

# KSB13005B KSC13005B

*NPN Silicon Power Transistor, VCBO= 850V, VCEO= 450V, IC= 3A*

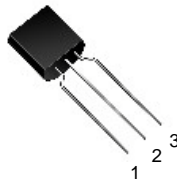
## General Description

- High voltage, High speed power switching
- Suitable for switching regulator, inverters, motor controls

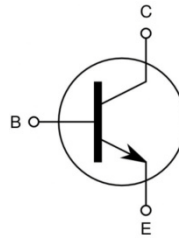
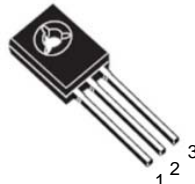
## Features

- VCBO = 850V
- VCEO = 450V
- VBEO = 9V
- IC = 3A

**TO-92**



**TO-126**



## Ordering Information

Ordering number	Package	Pin Assignment			Packing
		1	2	3	
KSB13005B	TO-92	B	C	E	Ammo
KSC13005B	TO-126	B	C	E	Bulk

NPN Silicon Power Transistor,  $V_{CBO}=850V$ ,  $V_{CEO}=450V$ ,  $I_C=3A$

### Absolute Maximum Ratings TC=25°C unless otherwise noted

CHARACTERISTICS	SYMBOL	RATING		UNIT
		TO-92	TO-126	
Collector-Base Voltage	$V_{CBO}$	850		V
Collector-Emitter Voltage	$V_{CEO}$	450		V
Emitter-Base Voltage	$V_{EBO}$	9		V
Collector Current(DC)	$I_C$	3		A
Collector Current(Pulse)	$I_{CP}$	6		A
Base Current	$I_B$	1.5		A
Collector Dissipation(Tc=25°C)	$P_C$	1.5	25	W
Junction Temperature	$T_J$	150		°C
Storage Temperature	$T_{STG}$	-55~150		°C

### Electrical Characteristics TC=25°C unless otherwise noted

CHARACTERISTICS	SYMBOL	Test Condition	Min	Typ.	Max	Unit
Collector-Base Breakdown Voltage	$V_{CBO}$	$I_C=500\mu A, I_E=0$	850			V
Collector-Emitter Breakdown Voltage	$V_{CEO}$	$I_C=5mA, I_B=0$	450			V
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=9V, I_C=0$			1	mA
*DC Current Gain	$h_{FE1}$ $h_{FE2}$	$V_{CE}=5V, I_C=0.5A$ $V_{CE}=5V, I_C=1A$	10 10		40	
*Collector-Emitter Saturation Voltage	$V_{CE}(sat)$	$I_C=1.0A, I_B=0.2A$			1	V
*Base-Emitter Saturation Voltage	$V_{BE}(sat)$	$I_C=1.0A, I_B=0.2A$			2	V
Output Capacitance	$C_{ob}$	$V_{CB}=10V, f=0.1MHz$		21		pF
Storage Time	$t_{stg}$	$I_C=500mA, I_B=10mA$ (U19600)	1		6	$\mu s$

