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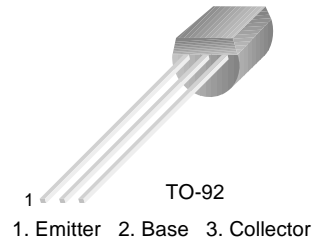
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)



## KSP8598/8599

### Amplifier Transistor

- Collector-Emitter Voltage:  $V_{CE0}$ = KSP8598: 60V  
KSP8599: 80V
- Collector Power Dissipation:  $P_C$  (max)=625mW
- Suffix "-C" means Center Collector (1. Emitter 2. Collector 3. Base)



### PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage		
	: KSP8598	-60	V
	: KSP8599	-80	V
$V_{CEO}$	Collector-Emitter Voltage		
	: KSP8598	-60	V
	: KSP8599	-80	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current	-500	mA
$P_C$	Collector Power Dissipation	625	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Max.	Units	
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}, I_E = 0$				
	: KSP8598		-60		V	
	: KSP8599		-80		V	
$BV_{CEO}$	* Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}, I_B = 0$				
	: KSP8598		-60		V	
	: KSP8599		-80		V	
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\mu\text{A}, I_C = 0$	-5		V	
$I_{CBO}$	Collector Cut-off Current					
	: KSP8598	$V_{CB} = -60\text{V}, I_E = 0$		-100	nA	
	: KSP8599	$V_{CB} = -80\text{V}, I_E = 0$		-100	nA	
$I_{CEO}$	Collector Cut-off Current	$V_{CE} = -60\text{V}, I_B = 0$		-100	nA	
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = -4\text{V}, I_C = 0$		-100	nA	
$h_{FE}$	* DC Current Gain	$V_{CE} = -5\text{V}, I_C = -1\text{mA}$	100	300		
		$V_{CE} = -5\text{V}, I_C = -10\text{mA}$	100			
		$V_{CE} = -5\text{V}, I_C = -100\text{mA}$	75			
$V_{CE}(\text{sat})$	* Collector-Emitter Saturation Voltage	$I_C = -100\text{mA}, I_B = -5\text{mA}$		-0.4	V	
		$I_C = -100\text{mA}, I_B = -10\text{mA}$		-0.3	V	
$V_{BE}(\text{on})$	* Base-Emitter On Voltage	: KSP8598	$V_{CE} = -5\text{V}, I_C = -1\text{mA}$	-0.5	-0.7	V
		: KSP8599	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$	-0.6	-0.8	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$ $f = 100\text{MHz}$	150		MHz	
$C_{ob}$	Output Capacitance	$V_{CB} = -5\text{V}, I_E = 0$ $f = 1\text{MHz}$		8	pF	

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

## Typical Characteristics

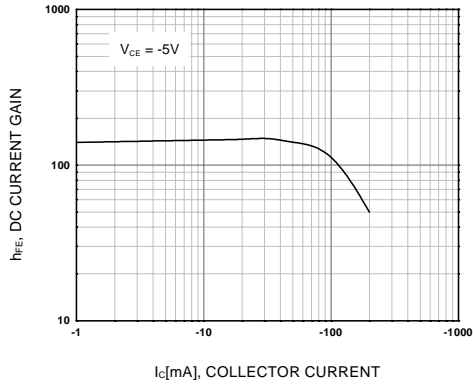


Figure 1. DC current Gain

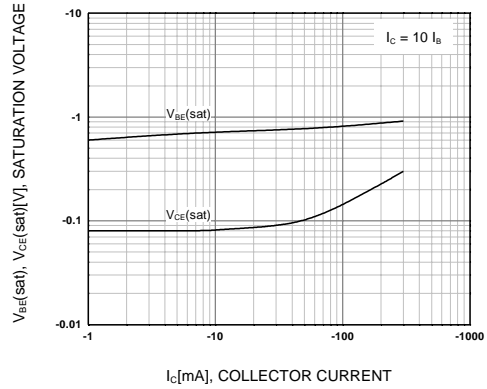


Figure 2. Collector-Emitter Saturation Voltage  
 Base-Emitter Saturation Voltage

