

# Continental Device India Limited

An ISO/TS16949 and ISO 9001 Certified Company



# PNP SILICON PLANAR EPITAXIAL TRANSISTORS



BC212, A, B BC213, A, B, C BC214, B, C

TO-92 Plastic Package

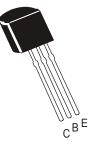
## Silicon Small Signal General Purpose Amplifier

### ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	BC212	BC213	BC214	UNITS
Collector Emitter Voltage	V <sub>CEO</sub>	50	30	30	V
Collector Base Voltage	V <sub>CBO</sub>	60	45	45	V
Emitter Base Voltage	V <sub>EBO</sub>		5		V
Collector Current Continuous	Ι <sub>C</sub>		100		mA
Power Dissipation @ T <sub>a</sub> =25°C	P <sub>D</sub>		350		mW
Derate Above 25°C			2.8		mW/ ºC
Power Dissipation @ T <sub>c</sub> =25ºC	P <sub>D</sub>		1		W
Derate Above 25ºC			8		mW/ °C
Operating And Storage Junction Temperature Range	T <sub>j</sub> , T <sub>stg</sub>		-55 to +150		°C

### THERMAL RESISTANCE

Junction to Ambient in free air	R <sub>th (j-a)</sub>	357	°C/W
Junction to case	R <sub>th (j-c)</sub>	125	°C/W



BC212, A, B BC213, A, B, C BC214, B, C

TO-92 Plastic Package

## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	ТҮР	MAX	UNITS
Collector Emitter Voltage	V <sub>CEO</sub>	I <sub>C</sub> =2mA,I <sub>B</sub> =0				
BC212			50			V
BC213, BC214			30			V
Collector Base Voltage	V <sub>CBO</sub>	I <sub>C</sub> =10uA.I <sub>E</sub> =0				
BC212			60			V
BC213, BC214			45			V
Emitter Base Voltage	V <sub>EBO</sub>	I <sub>E</sub> =10uA, I <sub>C</sub> =0	5			V
Collector Cut off Current	I <sub>CBO</sub>	V <sub>CB</sub> =30V,I <sub>E</sub> =0			15	nA
Emitter Cut off Current	I <sub>EBO</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0			15	nA
DC Current Gain						
BC212, BC213	h <sub>FE</sub>	I <sub>C</sub> =10uA,V <sub>CE</sub> =5V	40			
BC214			100			
BC212	h <sub>FE</sub>	I <sub>C</sub> =2mA,V <sub>CE</sub> =5V	60			
BC213			80			
BC214			140		600	
				100		
BC212, BC214	h <sub>FE</sub>	I <sub>C</sub> =100mA,V <sub>CE</sub> =5V*		120		
BC213				140		
Collector Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =10mA,I <sub>B</sub> =0.5mA		0.10		V
		I <sub>C</sub> =100mA,I <sub>B</sub> =5mA*		0.25	0.6	V
Base Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =100mA,I <sub>B</sub> =5mA*		1.00	1.4	V
Base Emitter On Voltage	$V_{BE(on)}$	I <sub>C</sub> =2mA,V <sub>CE</sub> =5V	0.6	0.62	0.72	V

\*Pulse Condition: Pulse Width =  $300\mu$ s, Duty Cycle = 2%.

## PNP SILICON PLANAR EPITAXIAL TRANSISTORS



BC212, A, B BC213, A, B, C BC214, B, C

TO-92 Plastic Package

### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless specified otherwise)

