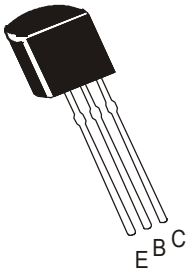
NPN SILICON PLANAR EPITAXIAL RF TRANSISTORS

BF240
BF241



TO-92
Plastic Package

A.M.Mixer, IF Amplifiers in AM/ FM Receiver Applications

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

DESCRIPTION	SYMBOL	Value	UNITS
Collector Emitter Voltage	V_{CEO}	40	V
Collector Base Voltage	V_{CBO}	40	V
Emitter Base Voltage	V_{EBO}	4	V
Collector Current Continuous	I_C	25	mA
Power Dissipation@ Ta=25ºC	P_D	350	mW
Dereate Above 25 deg C		2.8	mW/ ºC
Power Dissipation@ Tc=25ºC	P_D	1	W
Dereate Above 25ºC		8.0	mW/ ºC
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-55 to +150	ºC

ELECTRICAL CHARACTERISTICS (Ta=25ºC Unless Otherwise Specified)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Voltage	BV_{CEO} *	I_C=1mA,I_B=0	40			V
Collector Base Voltage	BV_{CBO}	I_C=100uA.I_E=0	40			V
EmitterBase Voltage	BV_{EBO}	I_E=10uA, I_C=0	4			V
Collector-Cut off Current	I_{CBO}	V_{CB}=20V,I_E=0			0.1	uA
Base Emitter On Voltage	V_{BE}(on)	I_C=1mA,V_{CE}=10V	0.65	0.7	0.74	V
DC Current Gain						
BF240	h_{FE}	I_C=1mA,V_{CE}=10V	65		220	
BF241			35		125	
Transition Frequency						
BF240	f_T	I_C=1mA, V_{CE}=10V		600		MHz
		f=100MHz				
BF241				470		MHz
Feedback Capacitance	C_{re}	V_{CB}=10V, I_E=0 ,		0.28	0.34	pF
		f=1MHz				

***Pulse Test: Pulse Width ≤ 300us, Duty Cycle ≤ 2%.**

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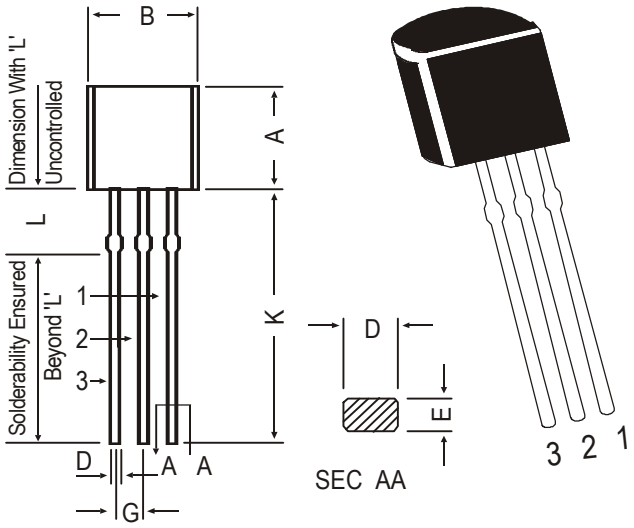
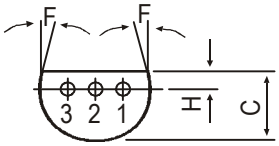


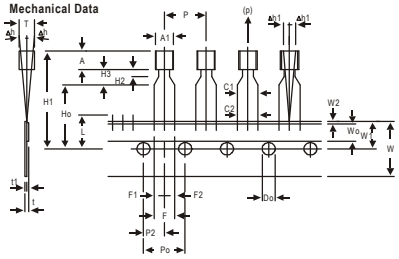


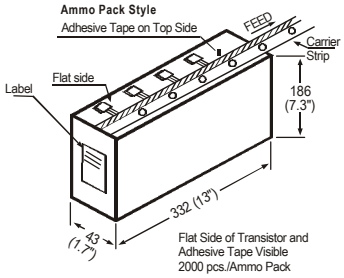
PIN CONFIGURATION
1. COLLECTOR
2. BASE
3. EMITTER

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 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

Disclaimer

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