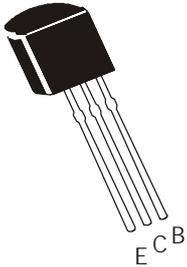


NPN SILICON PLANAR EPITAXIAL TRANSISTOR

CSC2786



**TO-92
Plastic Package**

For use in FM RF Amplifier

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Emitter Voltage	V _{CEO}	20	V
Collector Base Voltage	V _{CBO}	30	V
Emitter Base Voltage	V _{EBO}	4	V
Base Current	I _B	20	mA
Collector Current	I _C	20	mA
Power Dissipation @ T _a =25°C	P _C	250	mW
Junction Temperature	T _j	+150	°C
Storage Temperature Range	T _{stg}	- 55 to + 150	°C

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

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Cut Off Current	I _{CBO}	V _{CB} =30V, I _E = 0			100	nA
Emitter Cutoff Current	I _{EBO}	V _{EB} =4V, I _C = 0			100	nA
Collector Emitter Saturation Voltage	V _{CE(sat)}	I _C = 10mA, I _B = 1.0mA			0.30	V
Base Emitter On Voltage	V _{BE(on)}	V _{CE} = 6.0V, I _C = 1.0mA		0.72		V
DC Current Gain	*h _{FE}	V _{CE} = 6.0V, I _C = 1.0 mA	40		180	
Transition Frequency	f _T	V _{CE} = 6.0V, I _C = - 1.0mA	400			MHz
Power Gain	G _{pe}	V _{CE} = 6.0V, I _E = - 1.0mA, R _G =50kΩ f = 100MHz	18			dB
Collector to Base Time Constant	C _c r _{b'b}	V _{CE} = 6.0V, I _E = - 1.0mA, f=31.9MHz			15	ps
Output Capacitance	C _{ob}	V _{CB} = 6V, I _E =0, f =1MHz			1.30	pF
Noise Figure	NF	V _{CE} = 6.0V, I _E = - 1.0mA, R _G =50kΩ f = 100MHz			5.00	dB

*h_{FE} Classifications

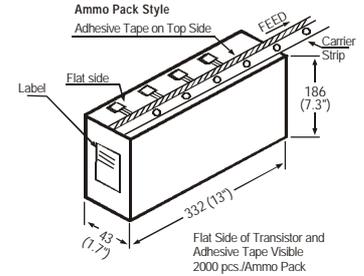
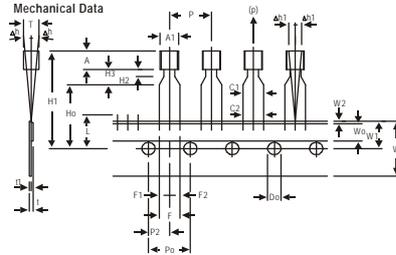
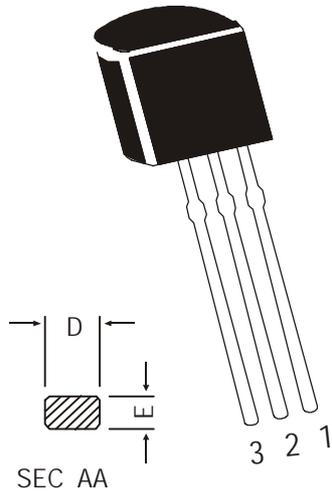
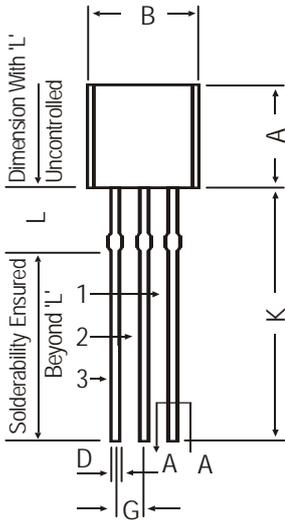
MF : 40 - 80

LF : 60 - 120

KF : 90 - 180

TO-92 Plastic Package

TO-92 Transistors on Tape and Ammo Pack



All dimensions in mm

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		± 1.0	
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	W0	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

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

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.

PIN CONFIGURATION

- BASE
- COLLECTOR
- EMITTER

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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