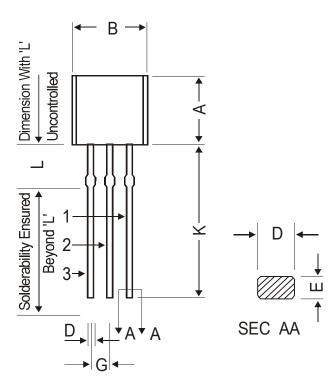
#### DYNAMICS CHARACTERISTICS

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	ТҮР	MAX	UNITS
Transition Frequency						
BC212	f <sub>T</sub>	I <sub>C</sub> =10mA, V <sub>CE</sub> =5V		280		MHz
BC213		f=50MHz		360		MHz
BC214				320		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0			6	pF
Noise Figure						
BC212, BC213	NF	I <sub>C</sub> =200uA, V <sub>CE</sub> =5V			10	dB
		$R_s=2K\Omega f=1KHz$				
		f=200Hz				
BC214	NF	I <sub>C</sub> =200uA, V <sub>CE</sub> =5V			2	dB
		R <sub>s</sub> =2KΩ f=30Hz				
		to 15KHz				
Small Signal Current Gain						
BC212	h <sub>fe</sub>	I <sub>C</sub> =2mA, V <sub>CE</sub> =5V	60			
BC213		f=1KH <sub>z</sub>	80			
BC214			140			
BC212A, BC213A	h <sub>fe</sub>	I <sub>C</sub> =2mA, V <sub>CE</sub> =5V	100		300	
BC212B, BC213B, BC214B		f=1KH <sub>z</sub>	200		400	
BC213C, BC214C			350		600	

\*Pulse Condition: Pulse Width =  $300\mu s$ , Duty Cycle = 2%.

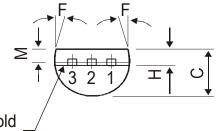
## BC212, A, B BC213, A, B, C BC214, B, C

## **TO-92 Plastic Package**

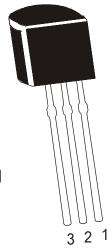


DIM	MIN.	MAX.			
А	4.32	5.33			
В	4.45	5.20			
С	3.18	4.19			
D	0.41	0.55			
E	0.35	0.50			
F	5 DEG				
G	1.14	1.40			
Н	1.20	1.40			
K	12.70				
L	1.982	2.082			
М	1.03	1.20			

All dimensions are in mm







**PIN CONFIGURATION** 

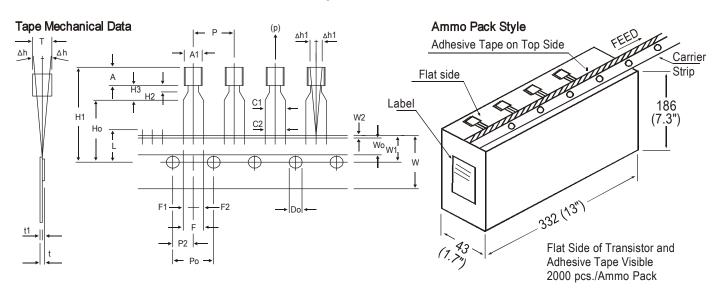
- 1. EMITTER
- 2. BASE
- 3. COLLECTOR

The TO-92 Package , Tape and Ammo Pack drawings are correct as on the date of issue/revision of this Data Sheet. The currently valid dimensions and information, may please be confirmed from the TO-92 Drawing in the Packages and Packing Section of the Product Catalogue.

### **Packing Details**

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"	<b>2K</b>	17" x 15" x 13.5"	32K	12.5 kgs

