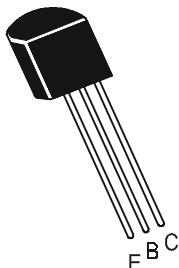


NPN EPITAXIAL PLANAR SILICON HIGH VOLTAGE TRANSISTOR

2N5550



TO-92
Plastic Package

High Voltage NPN Transistor For General Purpose and Telephony Applications.

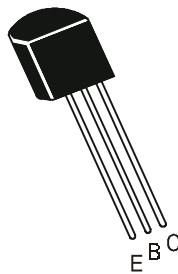
ABSOLUTE MAXIMUM RATINGS(Ta=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Emitter Voltage	V_{CEO}	140	V
Collector Base Voltage	V_{CBO}	160	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current Continuous	I_C	600	mA
Power Dissipation@ Ta=25°C	P_D	625	mW
Derate Above 25°C		5.0	mW/°C
Power Dissipation@ Tc=25°C	P_D	1.5	W
Derate Above 25°C		12	mW/°C
Operating And Storage Junction	T_j, T_{stg}	-55 to +150	°C
Temperature Range			

THERMAL RESISTANCE

Junction to ambient	$R_{th(j-a)}$ (1)	357	°C/W
Junction to case	$R_{th(j-c)}$	125	°C/W

(1) $R_{th(j-a)}$ is measured with the device soldered into a typical printed circuit board



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ELECTRICAL CHARACTERISTICS (Ta=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Base Voltage	V_{CEO}^*	$I_C=1\text{mA}, I_B=0$	140			V
Collector Base Voltage	V_{CBO}	$I_C=100\mu\text{A}, I_E=0$	160			V
Emitter Base Voltage	V_{EBO}	$I_E=10\mu\text{A}, I_C=0$	6			V
Collector Cut off Current	I_{CBO}	$V_{CB}=100\text{V}, I_E = 0$			100	nA
		$T_a=100^{\circ}\text{C}$ $V_{CB} = 100\text{V}, I_E=0$			100	μA
Emitter Cut off Current	I_{EBO}	$V_{BE}=4\text{V}, I_C = 0$			50	nA μA
DC Current Gain	h_{FE}^*	$V_{CE}=5\text{V}, I_C=1\text{mA}$ $V_{CE}=5\text{V}, I_C=10\text{mA}$ $V_{CE}=5\text{V}, I_C=50\text{mA}$	60 60 20		250	
Base Emitter Saturation Voltage	$V_{BE(\text{sat})}^*$	$I_C=10\text{mA}, I_B=1\text{mA}$ $I_C=50\text{mA}, I_B= 5\text{mA}$			1.0 1.2	V
Collector Emitter Saturation Voltage	$V_{CE(\text{sat})}^*$	$I_C=10\text{mA}, I_B=1\text{mA}$ $I_C=50\text{mA}, I_B=5\text{mA}$			0.15 0.25	V

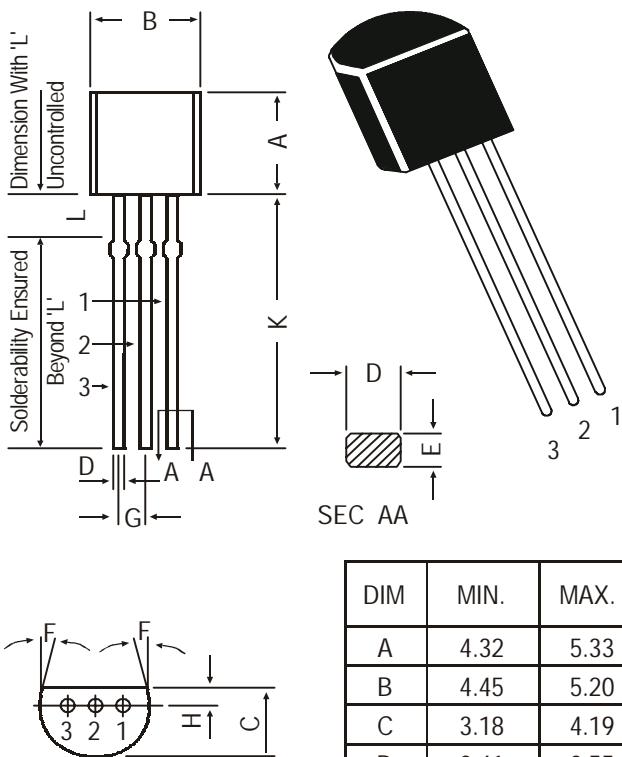
DYNAMIC CHARACTERISTICS

Small Signal Current Gain	$ h_{fe} $	$I_C=1\text{mA}, V_{CE}=10\text{V}$ $f=1\text{KHz}$	50	200	
Transition Frequency	f_T	$I_C=10\text{mA}, V_{CE}=10\text{V}$ $f=100\text{MHz}$	100	300	MHz
Output Capacitance	C_{obo}	$I_E=0, V_{CB}=10\text{V}$ $f=1\text{MHz}$		6.0	pF
Input Capacitance	C_{ibo}	$I_C=0, V_{EB}=0.5\text{V}$ $f=1\text{MHz}$		30	pF
Noise Figure	NF	$V_{CE}=5\text{V}, I_C=250\mu\text{A}$ $R=1\Omega, f=10\text{Hz}$ to 15.7kHz		10	dB

*Pulse Condition: Width = 300 μs , Duty Cycle= 2%.

