Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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FAIRCHILD
SEMICONDUCTOR®

KSC2500

Medium Power Amplifier & Low Saturation

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	30	V
V_{CES}	Collector-Emitter Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	10	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current (DC)	2	A
I_{CP}	* Collector Current (Pulse)	5	A
I_B	Base Current	0.5	A
P_C	Collector Power Dissipation	900	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

* PW≤10ms, Duty Cycle≤30%

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	V_{CB}=30V, I_E=0			100	nA
I_{EBO}	Emitter Cut-off Current	V_{EB}=6V, I_C=0			100	nA
BV_{CBO}	Collector-Emitter Breakdown Voltage	I_C=10mA, I_B=0	10			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E=1mA, I_C=0	6			V
$h_{FE\ 1}$ $h_{FE\ 2}$	DC Current Gain	V_{CE}=1V, I_C=0.5A V_{CE}=1V, I_C=2A	140 70	 200	600	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C=2A, I_B=50mA		0.2	0.5	V
V_{BE} (on)	Base-Emitter On Voltage	V_{CE}=1V, I_C=2A		0.86	1.5	V
f_T	Current Gain Bandwidth Product	V_{CE}=1V, I_C=0.5A		150		MHz
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0, f=1MHz		27		pF

h_{FE1} Classification

Classification	A	B	C	D
h_{FE1}	140 ~ 240	200 ~ 330	300 ~ 450	420 ~ 600

Typical Characteristics

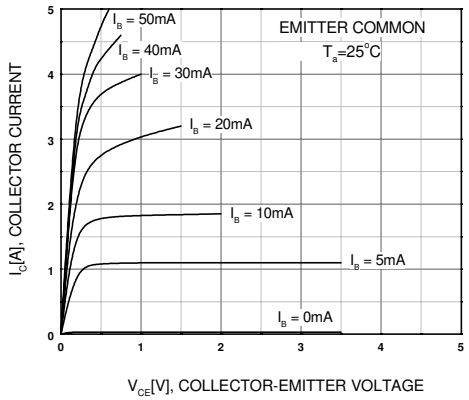


Figure 1. Static Characteristic

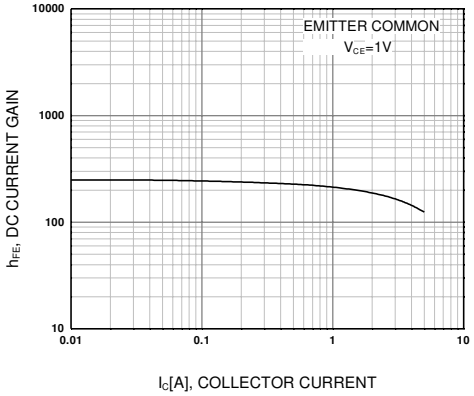


Figure 2. DC current Gain

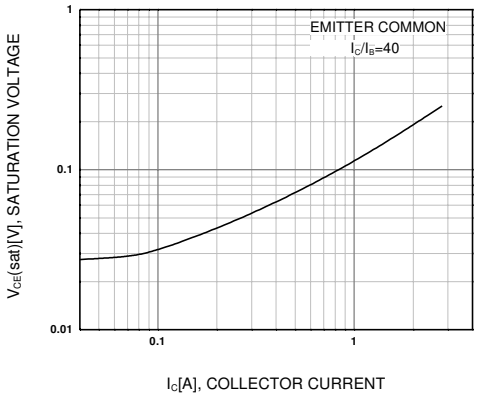


Figure 3. Collector-Emitter Saturation Voltage

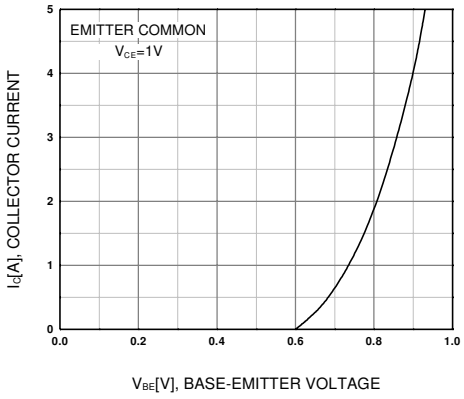


Figure 4. Base-Emitter On Voltage

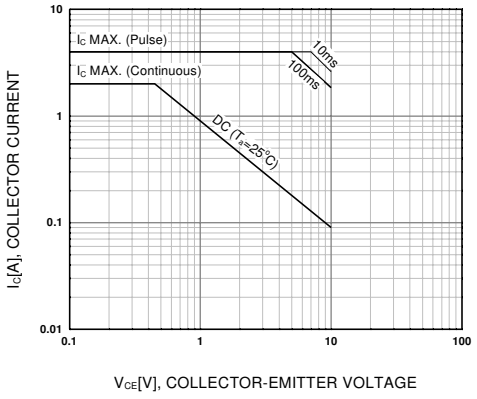
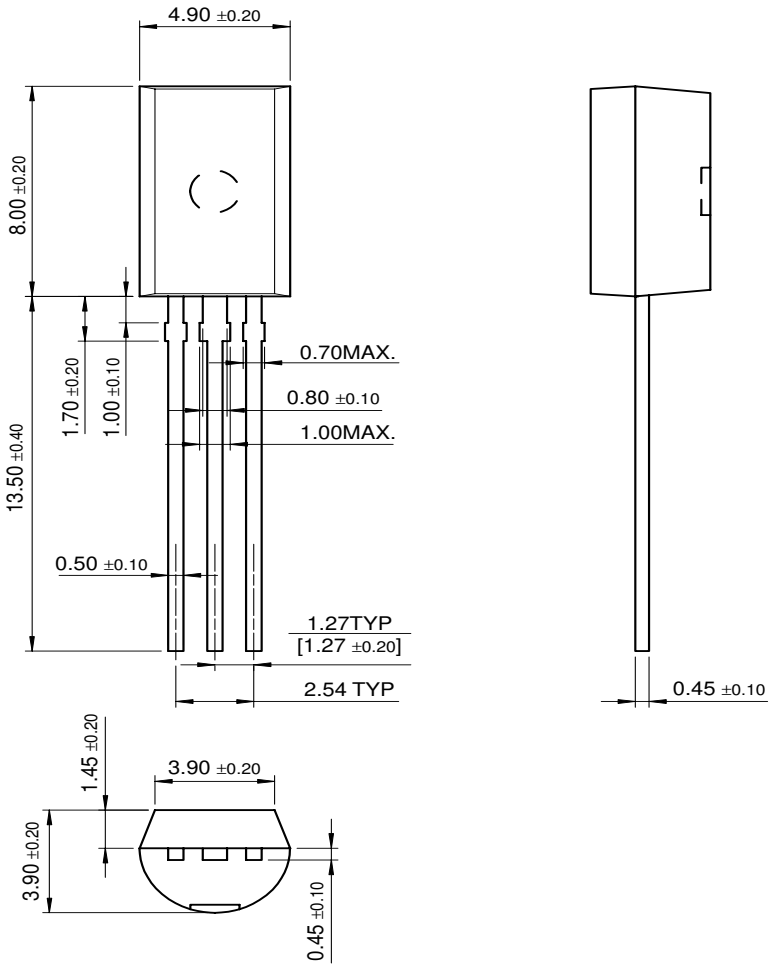


Figure 5. Safe Operating Area

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™
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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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PRODUCT STATUS DEFINITIONS

Definition of Terms

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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