## **TO-92 Tape and Ammo Pack**



#### All dimensions are in mm

Image: ConstructionMin.NOM.MAX.TOL.BODY WIDTHA14.04.8NOTESBODY HEIGHTA4.85.21BODY THICKNESST3.94.21.0PITCH OF COMPONENTP12.7±1.02.03*1FEED HOLE PITCHPo12.7±0.32.0*2 FEED HOLE CENTRE TO COMPONENT CENTREP26.35±0.43. Holddown tape will not exceed beyond the edge(s) of carrier tape and there shall be no exposure of adhesive.*3 COMPONENT ALIGNMENT SIDE VIEW *4 COMPONENT ALIGNMENT FRONT VIEW HOLD-DOWN TAPE WIDTH $\Delta h$ 01.0HOLD-DOWN TAPE WIDTH HOLD-DOWN TAPE POSITIONW20.5±0.2 +0.55. A tape trailer, having at least three feed holes are provided after the last component in a tape.HOLD-DOWN TAPE POSITIONW20.5±0.2 +0.55. A tape trailer, having at least three feed holes are provided after the last component in a tape.HOLD-DOWN TAPE POSITIONW20.5±0.2 +0.55. A tape trailer, having at least three feed holes are provided after the last component in a tape.HOLD-DOWN TAPE POSITIONW20.5±0.2 +0.55. Splices should not interfere with the sprocket feed holes.LEAD WIRE CLINCH HEIGHT LEAD TO - LEAD DISTANCEL11.012.7 +0.414.5STAND OFF CLINCH HEIGHTH20.451.45 +0.4*1 Cumulative pitch error 1.0 mm/20 pitch *3 At top of body*1 CLINCH HEIGHT LEAD PARALLELISMH20.451.45 +0.2 </th <th></th> <th></th> <th colspan="2">SPECIFICATION</th> <th>ON</th> <th></th>			SPECIFICATION		ON		
BODY HEIGHTA4.85.21. Maximum alignment deviation between leads will not to be greater than 0.2mm.PITCH OF COMPONENTP12.7± 1.02. Maximum non-cumulative variation between tape feed holes shall not exceed 1 mm in 20 pitches.*1 FEED HOLE PITCHPo12.7± 0.32. Maximum non-cumulative variation between tape feed holes shall not exceed 1 mm in 20 pitches.*2 FEED HOLE CENTRE TO COMPONENT CENTREP26.35± 0.43. Holddown tape will not exceed beyond the edge(s) of carrier tape and there shall be no exposure of adhesive.*3 COMPONENT ALIGNMENT SIDE VIEW *4 COMPONENT ALIGNMENT FRONT VIEW HOLD-DOWN TAPE WIDTH $\triangle h$ 01.0*0.11.8± 0.5± 0.25. A tape trailer, having at least three (3) consecutive missing components in a tape.HOLD-DOWN TAPE WIDTH HOLE POSITIONW20.5± 0.25. A tape trailer, having at least three feed holes are provided after the last component in a tape.HOLD-DOWN TAPE POSITION LEAD VIRE CLINCH HEIGHT LEAD - TO - LEAD DISTANCEL11.0± 0.2*5 TOTAL TAPE THICKNESS LEAD - TO - LEAD DISTANCEF1, F22.54+ 0.4 - 0.1*1 Cumulative pitch error 1.0 mm/20 pitch *3 to po foody*5 TAND OFF CLINCH HEIGHT LEAD PARALLELISM[C1 - C2]0.451.45*1 Cumulative pitch error 1.0 mm/20 pitch *3 At top of body	ITEM	SYMBOL	MIN.	NOM.	MAX.	TOL .	
BODY THICKNESST3.94.2BODY THICKNESST3.94.2PITCH OF COMPONENTP12.7 $\pm 1.0$ *1 FEED HOLE PITCHPo12.7 $\pm 0.3$ *2 FEED HOLE CENTRE TO COMPONENT CENTREP26.35 $\pm 0.4$ DISTANCE BETWEEN OUTER LEADSF5.08 $-0.2$ *3 COMPONENT ALIGNMENT SIDE VIEW HOLD-DOWN TALIGNMENT FRONT VIEW HOLD POSITION $\Delta h$ 01.0*4 COMPONENT ALIGNMENT FRONT VIEW HOLD-DOWN TAPE WIDTH $\Delta h$ 01.0HOLD-DOWN TAPE WIDTH HOLE POSITIONW20.5 $\pm 0.2$ *5 TOTAL TAPE THICKNESS EED HOLE DIAMETERL11.0FEED HOLE DIAMETER LEAD TO - LEAD DISTANCEF1, F22.54*5 TOTAL TAPE THICKNESS LEAD - TO - LEAD DISTANCEF1, F2*5 TAND OFF CLINCH HEIGHTH20.45LEAD PARALLELISM[C1 - C2]0.22	BODY WIDTH	A1	4.0		4.8		NOTES