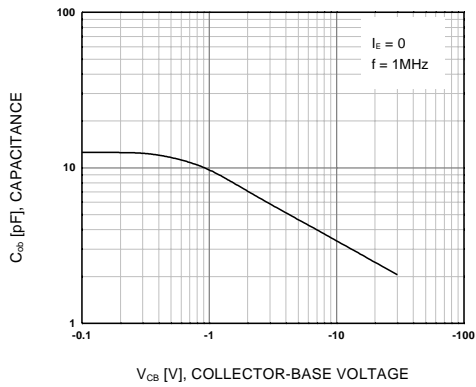


Figure 3. Output Capacitance

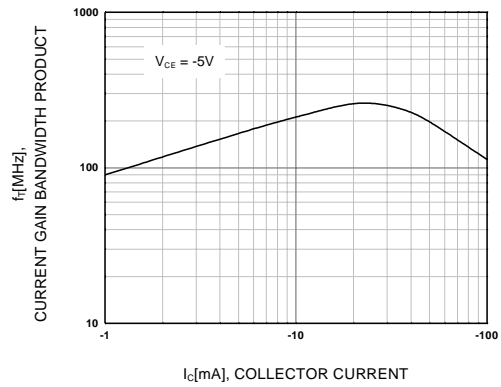
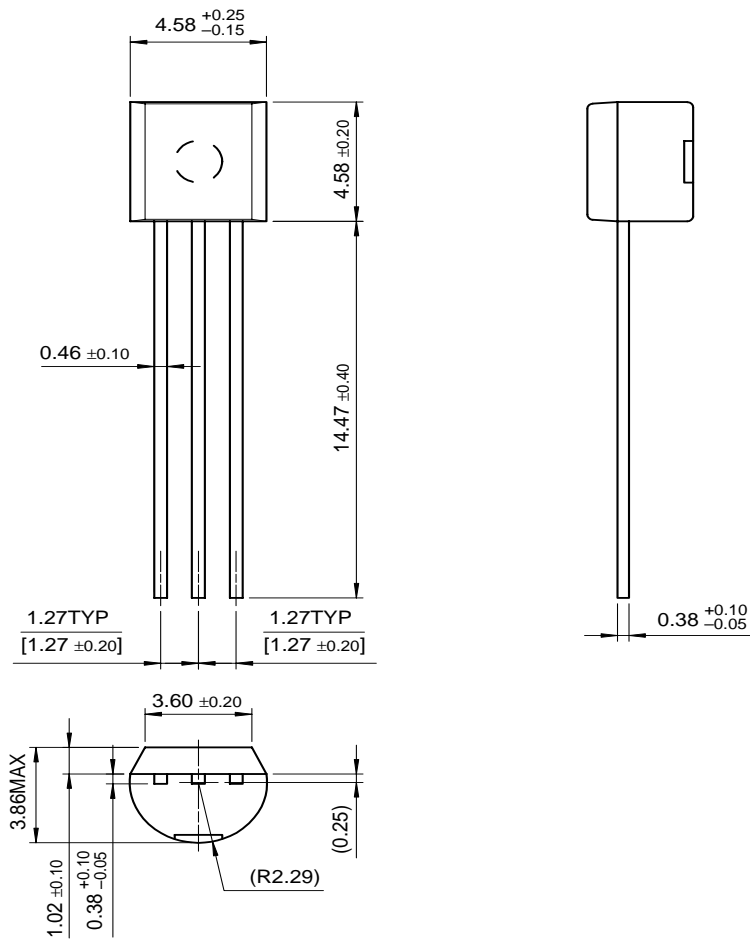


Figure 4. Current Gain Bandwidth Product

**Package Dimensions**

**TO-92**



Dimensions in Millimeters

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