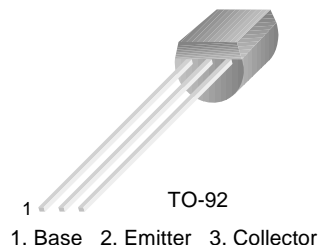


KSP17

CATV Transistor



NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	20	V
V_{CEO}	Collector-Emitter Voltage	15	V
V_{EBO}	Emitter-Base Voltage	3.0	V
P_C	Collector Dissipation ($T_a=25^\circ\text{C}$)	625	mW
	Derate above 25°C	5.0	mW/ $^\circ\text{C}$
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55~150	$^\circ\text{C}$
$R_{th(j-a)}$	Thermal Resistance, Junction to Ambient	200	$^\circ\text{C/W}$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=100\mu\text{A}$, $I_E=0$	20			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}$, $I_B=0$	15			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}$, $I_C=0$	3.0			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=15\text{V}$, $I_E=0$			100	nA
h_{FE}	DC Current Gain	$V_{CE}=10\text{V}$, $I_C=5\text{mA}$	25		250	
$V_{CE(sat)}$	Collector Emitter Saturation Voltage	$I_C=10\text{mA}$, $I_B=1\text{mA}$			0.5	V
f_T	Current Gain Bandwidth Product	$V_{CE}=10\text{V}$, $I_C=5\text{mA}$ $f=100\text{MHz}$	800			MHz
C_{ob}	Output Capacitance	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$	0.3		0.9	pF
h_{fe}	Small Signal Current Gain	$V_{CE}=10\text{V}$, $I_C=5\text{mA}$ $f=1\text{KHz}$	30			
NF	Noise Figure	$V_{CC}=12\text{V}$, $I_C=5\text{mA}$ $R_S=50\Omega$, $f=200\text{MHz}$			6.0	dB
G_{PE}	Amplifier Power Gain	$V_{CC}=12\text{V}$, $I_C=5\text{mA}$ $R_S=50\Omega$, $f=200\text{MHz}$		24		dB

Typical Characteristics

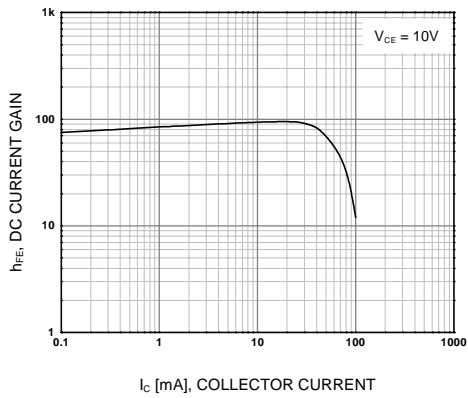


Figure 1. DC current Gain

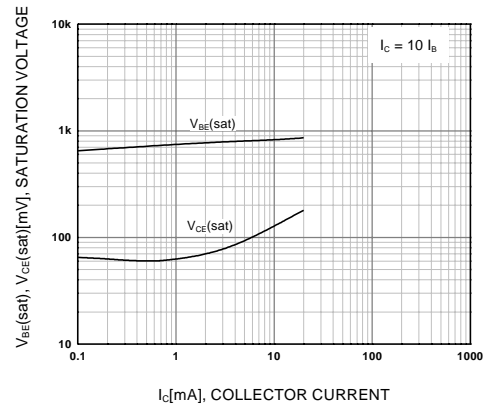


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

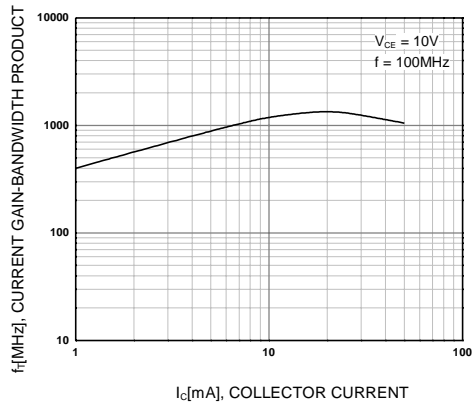
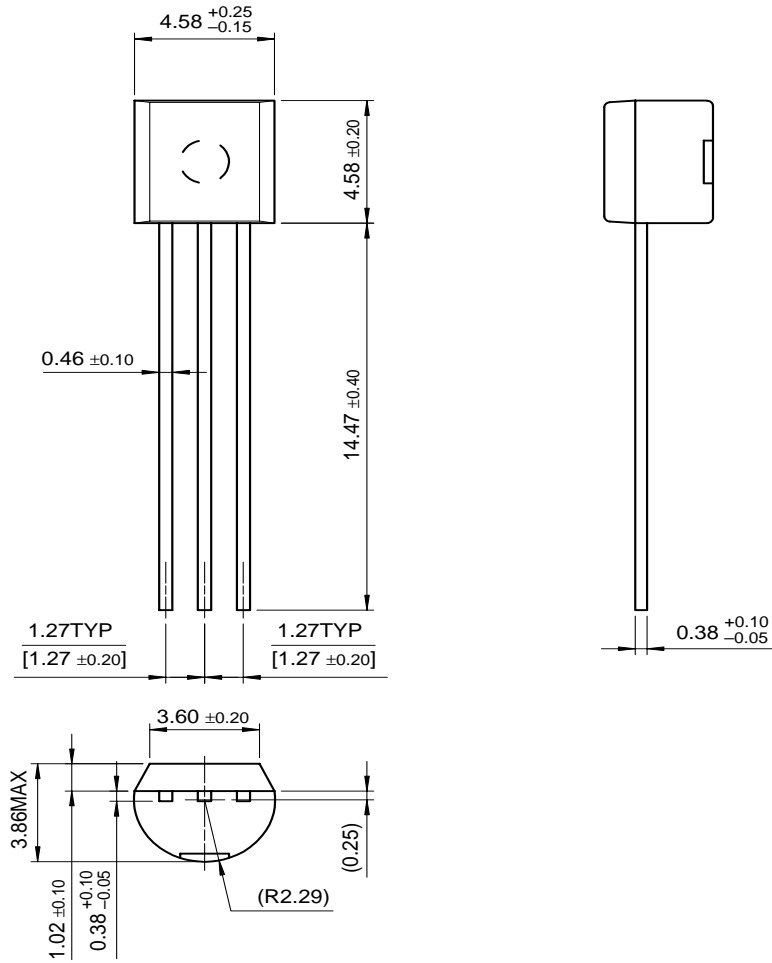


Figure 3. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

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FACT TM	OPTOLOGIC TM	Star* Power TM	
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