FAIRCHILD
SEMICONDUCTOR®

KSC2310

High Voltage Power Amplifier

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

TO-92L

1. Emitter 2. Collector 3. Base

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°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	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C=100μA, 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=100μA, I_C=0	5			V
I_{CBO}	Collector Cut-off Current	V_{CB}=200V, I_E=0			0.1	μA
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

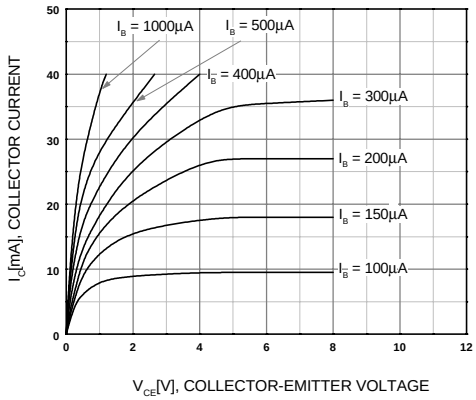


Figure 1. Static Characteristic

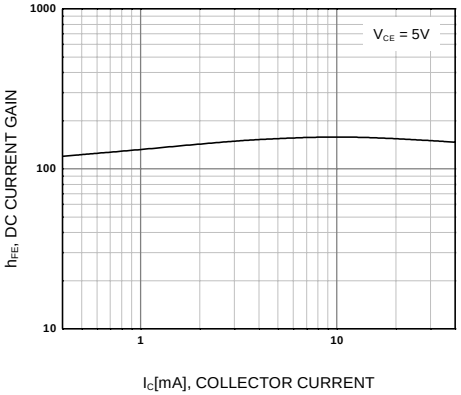


Figure 2. DC current Gain

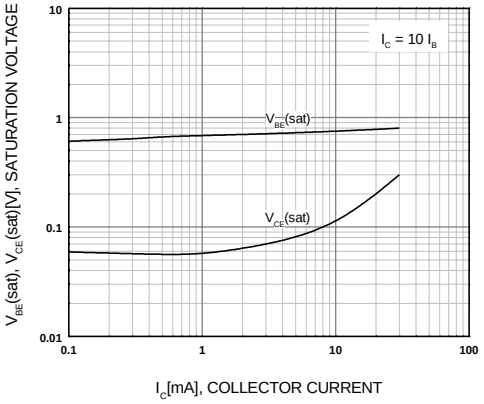


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

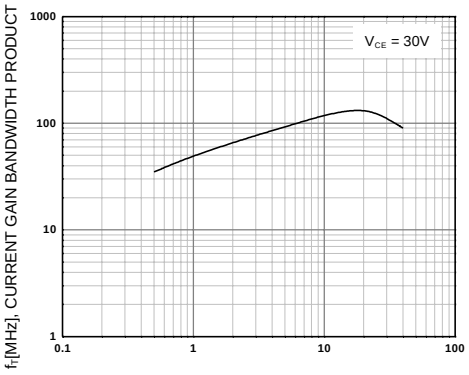


Figure 4. Current Gain Bandwidth Product

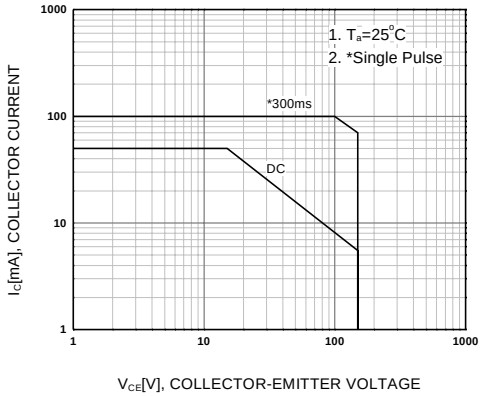


Figure 5. Safe Operating Area

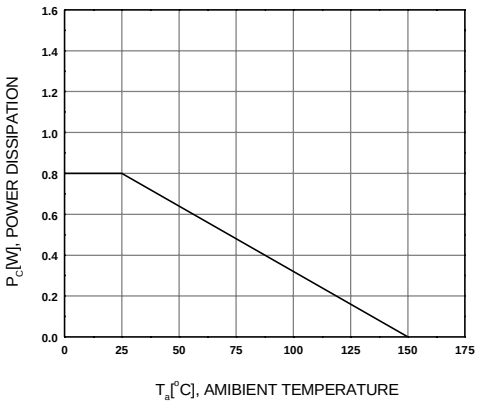
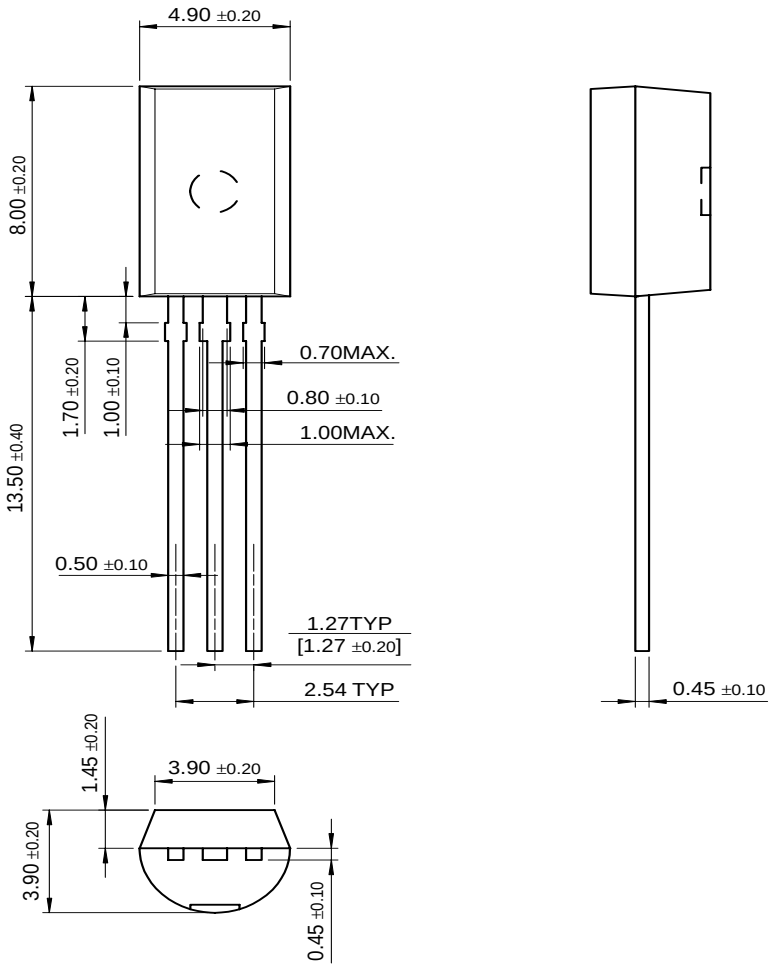


Figure 6. Power Derating

Package Dimensions

TO-92L



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
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The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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