\* Pulse Test: Pulse Widths $\leq 300\mu s$ , Duty Cycles $\leq 2\%$

# Typical Characteristics

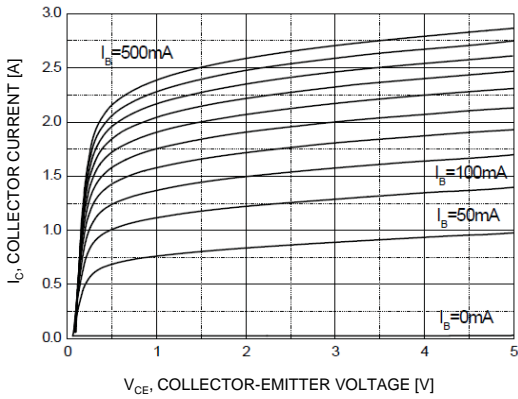


Figure 1. Static Characteristic

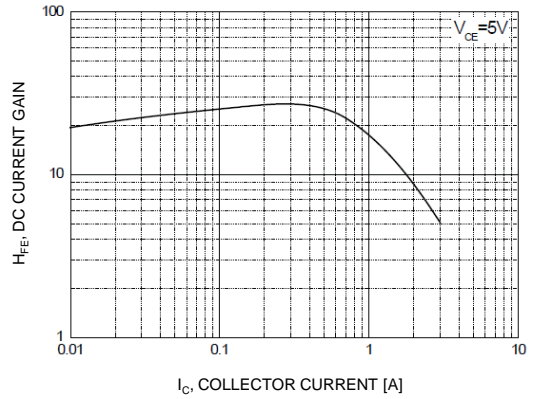


Figure 2. DC Current Gain

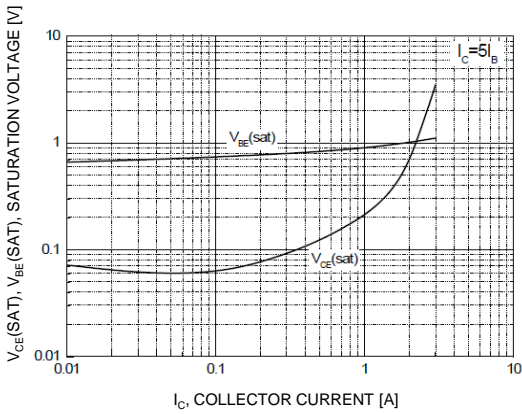


Figure 3. Collector-Emitter Saturation Voltage

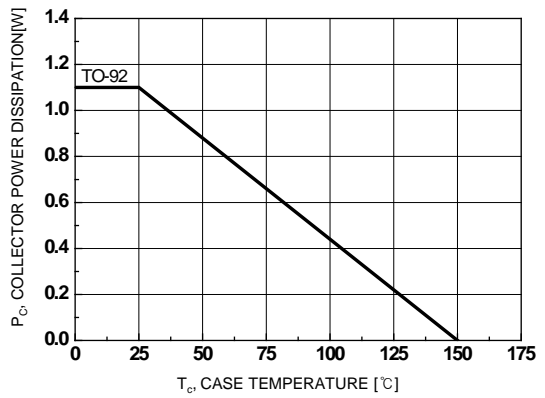


Figure 4. Power Derating

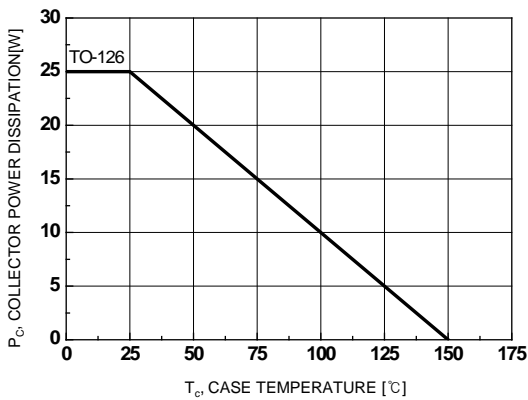
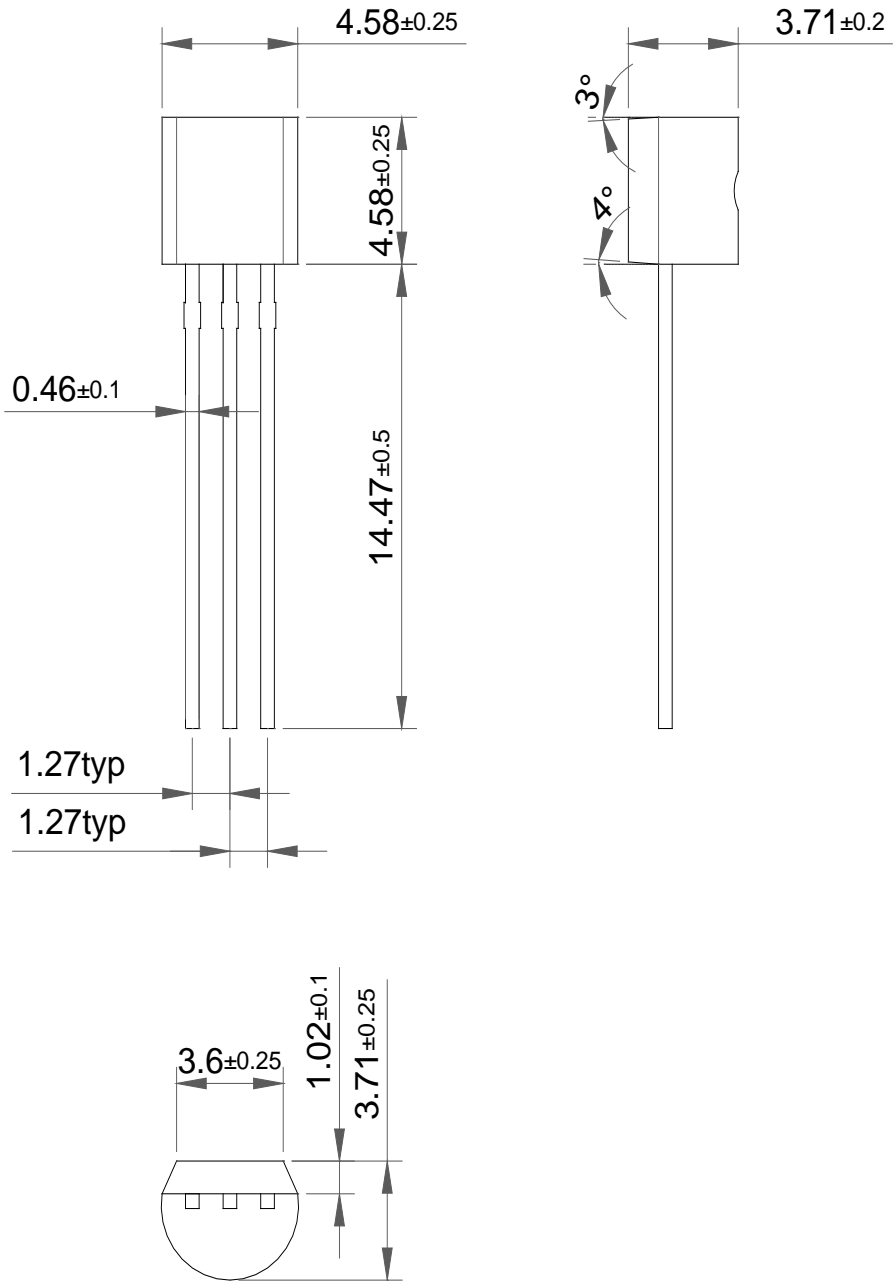


