



Radial Inserter machine PCBA Evaluation

Customer : Flex Brazil

Issued By: ShaoYong

Mob: 13760481664

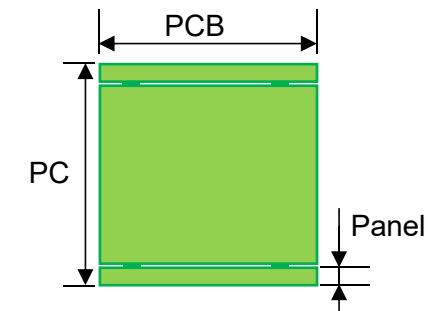
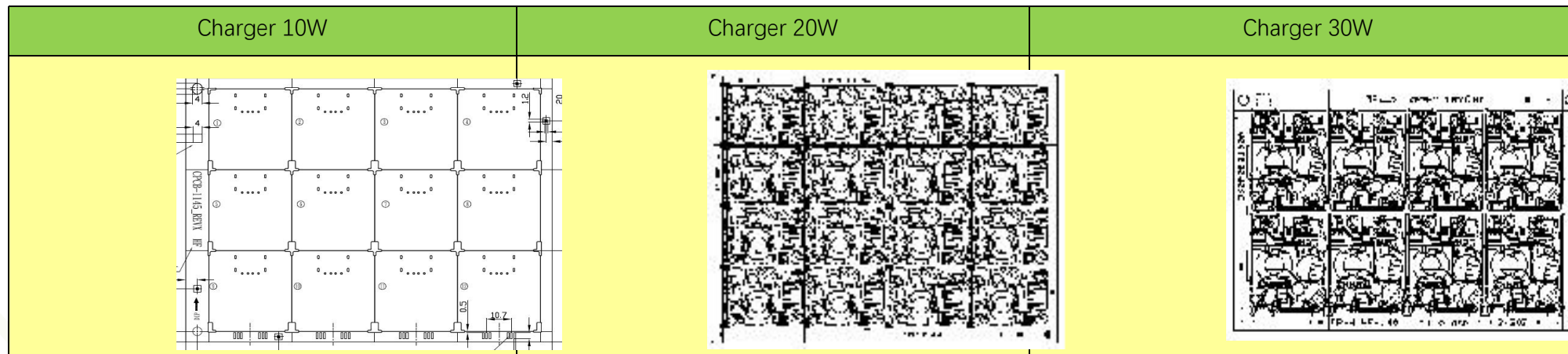
Email: shaoyong@smthelp.com




Date: 2020.7.30

1. PCB Panel Information

	PCB Panel length (mm)	PCB Panel width (mm)	PCB Panel thickness (mm)	Panel process edge width (mm)	How many PCB Units per Panel (PCS)
Charger 10W	157.4	124	1.2mm	5.0mm	12 (4x3)
Charger 20W	185.5	157.65	1.2mm	5.0 and 10.0	16 (4x4)
Charger 30W	168.2	114.8	1.2mm	8.0 and 10.0	8 (4x2)

2. PCB Panel Picture



	Yearly forecast	UPH requirement	Panel Cycle time	PCBA Top Side Picture	Qty of Component to be inserted automatically	CPH
Charger 10W	4,800,000	1070	34		6	1070*6=6420CPH
Charger 20W	2,000,000	450	107		9	450*8=4050CPH
Charger 30W	1,000,000	230	104		9	230*9=2070CPH
					总	12540 CPH

Capacity estimation

Solution	Equipment	Insertion Qty	UPH requirement	Speed(Sec/pcs)	Cycle Time(Sec/Single board)	UPH(Single Board)	Remarks
Charger 10W	1set	5 种元件, 单板6 颗 (12拼板 72颗)	1070 (6420pcs)	~0.35	~33	~8000	Cycle time include loading , unloading and fixation. Need two Radial insertion machine based on requested CPH.
Charger 20W	1set	7种元件, 单板9 颗 (12拼板 108颗)	450 (4050pcs)	~0.35	~44	~8836	
Charger 30W		8 种元件, 单板9 颗 (8拼板 72颗)	230 (2070pcs)	~0.35	~33	~8000	

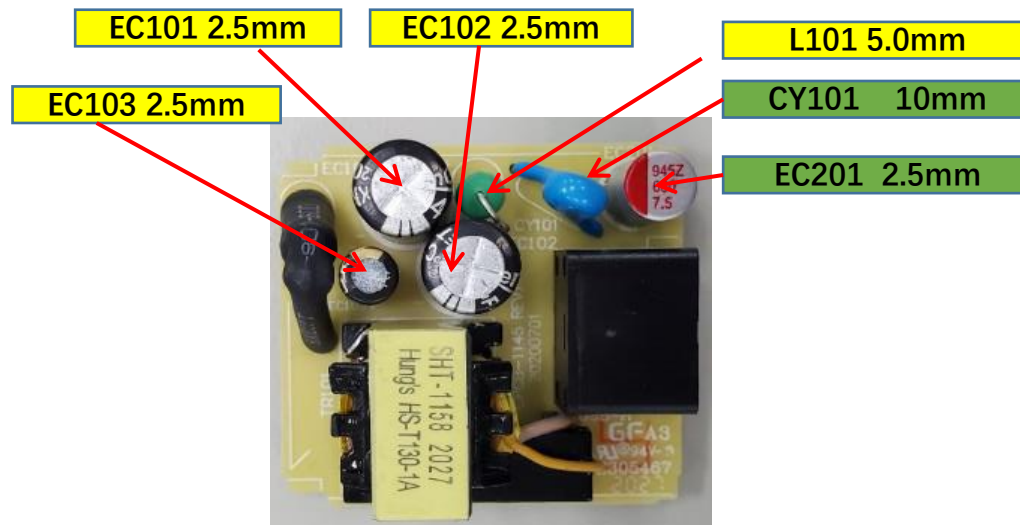
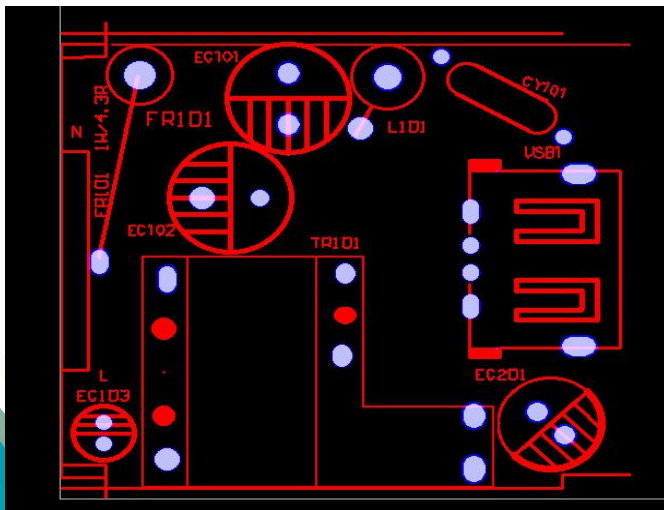
The evaluation results is provided by Southern Machinery. There is around 5% difference due to evaluation on pic of PCBA only.

