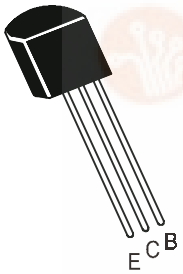
Continental Device India Limited
An IS/ISO 9002 and IECQ Certified Manufacturer

IS/ISO 9002
Lic# QSC/L- 000019.2

NPN EPITAXIAL SILICON PLANAR TRANSISTOR

CSC 1740



TO-92
Plastic Package

General Small Signal Amplifier

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

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Emitter Voltage	BV_{CEO}	50(ORS) 40(E)	V
Collector Base Voltage	BV_{CBO}	60(ORS) 50(E)	V
Emitter Base Voltage	BV_{EBO}	5	V
Collector Current (DC)	I_C	150	mA
Collector Power Dissipation	P_C	300	mW
Operating And Storage Junction Temperature Range	T_j, T_{stg}	-55 to +150	ºC

ELECTRICAL CHARACTERISTICS (Ta=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Emitter Voltage	V_{CEO}	I_C=1mA,I_B=0	50(ORS) 40(E)			V V
Collector Base Voltage	V_{CBO}	I_C=50µA,I_E=0	60(ORS) 50(E)			V V
Emitter Base Voltage	V_{EBO}	I_E=50µA, I_C=0	5			
Collector Cut off Current	I_{CBO}	V_{CB}=30V, I_E = 0			0.5	µA
Emitter Cut off Current	I_{EBO}	V_{BE}=4V, I_C = 0			0.5	µA
DC Current Gain	h_{FE}	V_{CE}=6V,I_C=0.1mA	120		820	µA
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=50mA,I_B=5.0mA			0.4	V

DYNAMIC CHARACTERISTICS

Transition Frequency	f_T	I_C=2.0mA, V_{CE}=12V f=100MHz		180		MHz
Collector Output Capacitance	C_{ob}	I_E=0, V_{CB}=12V f=1MHz			3.5	pF

*** hFE CLASSIFICATION : O : 120-270 R : 180-390 S: 270-560 E:390-820**

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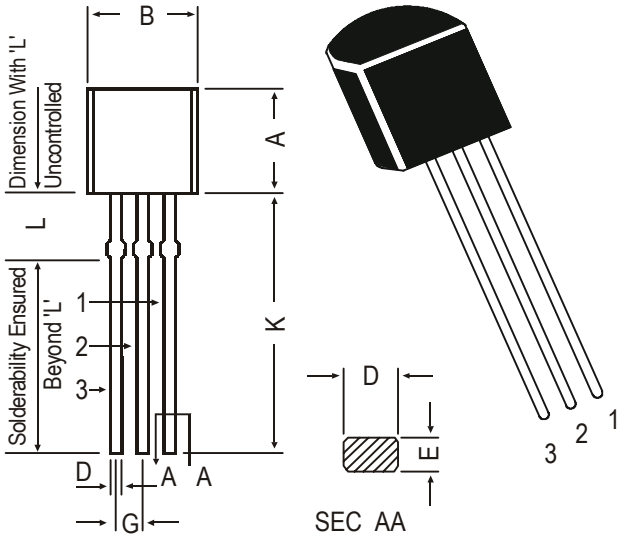
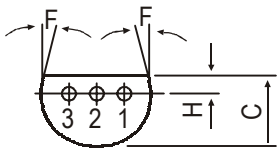


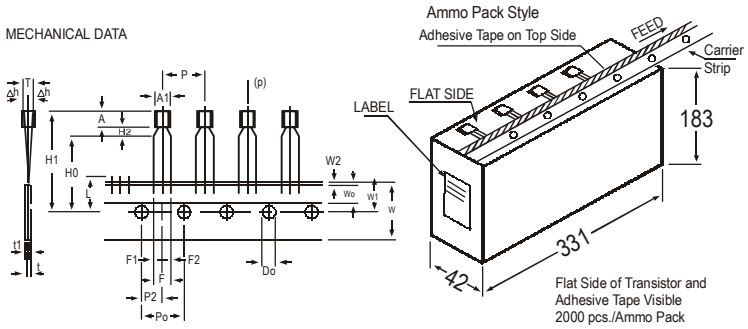


PIN CONFIGURATION
1. BASE
2. COLLECTOR
3. EMITTER

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 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	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	△h		0	1		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 DISTANCEF1,	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

Notes

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Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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