Figure 5. Power Derating

Package Dimension

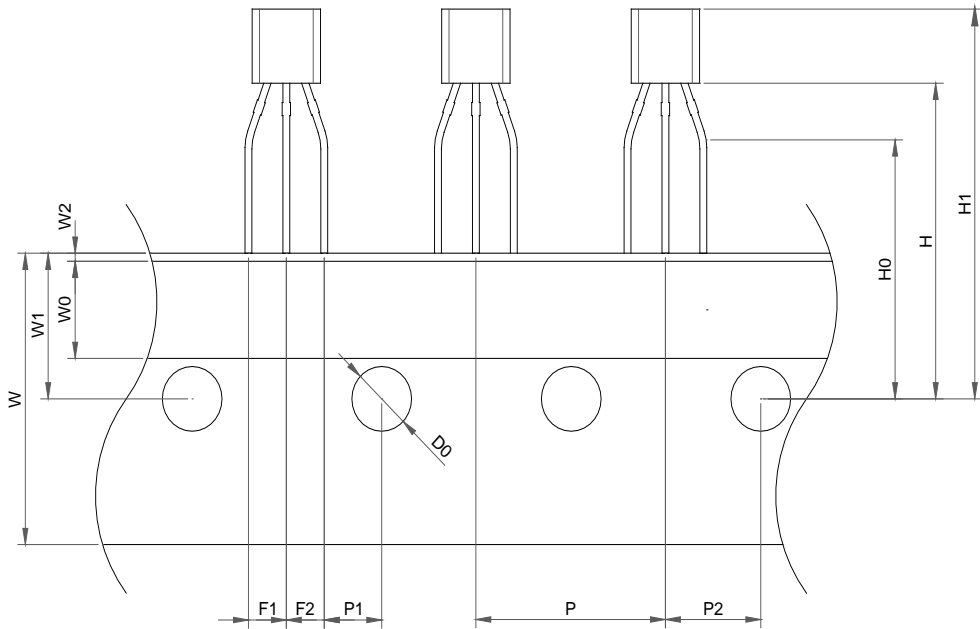
TO-92



Dimensions in Millimeters

**Package Dimension**

**TO-92 TAPING**



Item	Symbol	Dimension [mm]	
		Reference	Tolerance
Component pitch	P	12.7	±0.5
Side lead to center of feed hole	P1	3.85	±0.5
Center lead to center of feed hole	P2	6.35	±0.5
Lead pitch	F1,F2	2.5	+0.2/-0.1
Carrier Tape width	W	18.0	+1.0/-0.5
Adhesive tape width	W0	6.0	±0.5
Tape feed hole location	W1	9.0	±0.5
Adhesive tape position	W2	1.0 MAX	
Center of feed hole to bottom of component	H	19.5	±1
Center of feed hole to lead form	H0	16.0	±0.5
Component height	H1	27.0 max	
Tape feed hole diameter	D0	4.0	±0.2

Package Dimension

TO-126

UNIT : mm