Pls refer to the specification listed on Equipment' s PO agreement.

Southern Machinery maintain the right for adjustment.

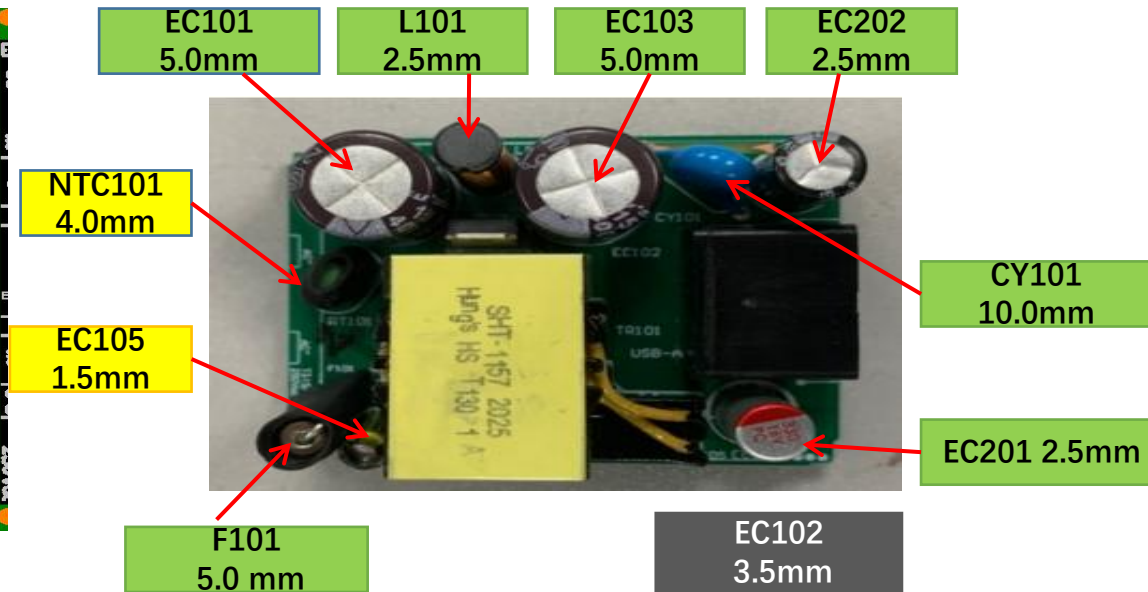
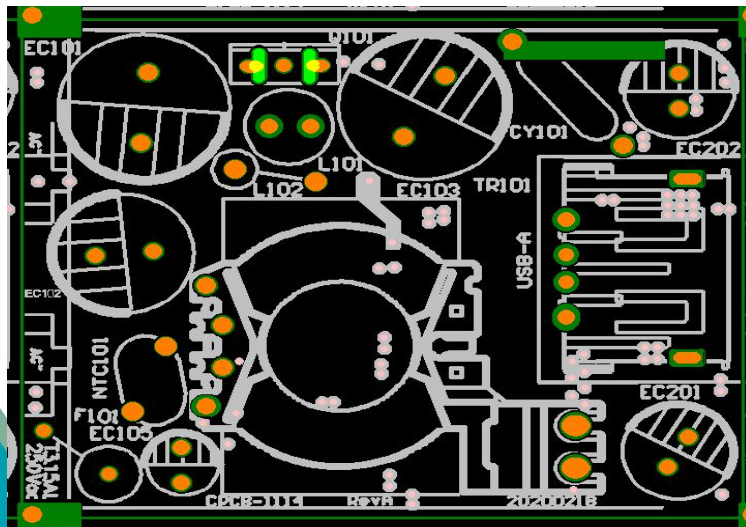
Charger 10W

	Pat number	Ref.	DESCRIPTION	CURRENT Lead To Lead Distance	DESIGN CHANGE REQUIRED	PACKAGING
1	94-05000183051	FR101	Resistor RXF21-1W-4R3-M-D-2KV-Tube	Axial		
2	95-01002977184	EC103	Capacitor EL71HM3R3C07B15T	1.5 mm	Lead To Lead distance 2.5mm	Tape
3	95-01002734184	EC101, EC102	Capacitor ERK2GM100F11B35TEHO	3.5 mm	Lead To Lead distance 2.5mm	Tape
5	95-01002783184	EC201	Capacitor SPZ0AM681E09C33R	2.5 mm ± 0.05mm	OK	Tape
6	95-02000237189	CY101	Capacitor 2B06b101K400VacBHF-T	10.0 mm ± 1.00 mm	OK	Tape
7	96-01000609472	L101	Inductor EC46 0510-331Kxn	Axial	Lead To Lead distance 5.0mm	Tape
8	01-07000037595	USB1	A0-9063-00365 FPI	Odd Form		
9		TR1	Trafo			