BODY THICKNESST3.94.2leads will not to be greater than 0.2mm.PITCH OF COMPONENTP12.7± 1.02. Maximum non-cumulative variation between tape feed holes shall not exceed 1 mm in 20 pitches.**2 FEED HOLE CENTRE TO COMPONENT CENTREP26.35± 0.43. Holddown tape will not exceed beyond the edge(s) of carrier tape and there shall be no exposure of adhesive.**3 COMPONENT ALIGNMENT SIDE VIEW LEADS $\Delta h$ 01.01.34.2**3 COMPONENT ALIGNMENT FRONT VIEW HOLD-DOWN TAPE WIDTH $\Delta h$ 01.01.34.0**4 COMPONENT ALIGNMENT FRONT VIEW HOLD-DOWN TAPE WIDTH $\Delta h$ 01.04.4. There will be no more than three (3) consecutive missing components in a tape.HOLD-DOWN TAPE POSITION LEAD WIRE CLINCH HEIGHTW20.5± 0.25. A tape trailer, having at least three feed holes are provided after the last component in a tape.HOLD-DOWN TAPE POSITION LEAD VIRE CLINCH HEIGHTU11.0± 0.25. On the sproket feed holes.**5 TOTAL TAPE THICKNESS LEAD - TO - LEAD DISTANCEL11.0± 0.2*1 Cumulative pitch error 1.0 mm/20 pitch **3 to po foody**5 TAND OFF CLINCH HEIGHTH20.451.45*0*1 Cumulative pitch error 1.0 mm/20 pitch**3 TAND OFF CLINCH HEIGHTH30.451.45*1 Cumulative pitch error 1.0 mm/20 pitch**4 At top of bodyLEAD PARALLELISM[C1 - C2]0.22*4 At top of body	BODY HEIGHT	А	4.8		5.2		1. Maximum alignment deviation between
*1 FEED HOLE PITCH Po 12.7 ± 0.3 ± 0.3 between tape feed holes shall not exceed holes.   *2 FEED HOLE CENTRE TO COMPONENT CENTRE P2 6.35 ± 0.4 3. Holdown tape feed holes shall not exceed beyond the edge(s) of carrier tape and there shall be no exposure of adhesive.   *3 COMPONENT ALIGNMENT SIDE VIEW $\Delta h$ 0 1.0 -0.2 4. There will be no more than three (3) consecutive missing components in a tape.   *4 COMPONENT ALIGNMENT FRONT VIEW $\Delta h$ 0 1.0 -0.5 ± 0.5   HOLD-DOWN TAPE WIDTH Wo 6 ± 0.7 -0.5 5. A tape trailer, having at least three feed holes.   HOLD-DOWN TAPE POSITION W2 0.5 ± 0.5 ± 0.5 5. A tape trailer, having at least three feed holes.   HOLD-DOWN TAPE POSITION W2 0.5 ± 0.5 ± 0.5 6. Splices should not interfere with the sprocket feed holes.   LEAD VIRE CLINCH HEIGHT H0 16 ± 0.5 ± 0.5 4. 0.4 *1 Cumulative pitch error 1.0 mm/20 pitch   *5 TOTAL TAPE THICKNESS t 1.45 1.45 •0.4 *1 Cumulative pitch error 1.0 mm/20 pitch   *5 TAND OFF H2 0.45 1.45 3.0 <	BODY THICKNESS	Т	3.9		4.2		
