

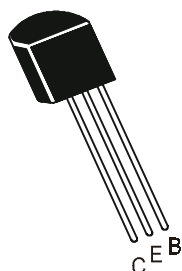
NPN SILICON PLANAR EPITAXIAL RF TRANSISTORS

BF494

BF495

TO-92

Plastic Package



High Voltage Video Transistors

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

DESCRIPTION	SYMBOL	Value	UNITS
Collector Emitter Voltage	V_{CEO}	20	V
Collector Base Voltage	V_{CBO}	30	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	30	mA
Collector Current(peak value)	I_{CM}	30	mA
Total Power dissipation up to Tamb = 25°C	P_{tot}	300	mW
Operating And Storage Junction Temperature Range	T_j, T_{stg}	-55 to +150	mW/°C °C

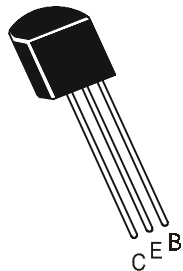
THERMAL RESISTANCE

Junction to ambient	$R_{th(j-a)}$	420	K/W
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ELECTRICAL CHARACTERISTICS (Ta=25°C Unless Otherwise Specified)

DESCRIPTION	SYMBOL	TEST CONDITION	Min	Max	UNITS
Collector Cut- off Current	I_{CBO}	$V_{CB}=20V, I_E=0$		500	nA
Collector Cut - off Current	I_{CBO}	$V_{CB}=20V, I_E=0$ Ta =150 °C		4.0	μA
EmitterCut off Current	I_{EBO}	$V_{EB}=4V, I_C=0$		500	nA
Base Emitter Voltage	$V_{BE(ON)}$	$V_{CE}=10V, I_C=1mA$	0.65	0.74	V
DC Current Gain	$h_{FE} *$	$I_C=1mA, V_{CE}=10V$			
	BF494		67	221	
	BF494A		200	500	
	BF494B		110	215	
	BF 495		35	125	
	BF 495C		65	135	
	BF 495D		40	85	

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ELECTRICAL CHARACTERISTICS (Ta=25°C Unless Specified Otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	Min	Max	UNITS
DYNAMIC CHARACTERISTICS					
Transition Frequency	f_T	$I_C=1\text{mA}$, $V_{CE}=10\text{V}$	120		MHz
Feedback Capacitance	C_{re}	$V_{CE}=10\text{V}$, $I_C=1\text{mA}$ $f=4.5\text{MHz}$		1.0	pF

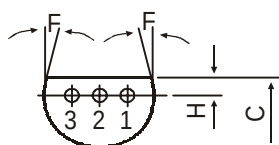
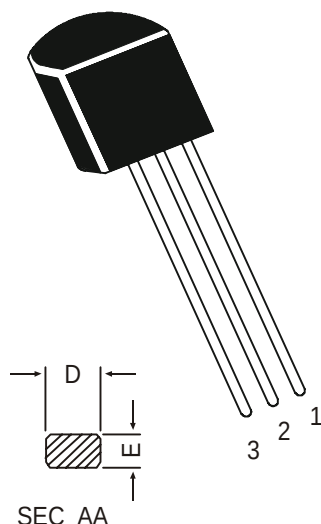
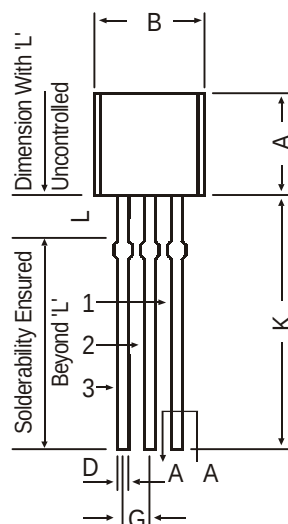
*** V_{BE} decreases by about 1.7mV/K with increasing temperature.**

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TO-92 Transistors on Tape and Ammo Pack

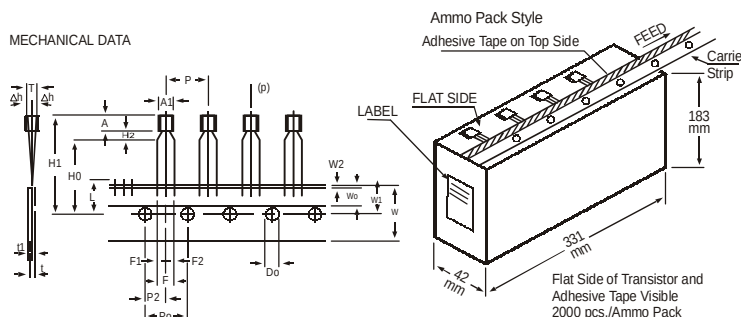


PIN CONFIGURATION

1. BASE
2. EMITTER
3. COLLECTOR

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.



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	P0		12.7		±0.3	
FEED HOLE CENTRE TO COMPONENT CENTRE	P2		6.35		±0.4	
DISTANCE BETWEEN OUTER LEADS	F		5.08		+0.6 -0.2	
COMPONENT ALIGNMENT	Δh		0	1		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	H0		16		±0.5	
COMPONENT HEIGHT	H1			23.25		
LENGTH OF SNIPPED LEADS	L			11.0		
FEED HOLE DIAMETER	D0		4		±0.2	
TOTAL TAPE THICKNESS	t			1.2		±1 0.3 - 0.6
LEAD - TO - LEAD DISTANCE F1	F2		2.54		+0.4 -0.1	
CLINCH HEIGHT	H2			3		
PULL - OUT FORCE	(P)	6N				

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.

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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