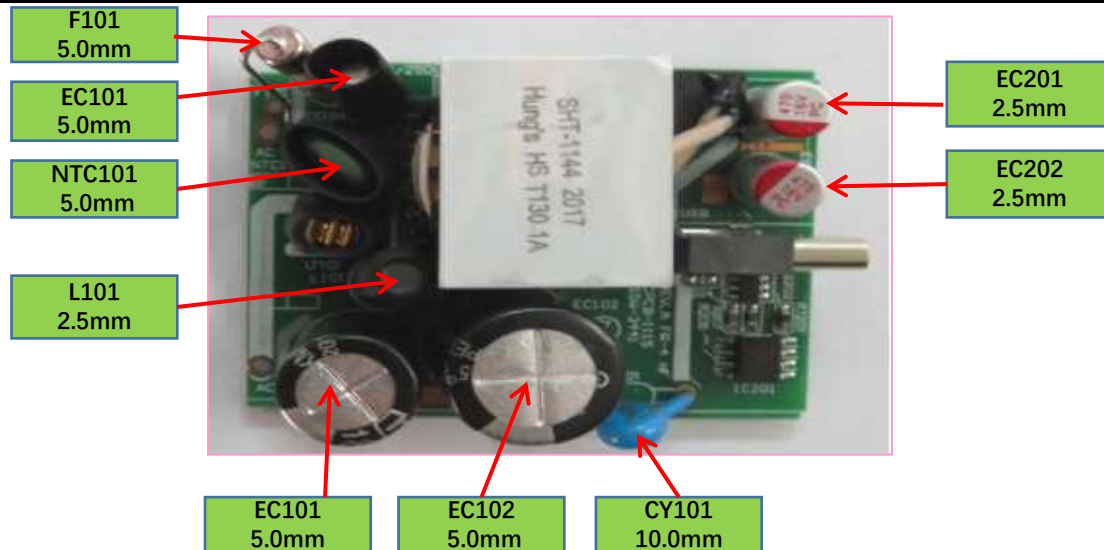
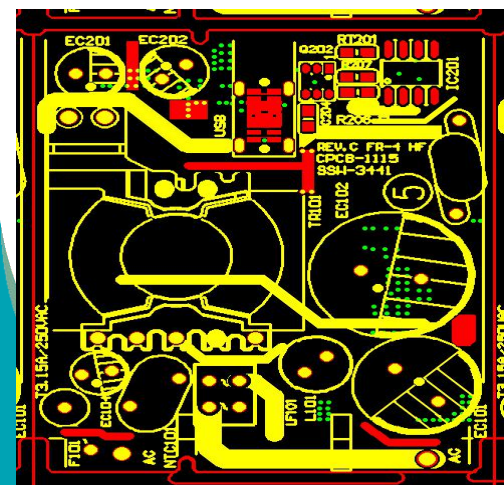
(修改后机插6颗)

	Pat number	Ref.	DESCRIPTION	Current Lead To Lead distance	DESIGN CHANGE REQUIRED	PACKAGING
2	94-09000122083	NTC101	Thermistor SCK05052MSY523 Tmax3.8	4.0 mm ± 0.50 mm	Lead To Lead distance 5.0mm	Tape
3	95-01002966184	EC101, EC103	Capacitor Eletrolítico ERK2GM120G12B50TKEHB	5.0 mm ± 0.5 mm	OK	Tape
5	95-01002967184	EC102	Capacitor Eletrolítico ERK2GM8R2F12B35TKEHO	3.5 mm ± 0.5 mm	Not found on board	Tape
6	95-01002660184	EC201, EC202	Capacitor SPZ1CM331E11C33R	2.5 mm ± 0.5 mm	OK	Tape
7	99-01000339403	F101	Fuse 3NT1315APH LANSON	Axial	OK	Tape
10	96-01000613180	L101	Indutor RL0512-331K-B2126A	2.5mm ± 0.5mm	OK	Tape
9	95-01002951184	EC105	Capacitor ERG1HM4R7C07B15T	1.5 mm	Lead To Lead distance 2.5mm	Tape
11	96-04000094180	L102	Indutor RH253008	Axial	NO	Tape
4	95-02000181623	CY101	Capacitor H101K050BG55250L	10 mm ± 0.8 mm	OK	Tape

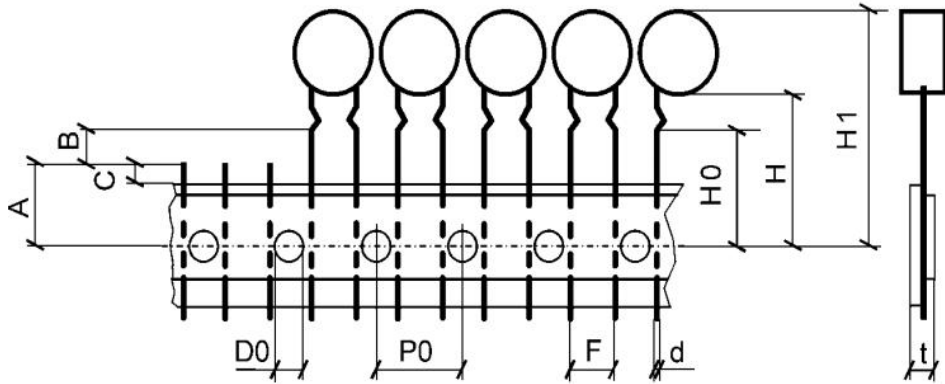


(修改后机插9颗)

	Pat number	Ref.	DESCRIPTION	Current Lead To Lead distance	DESIGN CHANGE REQUIRED	PACKAGING
2	ODM-94-09000156319	NTC101	WTR08D030MD2AW	5.0mm ±1.0mm	OK	Tape
3	ODM-95-10000048644	EC101	KM186M400G16T50EH3FTH	5.0mm ±0.5mm	OK	Tape
4	ODM-95-10000049644	EC102	KM276R400J16T50EH3FTH	5.0mm ±0.5mm	OK	Tape
5	ODM-95-01003286644	EC104	ZF106M050C07T25EH4FP0	2.5mm	OK	Tape
6	ODM-95-09000040644	EC201 EC202	PC477M016D11T25NB2FP0	2.5mm ±0.5mm	OK	Tape
7	ODM-99-01000368403	F101	3NT1315APH-1-BL LANSON(良盛)	5.0mm ±0.5mm	OK	Tape
8	ODM-95-02000209151	CY101	YP1AH101K060BAMD0H	10.0mm ±1.0mm	OK	Tape
9	ODM-96-01000585180	L101	RL0512-151K-B2095	2.5mm ±0.5mm	OK	Tape
10	ODM-26-02000730	TR101	HT SHT-1144 R0 HF	odd form		Tray
11	don't assembly	TUBEEC104, NTC1				



