

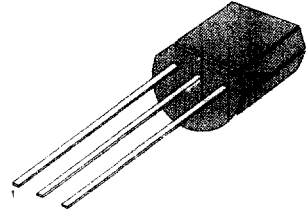
**AMPLIFIER TRANSISTOR**

- Collector-Emitter Voltage:  $V_{CE0}$  KSP8598: 60V  
KSP8599: 80V
- Collector Dissipation:  $P_C$  (max)=625mW

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

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

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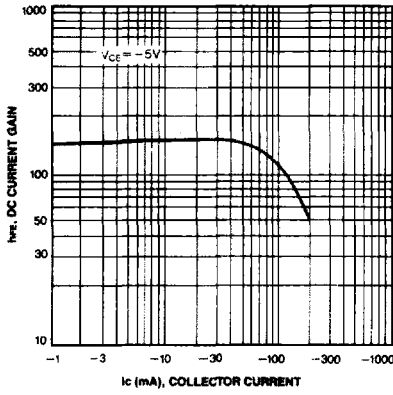
1. Emitter 2. Base 3. Collector

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

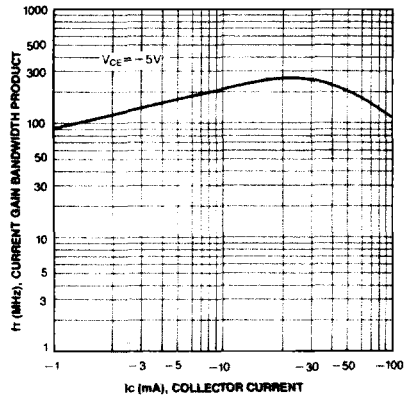
Characteristic	Symbol	Test Conditions	Min	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = -100\mu\text{A}, I_E = 0$			
:KSP8598			-60		V
:KSP8599			-80		V
*Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = -10\text{mA}, I_B = 0$			
:KSP8598			-60		V
:KSP8599			-80		V
Emitter-Base Breakdown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

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

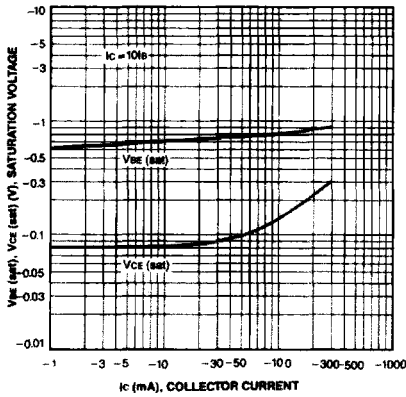
DC CURRENT GAIN



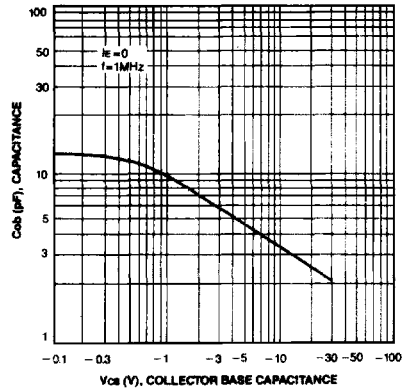
CURRENT GAIN BANDWIDTH PRODUCT



COLLECTOR EMITTER SATURATION VOLTAGE  
BASE-EMITTER SATURATION VOLTAGE



OUTPUT CAPACITANCE



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