**2 FEED HOLE CENTRE TO COMPONENT CENTRE P2 6.35 ± 0.4 exceed 1 mm in 20 pitches.   DISTANCE BETWEEN OUTER LEADS F 5.08 ± 0.4 3. Holddown tape will not exceed beyond the edge(s) of carrier tape and there shall be no exposure of adhesive.   *3 COMPONENT ALIGNMENT SIDE VIEW *4 COMPONENT ALIGNMENT FRONT VIEW TAPE WIDTH △h 0 1.0 -0.2 4. There will be no more than three (3) consecutive missing components in a tape.   HOLD-DOWN TAPE WIDTH HOLE POSITION W 18 ± 0.5 ± 0.2 5. A tape trailer, having at least three feed holes are provided after the last component in a tape.   HOLD-DOWN TAPE POSITION HOLE POSITION W2 0.5 ± 0.2 5. A tape trailer, having at least three feed holes are provided after the last component in a tape.   HOLD-DOWN TAPE POSITION LEAD WIRE CLINCH HEIGHT LEAD WIRE CLINCH HEIGHT LEAD TO - LEAD DISTANCE W2 0.5 ± 0.2   *5 TOTAL TAPE THICKNESS CLINCH HEIGHT LEAD - TO - LEAD DISTANCE F1, F2 2.54 + 0.4   *5 TAND OFF CLINCH HEIGHT LEAD PARALLELISM H2 0.45 1.45 3.0   *1 Cunulative pitch error 1.0 mm/20 pitch *3 At top of body *4 At top of body		Р				± 1.0	2. Maximum non-cumulative variation
COMPONENT CENTRE DISTANCE BETWEEN OUTER LEADSP26.35± 0.43. Holddown tape will not exceed beyond the edge(s) of carrier tape and there shall be no exposure of adhesive.*3 COMPONENT ALIGNMENT SIDE VIEW *4 COMPONENT ALIGNMENT FRONT VIEW TAPE WIDTH HOLD-DOWN TAPE WIDTH HOLE POSITION△h01.04. There will be no more than three (3) consecutive missing components in a tape.HOLD-DOWN TAPE WIDTH HOLE POSITIONW18± 0.55. A tape trailer, having at least three feed holes are provided after the last component in a tape.HOLD-DOWN TAPE POSITION LEAD WIRE CLINCH HEIGHT LEAD TO - LEAD DISTANCEW20.5± 0.2*5 TOTAL TAPE THICKNESS CLINCH HEIGHT LEAD - TO - LEAD DISTANCEF1, F22.54+ 0.4*5 TAND OFF CLINCH HEIGHT LEAD PARALLELISMF1, C211.45*1 Cumulative pitch error 1.0 mm/20 pitch *3 At top of body	*1FEED HOLE PITCH	Po		12.7		± 0.3	
DISTANCE BETWEEN OUTER LEADSIn 20.001.03. Holddown tape will not exceed beyond the edge(s) of carrier tape and there shall be no exposure of adhesive.*3 COMPONENT ALIGNMENT SIDE VIEW *4 COMPONENT ALIGNMENT FRONT VIEW TAPE WIDTH $\triangle h$ 01.0*4 COMPONENT ALIGNMENT FRONT VIEW TAPE WIDTH $\triangle h$ 01.04. There will be no more than three (3) consecutive missing components in a tape.HOLD-DOWN TAPE WIDTH HOLE POSITIONW18 $\pm 0.5$ 5. A tape trailer, having at least three feed holes are provided after the last component in a tape.HOLD-DOWN TAPE POSITION LEAD WIRE CLINCH HEIGHT LEAD WIRE CLINCH HEIGHTW20.5 $\pm 0.2$ 5. A tape trailer, having at least three feed holes are provided after the last component in a tape.*5 TOTAL TAPE THICKNESS CLINCH HEIGHT LEAD OFF CLINCH HEIGHT LEAD PARALLELISMF1, F22.54 $\pm 0.2$ *1 Cumulative pitch error 1.0 mm/20 pitch *3 At top of body*4 top of body	<sup>*2</sup> FEED HOLE CENTRE TO						exceed 1 mm in 20 pitches.
LEADSF5.08+ 0.0shall be no exposure of adhesive.*3 COMPONENT ALIGNMENT SIDE VIEW *4 COMPONENT ALIGNMENT FRONT VIEW TAPE WIDTH△h01.0*4 COMPONENT ALIGNMENT FRONT VIEW TAPE WIDTH△h101.3± 0.5HOLD-DOWN TAPE WIDTH HOLE POSITIONW18± 0.5± 0.2HOLD-DOWN TAPE WIDTH HOLE POSITIONW19± 0.7HOLD-DOWN TAPE POSITION LEAD WIRE CLINCH HEIGHT LENGTH OF SNIPPED LEADSW20.5± 0.2		P2		6.35		± 0.4	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		-		E 00		+ 0.6	