(机插9颗)

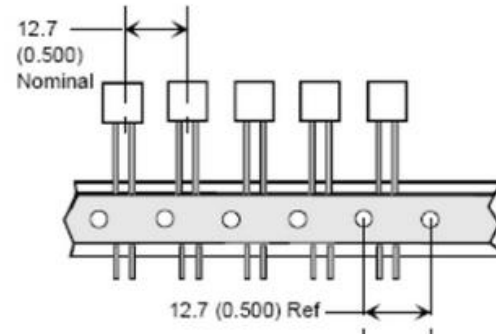


Dimensions feeder and tape

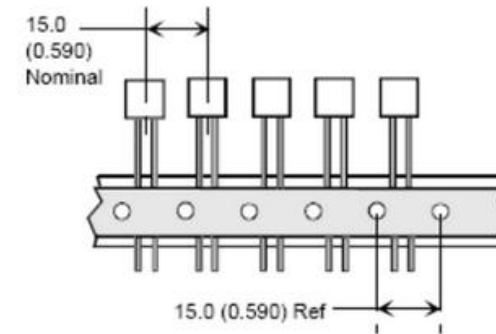
Abb.	Description	Dimension	Tol
A	Distance transport hole cutting edge (in RF 200 adjustable)	11 - 17	± 0,2
B	Distance cutting edge crimp	2 min.	
C	Distance carrier tape cutting edge	4 min.	
D0	Ø transport hole	4	1)
d	Ø connecting wire	0,8 max.	
F	Distance connecting wire	25 max.	1)
P0	Distance transport hole	12,7; 15	1)
H	Distance transport hole component lower edge	18 min.	1)
H0	Distance transport hole crimp	15 min.	1)
H1	Distance transport hole component upper edge	40 max.	1)
t	Total thickness	2 max.	

Dimensions are in millimeters;
inch equivalents are bracketed.

Single Pitch
Component Taping



Component Spacing for 12.7 (0.500) Pitch Tape



Component Spacing for 15.0 (0.590) Pitch Tape

Double Pitch
Component Taping

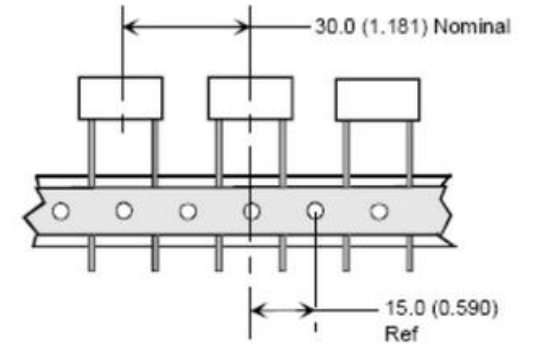
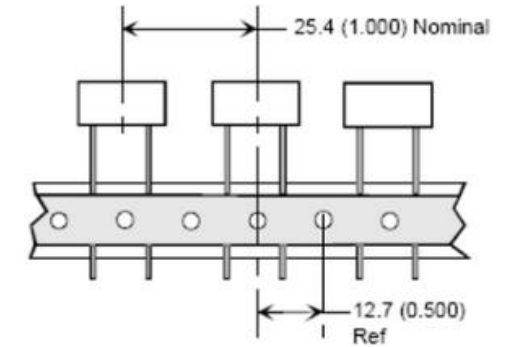


Table 20. Machine Specifications

Machine Specifications	Single Span		Dual Span			3.5 mm Triple Span			Small Triple Span			Large Triple Span			Quad Span			
	2.5	5.0	2.5	5.0	7.5	2.5	3.5	5.0	2.5	5.0	7.5	5.0	7.5	10.0	2.5	5.0	7.5	10.0
Component Lead Span	2.5	5.0	2.5	5.0	7.5	2.5	3.5	5.0	2.5	5.0	7.5	5.0	7.5	10.0	2.5	5.0	7.5	10.0
Feed Hole Pitch 12.7	X	X	X	X	X	X	X	X	X	X	X	X	X	*	X	X	X	*
Feed Hole Pitch 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
* Not Supported																		

*Taped Component Removal Pull Testing

The taped components shall unwind (reel and cassette) or unfold (ammo-pack) with a force not to exceed 5 Newtons (17.9 oz.). Pull test shall be applied as illustrated in Figure 43.

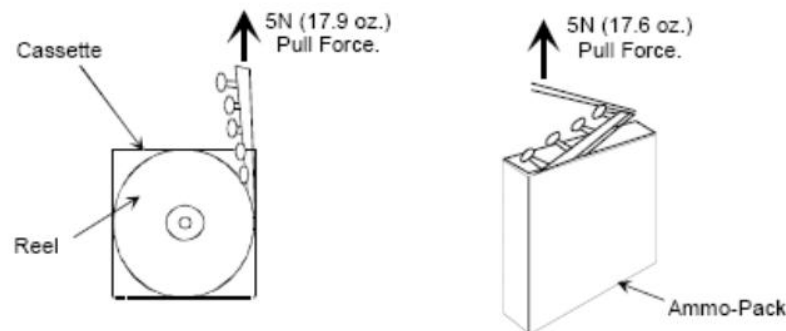
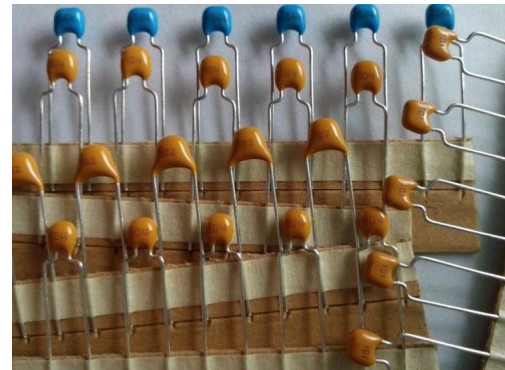


