

# KSC2310

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## High Voltage Power Amplifier

- Collector-Base Voltage :  $V_{CBO}=200V$
- Current Gain Bandwidth Product :  $f_T=100MHz$



## NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Ratings	Units
$V_{CBO}$	Collector-Base Voltage	200	V
$V_{CEO}$	Collector-Emitter Voltage	150	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	50	mA
$P_C$	Collector Power Dissipation	800	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.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C=100\mu A, I_E=0$	200			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C=5mA, I_B=0$	150			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E=100\mu A, I_C=0$	5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=200V, I_E=0$			0.1	$\mu A$
$h_{FE}$	DC Current Gain	$V_{CE}=5V, I_C=10mA$	40		240	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10mA, I_B=1mA$			0.5	V
$f_T$	Current Gain Bandwidth Product	$V_{CE}=30V, I_C=10mA$		100		MHz
$C_{ob}$	Output Capacitance	$V_{CB}=10V, I_E=0, f=1MHz$		3.5	5	pF

### $h_{FE}$ Classification

Classification	R	O	Y
$h_{FE}$	40 ~ 80	70 ~ 140	120 ~ 240

# Typical Characteristics

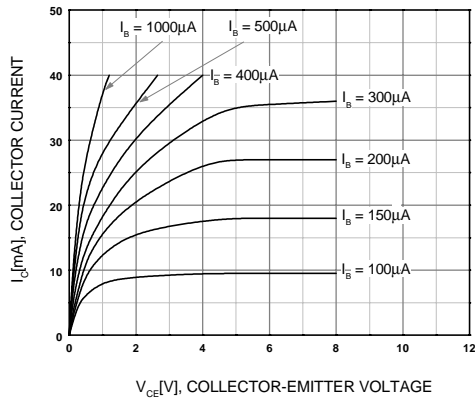


Figure 1. Static Characteristic

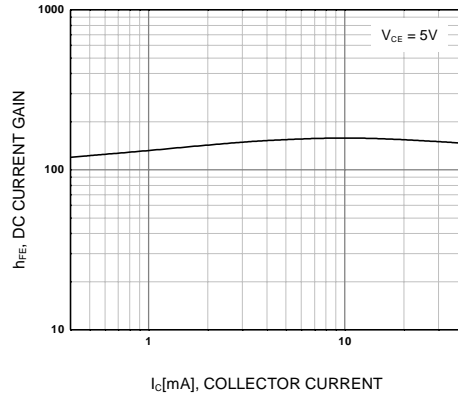


Figure 2. DC current Gain

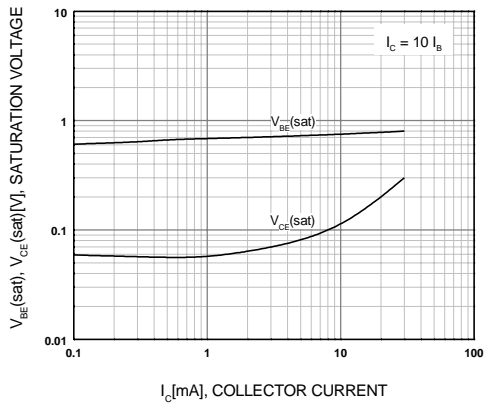


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

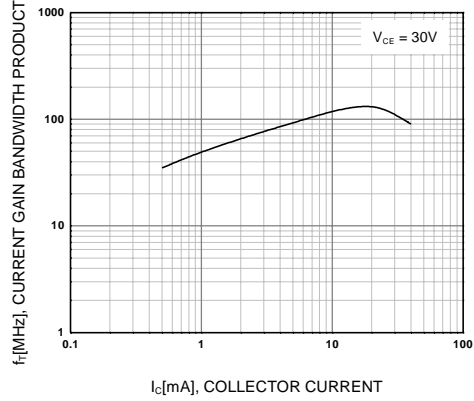


Figure 4. Current Gain Bandwidth Product

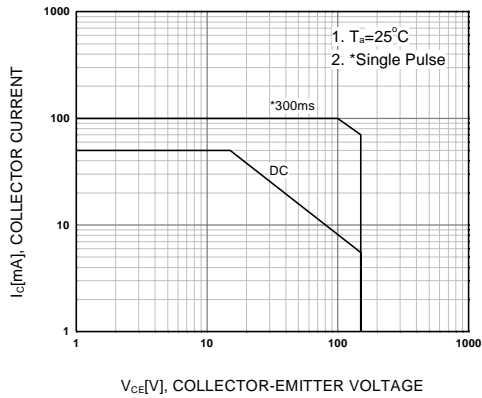


Figure 5. Safe Operating Area

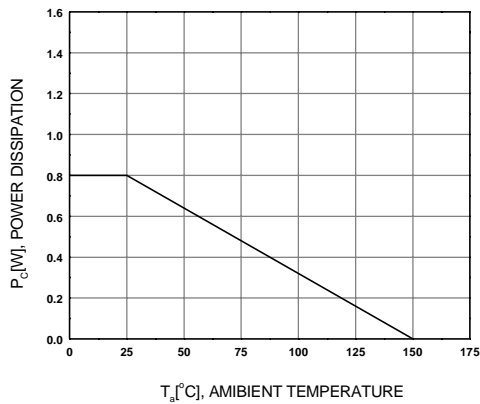


Figure 6. Power Derating

# Package Dimensions

## TO-92L



Dimensions in Millimeters

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