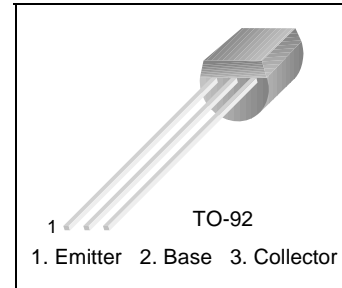


NPN Epitaxial Silicon Transistor

1W Output Amplifier of Potable Radios in Class B Push-pull Operation.

- High total power dissipation. ($P_T=625\text{mW}$)
- High Collector Current. ($I_C=500\text{mA}$)
- Complementary to L9012
- Excellent h_{FE} linearity.

L9013


Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

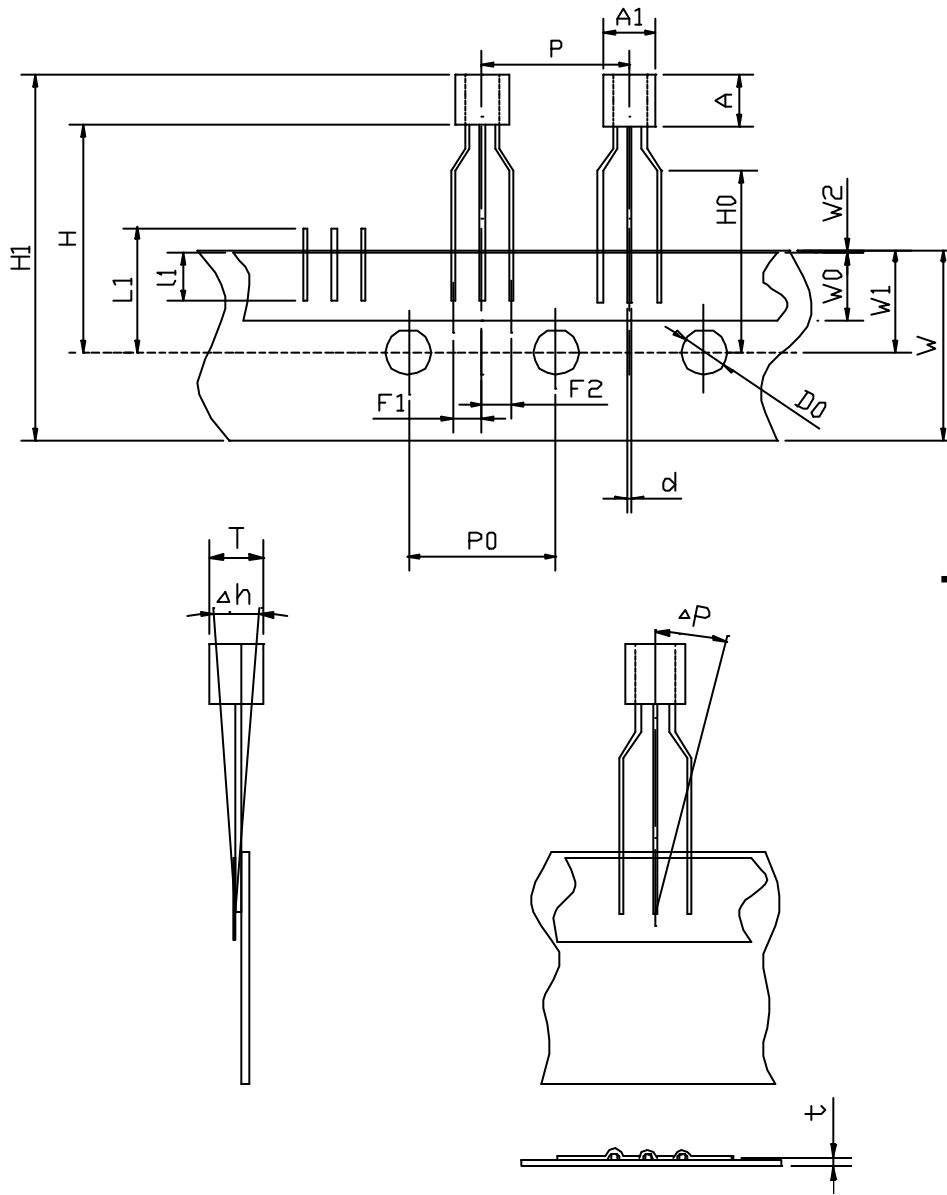
Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	625	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=100\mu\text{A}, I_E=0$	40			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}, I_B=0$	20			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=100\mu\text{A}, I_C=0$	5			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=25\text{V}, I_E=0$			100	nA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=3\text{V}, I_C=0$			100	nA
h_{FE1} h_{FE2}	DC Current Gain	$V_{CE}=1\text{V}, I_C=50\text{mA}$ $V_{CE}=1\text{V}, I_C=500\text{mA}$	64 30	120 120	300	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$		0.16	0.6	V
$V_{BE}(\text{sat})$	Base-Emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$		0.91	1.2	V
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE}=1\text{V}, I_C=10\text{mA}$	0.6	0.67	0.7	V

h_{FE} Classification

Classification	D	F	G	H	I
h_{FE1}	64 ~ 96	96 ~ 135	112 ~ 166	144 ~ 202	202 ~ 300



TO-92

SIZE LIST (mm)					
A1	4.5 ± 0.1	P_1	6.35 ± 0.4	H_0	16.0 ± 0.5
A	4.5 ± 0.1	F_1/F_2	$2.5(+0.6, -0.3)$	H_1	
T	3.9 ± 0.1	h	0 ± 2.0	D_0	4.0 ± 0.2
d	0.42 ± 0.01	W	$18.0(+1.0, -0.5)$	t	0.6 ± 0.2
l_1	2.5(min)	W_0	6.0 ± 0.3	L_1	32.25(max)
P	12.7 ± 1.0	W_1	$9.0(+0.75, -0.5)$	P	0 ± 1.0
P_0	12.7 ± 0.2	W_2	0.5(max)		