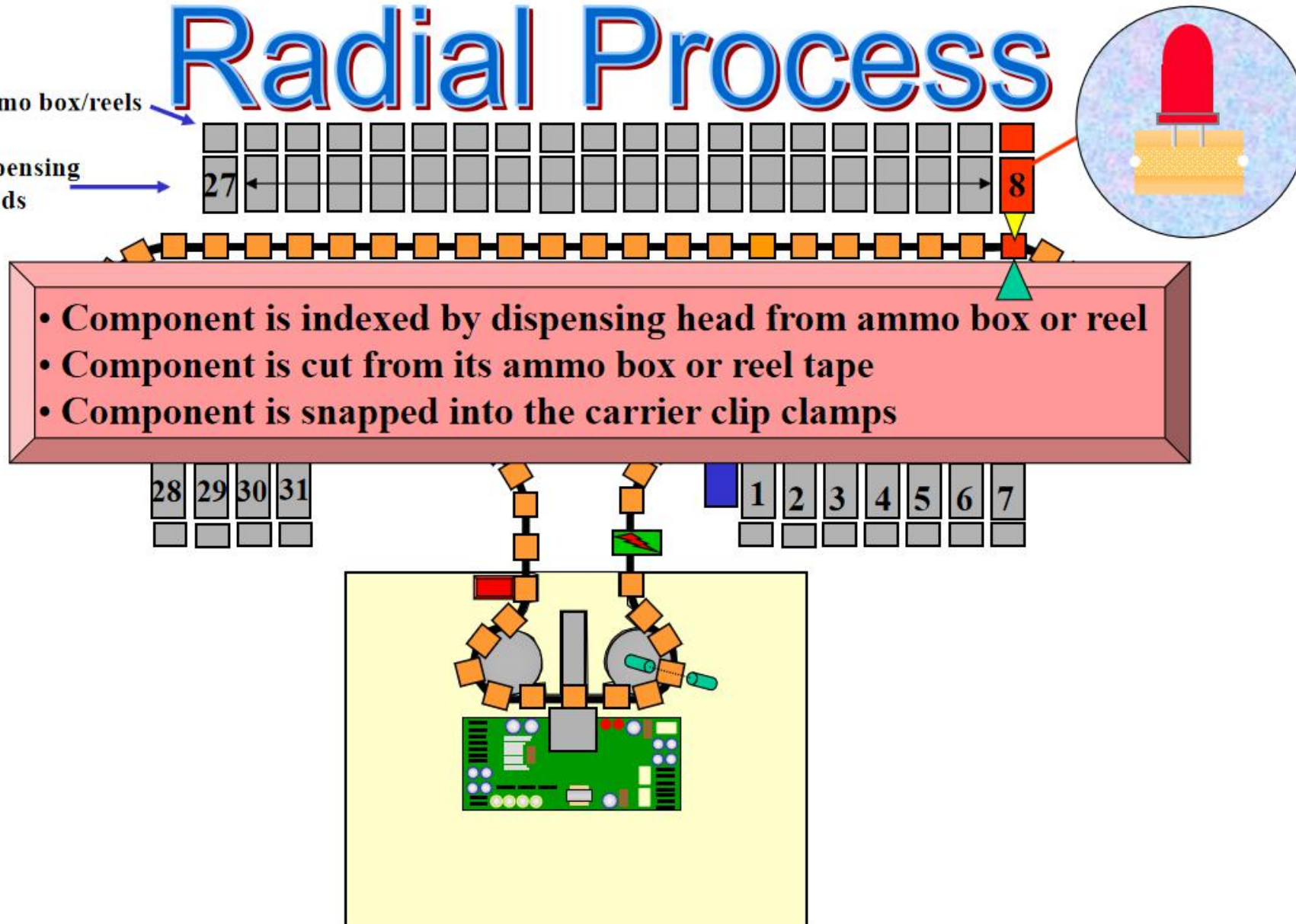
Figure 43. Taped Component Removal Pull Testing



Radial Process

Ammo box/reels

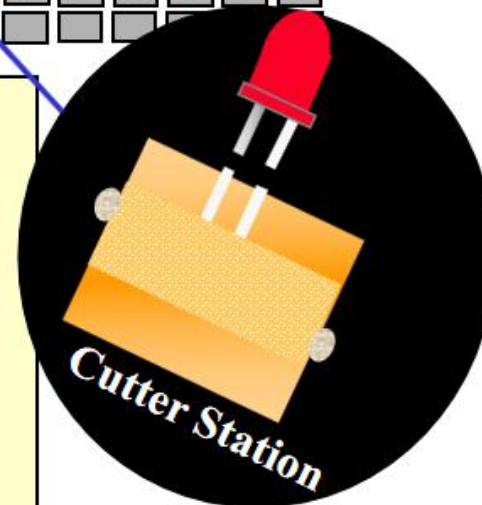
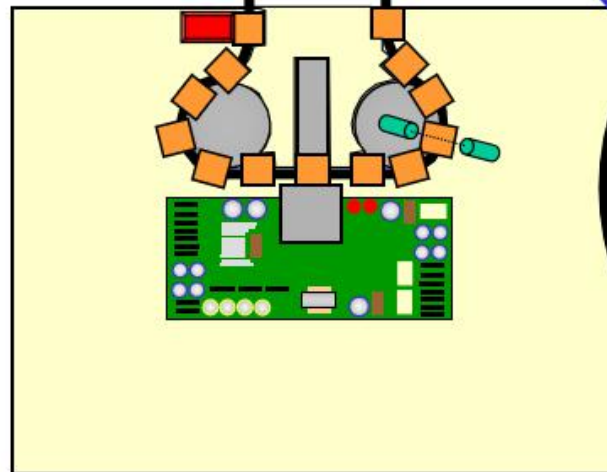
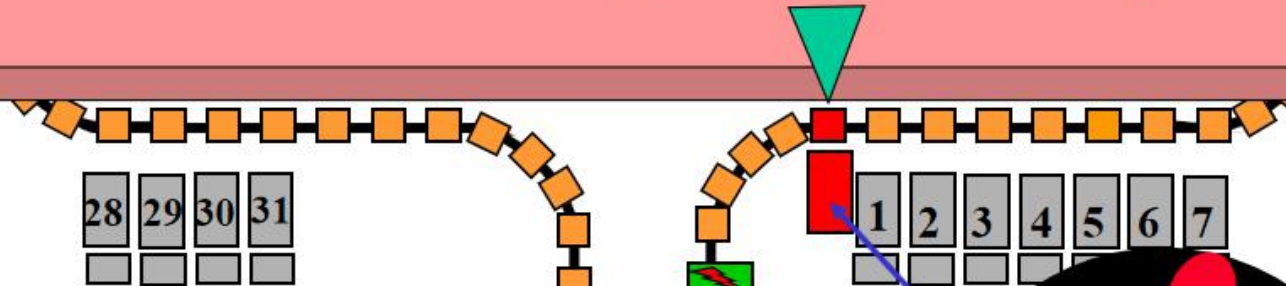
Dispensing
heads