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PIN CONFIGURATION
 1. COLLECTOR
 2. BASE
 3. Emitter

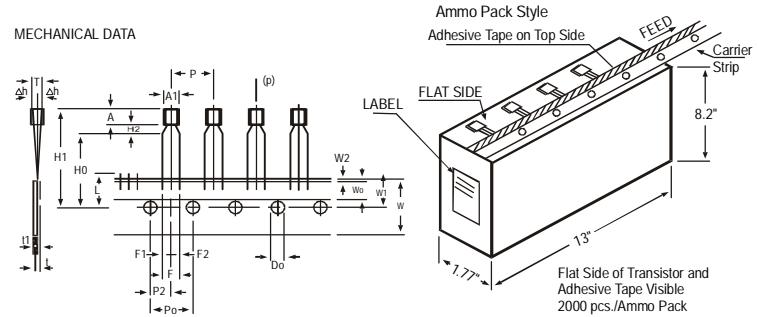
DIM	MIN.	MAX.
A	4.32	5.33
B	4.45	5.20
C	3.18	4.19
D	0.41	0.55
E	0.35	0.50
F	5 DEG	
G	1.14	1.40
H	1.14	1.53
K	12.70	—
L	1.982	2.082

All dimensions in mm.

NOTES

1. MAXIMUM ALIGNMENT DEVIATION BETWEEN LEADS NOT TO BE GREATER THAN 0.2 mm.
2. MAXIMUM NON-CUMULATIVE VARIATION BETWEEN TAPE FEED HOLES SHALL NOT EXCEED 1 mm IN 20 PITCHES.
3. HOLDDOWN TAPE NOT TO EXCEED BEYOND THE EDGE(S) OF CARRIER TAPE AND THERE SHALL BE NO EXPOSURE OF ADHESIVE.
4. NO MORE THAN 3 CONSECUTIVE MISSING COMPONENTS ARE PERMITTED.
5. A TAPE TRAILER, HAVING AT LEAST THREE FEED HOLES ARE REQUIRED AFTER THE LAST COMPONENT.
6. SPLICES SHALL NOT INTERFERE WITH THE SPROCKET FEED HOLES.

TO-92 Transistors on Tape and Ammo Pack



All dimensions in mm unless specified otherwise

ITEM	SYMBOL	SPECIFICATION				REMARKS
		MIN.	NOM.	MAX.	TOL.	
BODY WIDTH	A1	4.0		4.8		
BODY HEIGHT	A	4.8		5.2		
BODY THICKNESS	T	3.9		4.2		
PITCH OF COMPONENT	P		12.7		± 1	
FEED HOLE PITCH	Po		12.7		± 0.3	
FEED HOLE CENTRE TO						
COMPONENT CENTRE	P2		6.35		± 0.4	
DISTANCE BETWEEN OUTER						
LEADS	F		5.08		± 0.6	
COMPONENT ALIGNMENT	Δh	0		1	-0.2	
TAPE WIDTH	W	18				
HOLD-DOWN TAPE WIDTH	Wo	6			± 0.5	
HOLE POSITION	W1	9			± 0.2	
HOLD-DOWN TAPE POSITION	W2		0.5		± 0.7	
LEAD WIRE CLINCH HEIGHT	Ho	16		23.25	± 0.5	
COMPONENT HEIGHT	H1			11.0		
LENGTH OF SNIPPED LEADS	L		4		± 0.2	
FEED HOLE DIAMETER	Do			1.2	± 0.4	
TOTAL TAPE THICKNESS	t		2.54		-0.1	
LEAD - TO - LEAD DISTANCE F1,	F2			3		
CLINCH HEIGHT	H2					
PULL - OUT FORCE	(P)		6N			

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-92 Bulk	1K/polybag	200 gm/1K pcs	3" x 7.5" x 7.5"	5K	17" x 15" x 13.5"	80K	23 kgs
TO-92 T&A	2K/ammo box	645 gm/2K pcs	12.5" x 8" x 1.8"	2K	17" x 15" x 13.5"	32K	12.5 kgs

Disclaimer

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