**4 COMPONENT ALIGNMENT FRONT VIEW △h1 0 1.3 consecutive missing components in a tape.   TAPE WIDTH W 18 ± 0.5 ± 0.5 ± 0.7   HOLD-DOWN TAPE WIDTH W0 6 ± 0.7 -0.5 ± 0.7   HOLD-DOWN TAPE POSITION W2 0.5 ± 0.2 + 0.7 -0.5   HOLD-DOWN TAPE POSITION W2 0.5 ± 0.2 ± 0.5 5   LEAD WIRE CLINCH HEIGHT H0 16 ± 0.5 ± 0.5 6   COMPONENT HEIGHT H1 23.25 11.0 6 Spices should not interfere with the sprocket feed holes.   FEED HOLE DIAMETER Do 4 ± 0.2 1.2 11.0 7   *5 TOTAL TAPE THICKNESS t 1.2 1.45 ± 0.2 11.0 12 12   STAND OFF H2 0.45 1.45 3.0 ± 0.4 ± 0.1 *1 Cumulative pitch error 1.0 mm/20 pitch   *2 To be measured at bottom of clinch *3 At top of body *4 At top of body *4 At top of body		Г		5.00		- 0.2	
TAPE WIDTHW18 $\pm 0.5$ $\pm 0.5$ tape.HOLD-DOWN TAPE WIDTHWo6 $\pm 0.5$ $\pm 0.5$ $\pm 0.5$ HOLD-DOWN TAPE POSITIONW19 $+0.7$ $-0.5$ $5$ . A tape trailer, having at least three feed holes are provided after the last component in a tape.HOLD-DOWN TAPE POSITIONW20.5 $\pm 0.2$ $\pm 0.5$ $\pm 0.2$ LEAD WIRE CLINCH HEIGHTHo16 $\pm 0.5$ $\pm 0.2$ $5$ . Splices should not interfere with the sprocket feed holes.COMPONENT HEIGHTH123.2511.0 $5$ . Splices should not interfere with the sprocket feed holes.FEED HOLE DIAMETERDo4 $\pm 0.2$ $*1.2$ LEAD - TO - LEAD DISTANCEF1, F2 $2.54$ $+0.4$ $*1$ Cumulative pitch error 1.0 mm/20 pitchSTAND OFFH2 $0.45$ $1.45$ $3.0$ $*4$ At top of bodyLEAD PARALLELISM C1 - C2 0.22 $*4$ At top of body $*4$ At top of body	*3 COMPONENT ALIGNMENT SIDE VIEW	∆h		0			
TAPE WIDTHW18± 0.5HOLD-DOWN TAPE WIDTHWo6± 0.2HOLE POSITIONW19+ 0.7-0.5± 0.2- 0.5HOLD-DOWN TAPE POSITIONW20.5± 0.2LEAD WIRE CLINCH HEIGHTHo16± 0.5COMPONENT HEIGHTH123.25LENGTH OF SNIPPED LEADSL11.0FEED HOLE DIAMETERDo4± 0.2*5 TOTAL TAPE THICKNESSt1.2LEAD - TO - LEAD DISTANCEF1, F22.54STAND OFFH20.451.45CLINCH HEIGHTH30.22LEAD PARALLELISM  C1 - C2				Ŭ	1.3		<b>v</b> .
HOLD DOWN TAPE POSITIONW19+ 0.7 - 0.5holes are provided after the last component in a tape.HOLD-DOWN TAPE POSITIONW20.5± 0.2-LEAD WIRE CLINCH HEIGHTHo16± 0.56. Splices should not interfere with the sprocket feed holes.COMPONENT HEIGHTH123.2511.0LENGTH OF SNIPPED LEADSL11.04*5 TOTAL TAPE THICKNESSt1.2LEAD - TO - LEAD DISTANCEF1, F22.54+ 0.4STAND OFFH20.451.45CLINCH HEIGHTH30.224 top of bodyLEAD PARALLELISM C1 - C2 0.22*4 At top of body		W					
HOLE POSITIONW19+ 0.7 - 0.5component in a tape.HOLD-DOWN TAPE POSITIONW20.5± 0.26. Splices should not interfere with the sprocket feed holes.LEAD WIRE CLINCH HEIGHTHo16± 0.56. Splices should not interfere with the sprocket feed holes.COMPONENT HEIGHTH123.2511.06. Splices should not interfere with the sprocket feed holes.FEED HOLE DIAMETERDo4± 0.28.*5 TOTAL TAPE THICKNESSt1.21.21.2LEAD - TO - LEAD DISTANCEF1, F22.54+ 0.4 - 0.1-0.1STAND OFFH20.451.453.0CLINCH HEIGHTH30.220.22*4 At top of bodyLEAD PARALLELISM C1 - C2  0.22*4 At top of body	HOLD-DOWN TAPE WIDTH	Wo		Ŭ		± 0.2	