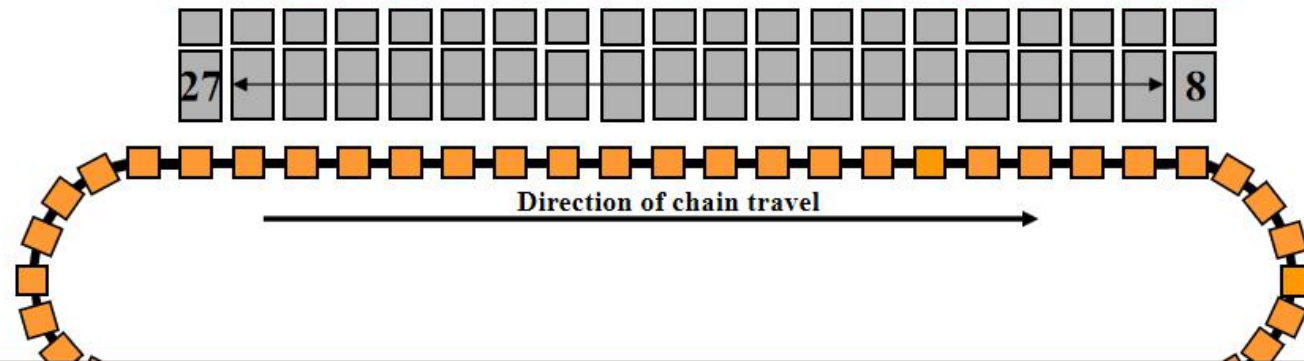
Radial Process



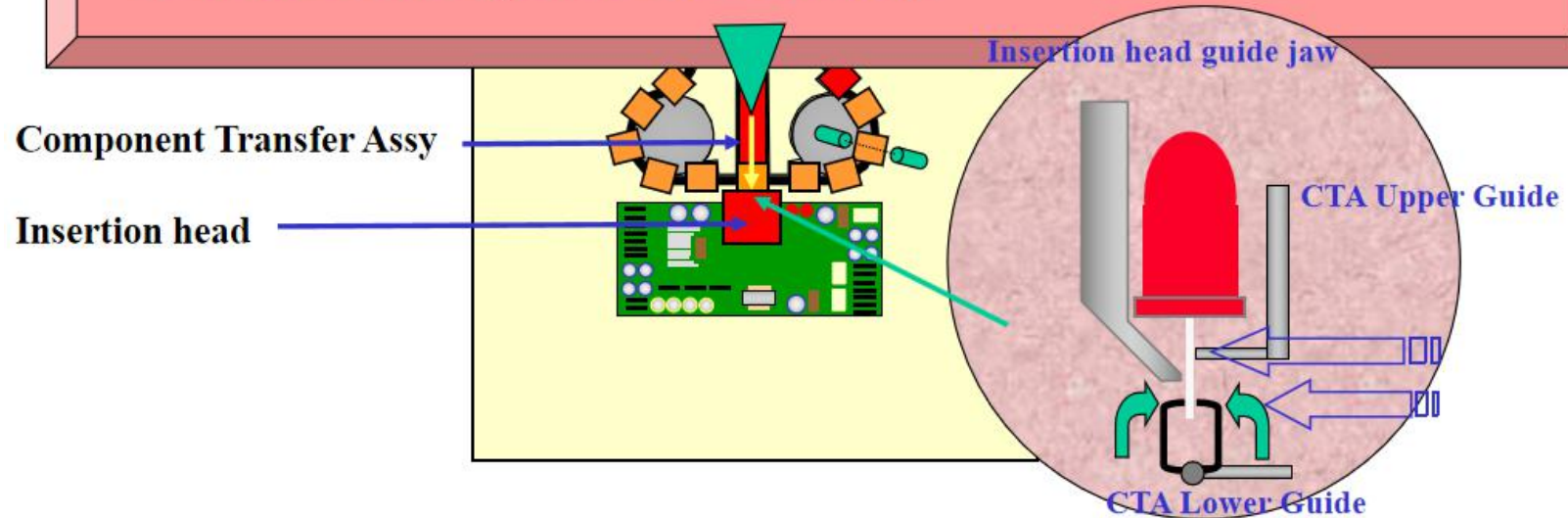
- The Cutter Station cuts the paper tape from the component leads



