance : KSP42 : KSP43	$V_{CB}=20V, I_E=0$ $f=1MHz$		3 4	pF
f_T	Current Gain Bandwidth Product	$V_{CE}=20V, I_C=10mA$ $f=100MHz$	50		MHz

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

Typical Characteristics

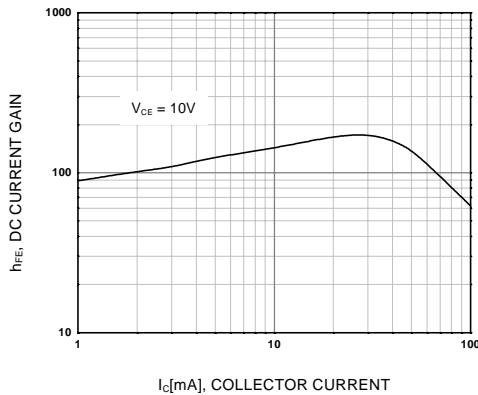


Figure 1. DC current Gain

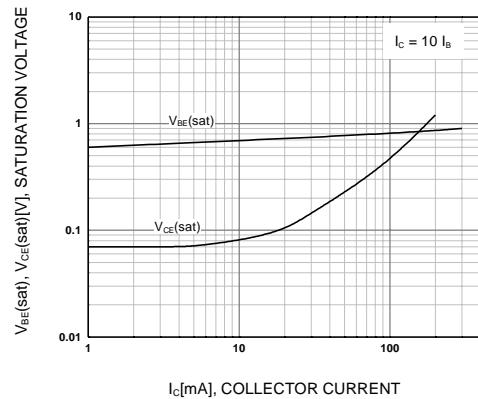


Figure 2. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

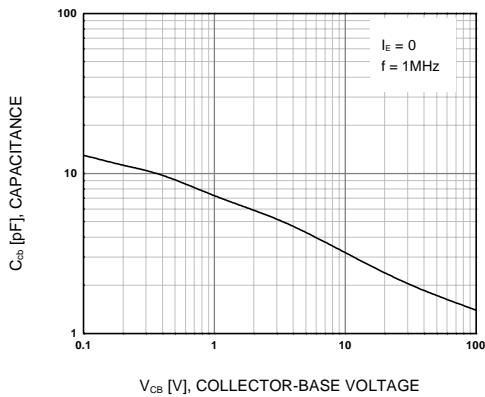


Figure 3. Collector-Base Capacitance

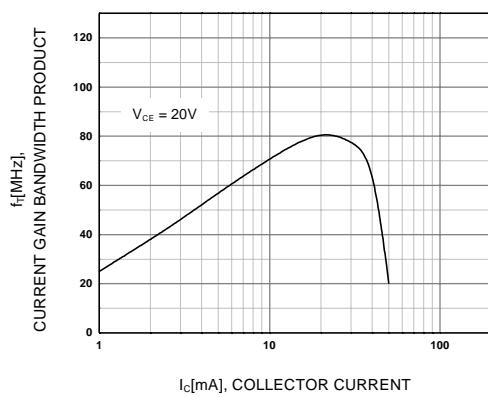
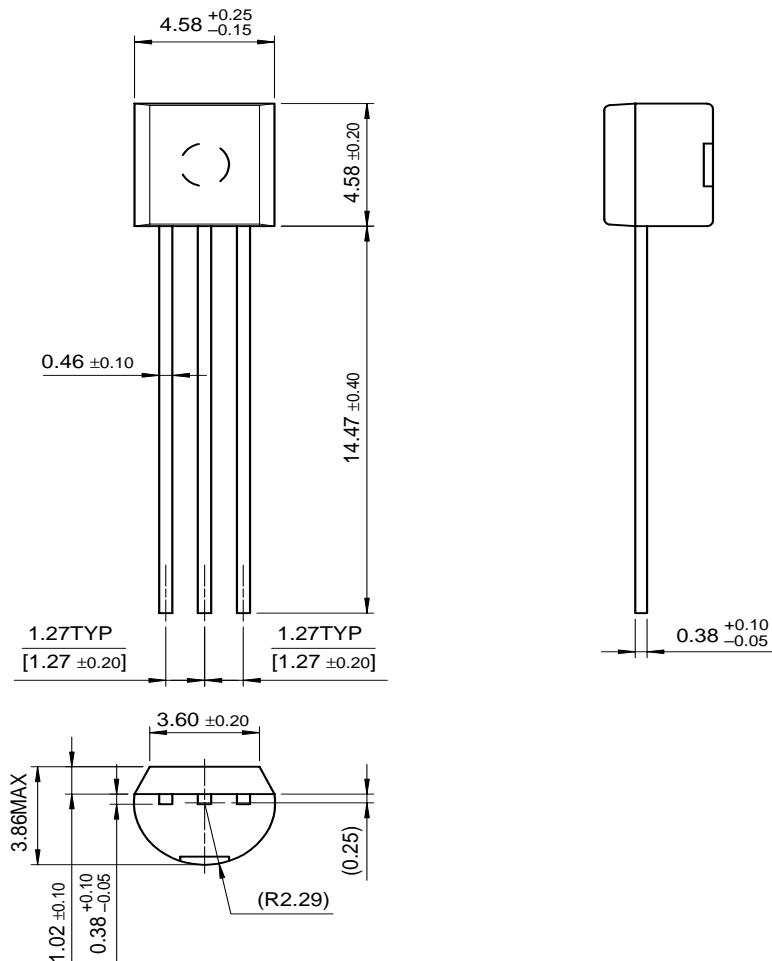


Figure 4. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

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