HOLD-DOWN TAPE POSITION LEAD WIRE CLINCH HEIGHT COMPONENT HEIGHTW2 Ho Ho $0.5$ 16 $\pm 0.2$ $\pm 0.5$ $6$ . Splices should not interfere with the sprocket feed holes.COMPONENT HEIGHT LENGTH OF SNIPPED LEADS FEED HOLE DIAMETERH1 Do $23.25$ 11.0 $7.02$ $6$ . Splices should not interfere with the sprocket feed holes.*5 TOTAL TAPE THICKNESS LEAD - TO - LEAD DISTANCEL F1, F2 $11.0$ 2.54 $\pm 0.2$ 11.0 $REMARKS$ STAND OFF CLINCH HEIGHT LEAD PARALLELISMH2 IC1 - C2 I $0.45$ $1.45$ 3.0 $7.0$ 0.22 $* 4$ At top of body	HOLE POSITION	W1		9		•••	
HOLD-DOWN TAPE FOSTIONW20.3± 0.2± 0.2sprocket feed holes.LEAD WIRE CLINCH HEIGHTHo16± 0.5sprocket feed holes.COMPONENT HEIGHTH123.2511.0feed holes.LENGTH OF SNIPPED LEADSL11.010feed holes.FEED HOLE DIAMETERDo4± 0.2feed holes.*5 TOTAL TAPE THICKNESSt1.2± 0.4fl Cumulative pitch error 1.0 mm/20 pitchLEAD - TO - LEAD DISTANCEF1, F22.54+ 0.4fl Cumulative pitch error 1.0 mm/20 pitchSTAND OFFH20.451.453.0*3 At top of bodyCLINCH HEIGHTH30.220.22*4 At top of body							
LEAD WIRE CLINCH HEIGHTHo16± 0.5COMPONENT HEIGHTH123.25LENGTH OF SNIPPED LEADSL11.0FEED HOLE DIAMETERDo4± 0.2*5 TOTAL TAPE THICKNESSt1.2LEAD - TO - LEAD DISTANCEF1, F22.54+ 0.4STAND OFFH20.451.45CLINCH HEIGHTH33.0*4 At top of bodyLEAD PARALLELISM C1 - C2 0.22*4 At top of body							
LENGTH OF SNIPPED LEADSL411.0FEED HOLE DIAMETERDo4± 0.2*5 TOTAL TAPE THICKNESSt1.2LEAD - TO - LEAD DISTANCEF1, F22.54STAND OFFH20.45CLINCH HEIGHTH3LEAD PARALLELISM C1 - C2				16		± 0.5	
FEED HOLE DIAMETERDo4± 0.2REMARKS*5 TOTAL TAPE THICKNESSt1.21.2* 0.4* 1.2*		H1					
*5 TOTAL TAPE THICKNESSt1.2*1 Cumulative pitch error 1.0 mm/20 pitchLEAD - TO - LEAD DISTANCEF1, F22.54+ 0.4- 0.1*1 Cumulative pitch error 1.0 mm/20 pitchSTAND OFFH20.451.453.0*3 At top of bodyCLINCH HEIGHTH3 C1 - C2 0.22*4 At top of body		-			11.0		
LEAD - TO - LEAD DISTANCEF1, F22.54+ 0.4 - 0.1* 1 Cumulative pitch error 1.0 mm/20 pitchSTAND OFFH20.451.45- 0.1*2 To be measured at bottom of clinchCLINCH HEIGHTH33.03.0*4 At top of bodyLEAD PARALLELISM  C1 - C2  0.22*4 At top of body		Do		4		± 0.2	REMARKS
ELEAD FIGUREH1, 122.54+ 0.4STAND OFFH20.451.45CLINCH HEIGHTH33.0LEAD PARALLELISM C1 - C2 0.22					1.2		*1 Cumulative pitch error 1.0 mm/20 pitch
STAND OFFH20.451.45CLINCH HEIGHTH33.0*3 At top of bodyLEAD PARALLELISM C1 - C2 0.22*4 At top of body	LEAD - TO - LEAD DISTANCE	F1, F2		2.54		+ 0.4	
LEAD PARALLELISMI C1 - C2  0.22*4 At top of body	STAND OFF	H2	0.45		1.45	- 0.1	
	CLINCH HEIGHT	H3			3.0		
PULL - OUT FORCE (p) 6N *5 t1 0.3 – 0.6 mm	LEAD PARALLELISM	C1 - C2			0.22		*4 At top of body
	PULL - OUT FORCE	(p)	6N				*5 t1 0.3 – 0.6 mm

BC212, A, B BC213, A, B, C BC214, B, C

TO-92 Plastic Package

### Disclaimer

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