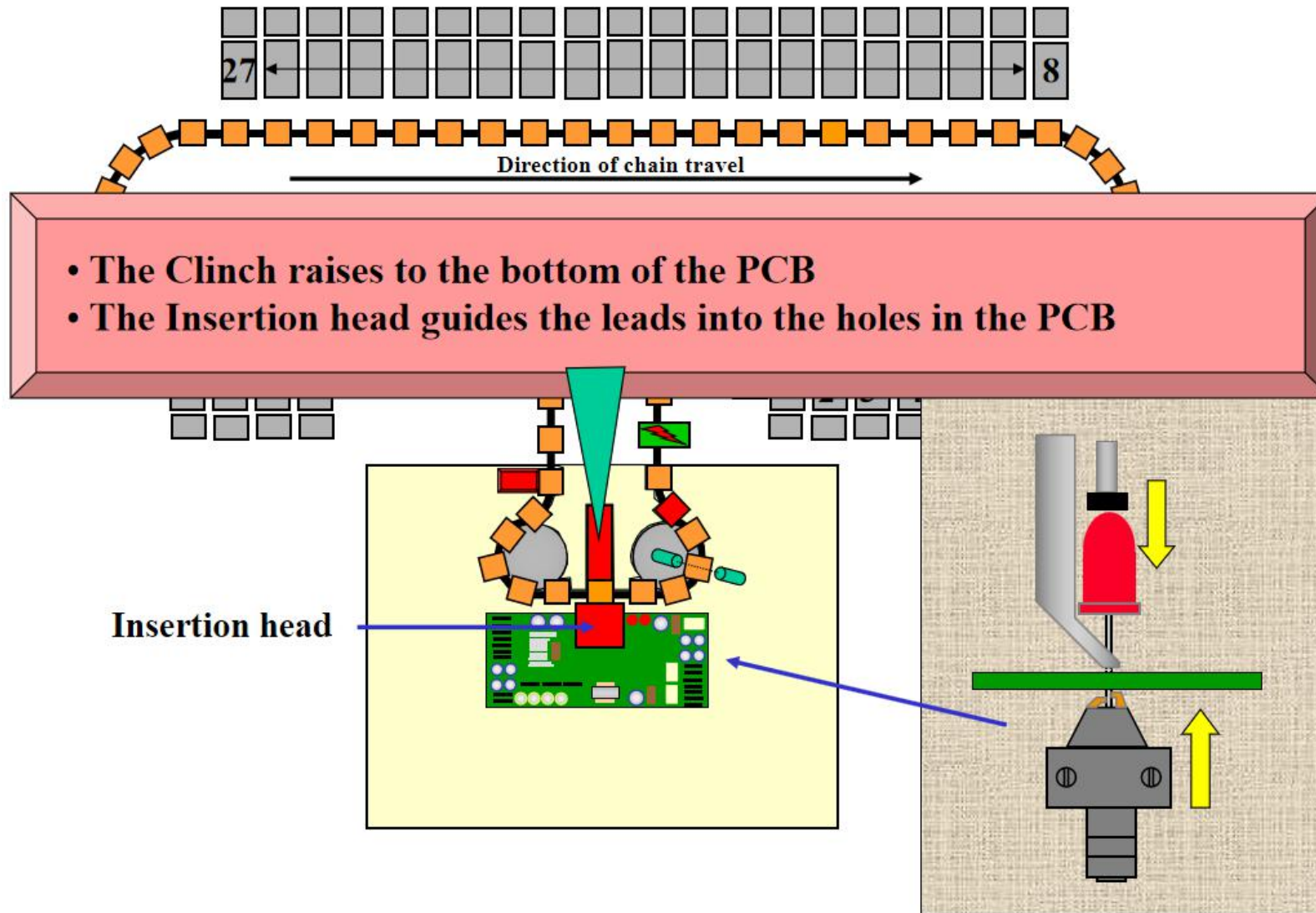
Radial Process



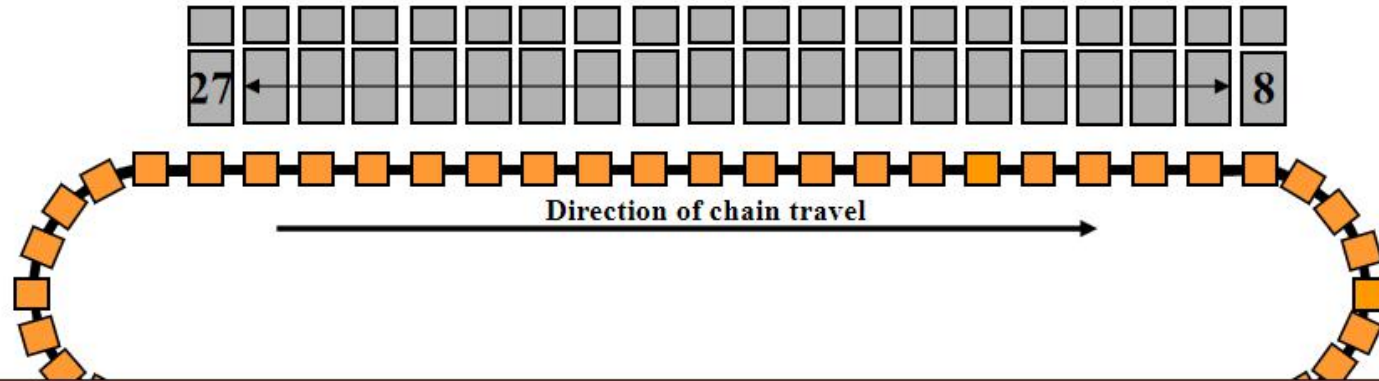
•The Component Transfer Assembly positively transfers the component from the chain clip to the insertion head



