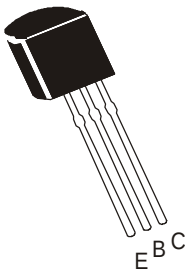
NPN SILICON PLANAR EPITAXIAL TRANSISTOR

2N5770



TO-92
Plastic Package

VHF/UHF Amplifier Mixer and Oscillator Applications

ABSOLUTE MAXIMUM RATINGS (T_a=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Emitter Voltage	V_{CEO}	15	V
Collector Base Voltage	V_{CBO}	30	V
Emitter Base Voltage	V_{EBO}	4.5	V
Collector Current Continuous	I_C	50	mA
Power Dissipation@ T_a=25ºC Derate Above 25ºC	P_D	350 2.8	mW mW/ ºC
Power Dissipation@ T_c=25ºC Derate Above 25ºC	P_D	850 6.8	mW mW/ ºC
Operating And Storage Junction Temperature Range	T_j, T_{stg}	- 55 to +150	ºC

ELECTRICAL CHARACTERISTICS (T_a=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Emitter Voltage	V_{CEO}	I_C=3mA, I_B=0	15		V
Collector Base Voltage	V_{CBO}	I_C=10µA, I_E=0	30		V
Emitter Base Voltage	V_{EBO}	I_E=10µA, I_C=0	4.5		V
Collector Cut Off Current	I_{CBO}	V_{CB}=15V, I_E = 0		10	nA
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=10mA, I_B=1mA		0.4	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=10mA, I_B=1mA		1.0	V
DC Current Gain	h_{FE}	I_C=3mA, V_{CE}=1V I_C=8mA, V_{CE}=10V	20 50	 200	

DYNAMIC CHARACTERISTICS

Output Capacitance	C_{ob}	I_E=0, V_{CB}=10V, f=140KHz	0.7	1.1	pF
Noise Figure	NF	V_{CE} =6V, I_C=1mA,R_s=400Ω, f=60MHz		6.0	dB
Transition Frequency	f_T	I_C=8mA, V_{CE}=10V,f=100MHz	700	1800	MHz

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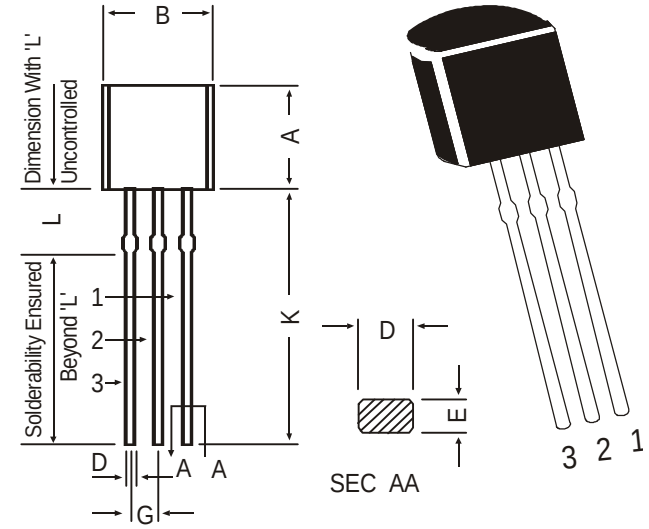
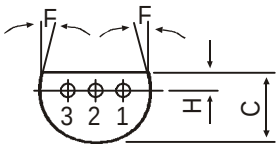


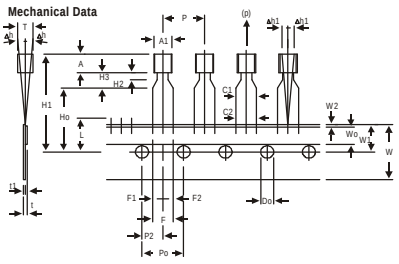


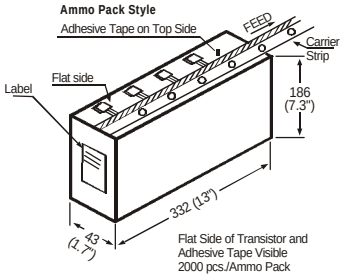
PIN CONFIGURATION
1. COLLECTOR
2. BASE
3. EMITTER

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 diminsions in mm.

TO-92 Transistors on Tape and Ammo Pack





All dimensions in mm

ITEM	SYMBOL	SPECIFICATION MIN.	NOM.	MAX.	TOL .	REMARKS
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		± 1.0	
FEED HOLE PITCH	Po		12.7		± 0.3	CUMULATIVE PITCH ERROR 1.0 mm/20 PITCH
FEED HOLE CENTRE TO COMPONENT CENTRE	P2		6.35		± 0.4	TO BE MEASURED AT BOTTOM OF CLINCH
DISTANCE BETWEEN OUTER LEADS	F		5.08		+ 0.6 - 0.2	
COMPONENT ALIGNMENT SIDE VIEW	Δh		0	1.0		AT TOP OF BODY
COMPONENT ALIGNMENT FRONT VIEW	Δh1		0	1.3		AT TOP OF BODY
TAPE WIDTH	W		18		± 0.5	
HOLD-DOWN TAPE WIDTH	Wo		6		± 0.2	
HOLE POSITION	W1		9		+ 0.7 - 0.5	
HOLD-DOWN TAPE POSITION	W2		0.5		± 0.2	
LEAD WIRE CLINCH HEIGHT	Ho		16		± 0.5	
COMPONENT HEIGHT	H1			23.25		
LENGTH OF SNIPPED LEADS	L			11.0		
FEED HOLE DIAMETER	Do		4		± 0.2	
TOTAL TAPE THICKNESS	t			1.2		t1 0.3-0.6
LEAD - TO - LEAD DISTANCE	F1, F2		2.54		+ 0.4 - 0.1	
STAND OFF	H2	0.45		1.45		
CLINCH HEIGHT	H3			3.0		
LEAD PARALLELISM	| C1 - C2 |			0.22		
PULL - OUT FORCE	(P)	6N				

NOTES
1. Maximum alignment deviation between leads will not to be greater than 0.2mm.
2. Maximum non-cumulative variation between tape feed holes shall not exceed 1 mm in 20 pitches.
3. Holddown tape will not exceed beyond the edge(s) of carrier tape and there shall be no exposure of adhesive.
4. There will be no more than three (3) consecutive missing components in a tape.
5. A tape trailer, having at least three feed holes are provided after the last component in a tape.
6. Splices should not interfere with the sprocket feed holes.

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

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Disclaimer

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