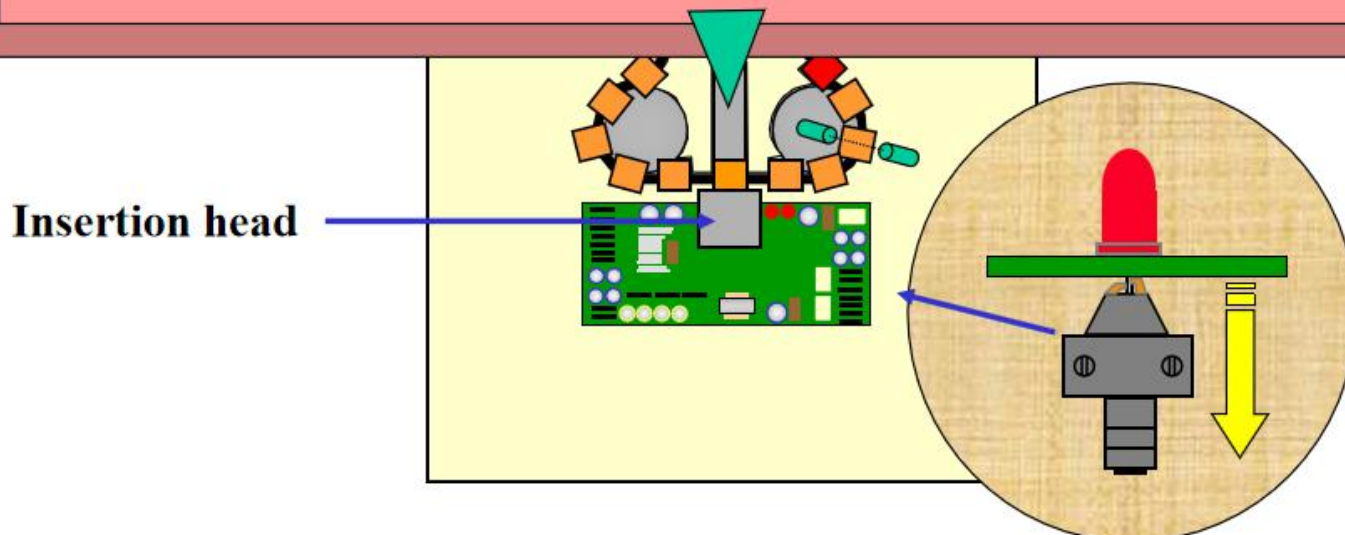
Radial Process



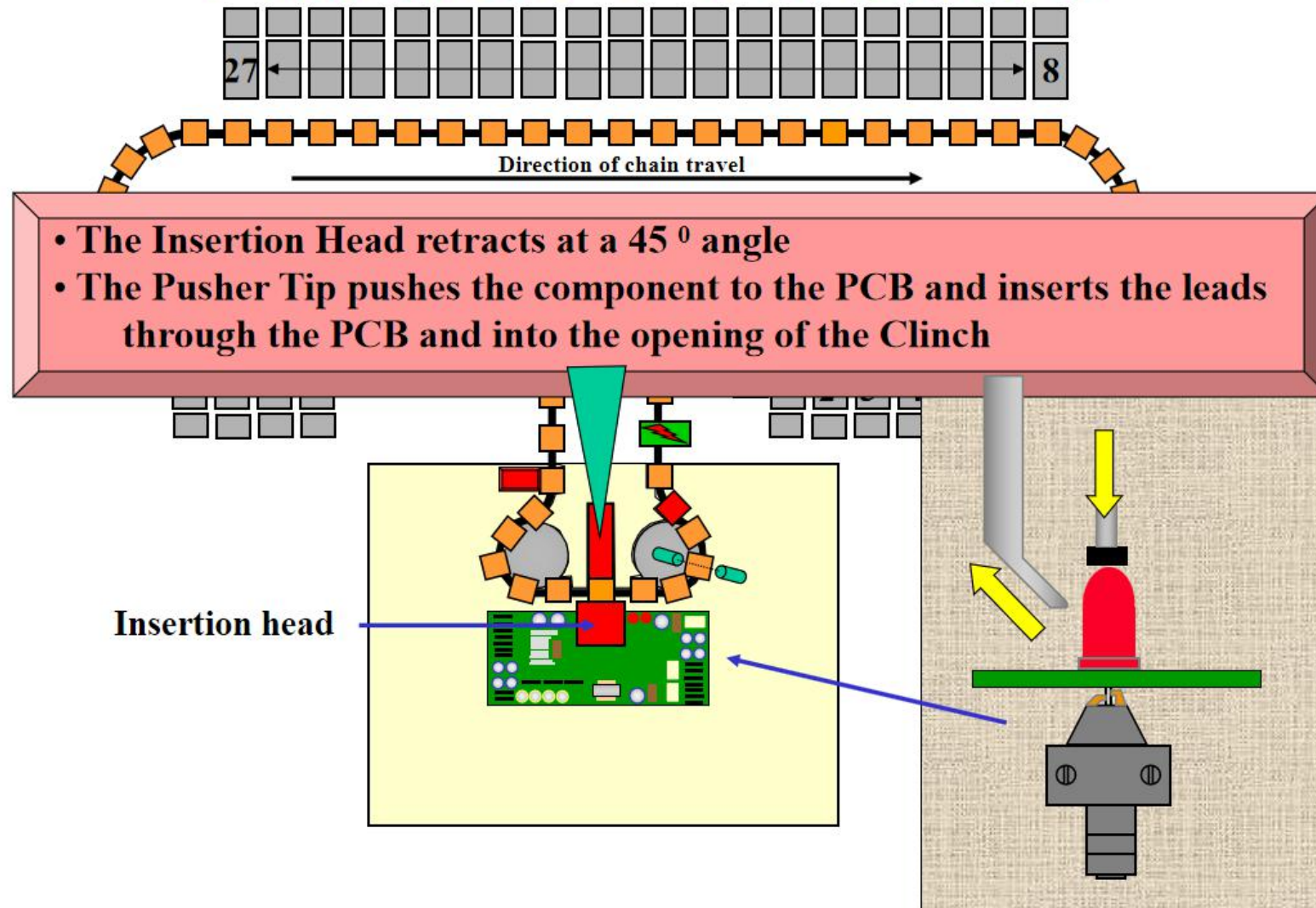
Radial Process



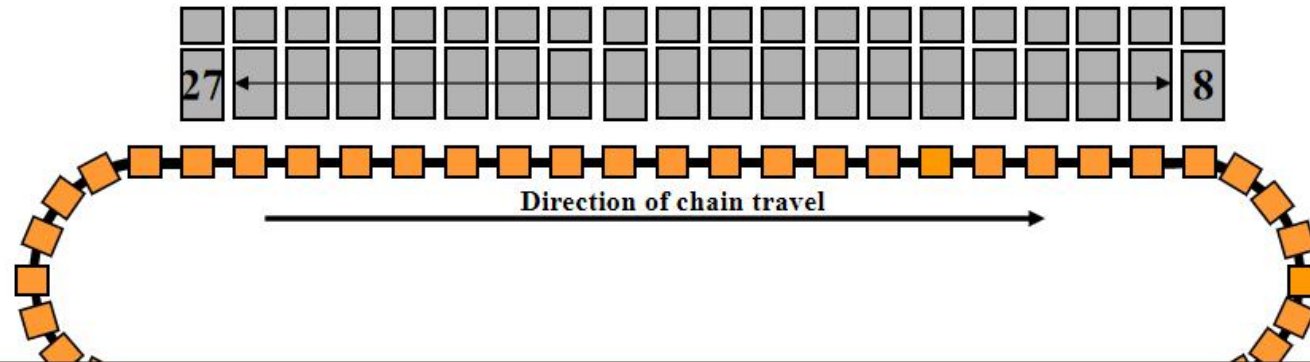
- The Clinch cuts the component leads and clinches them before returning to its lower position



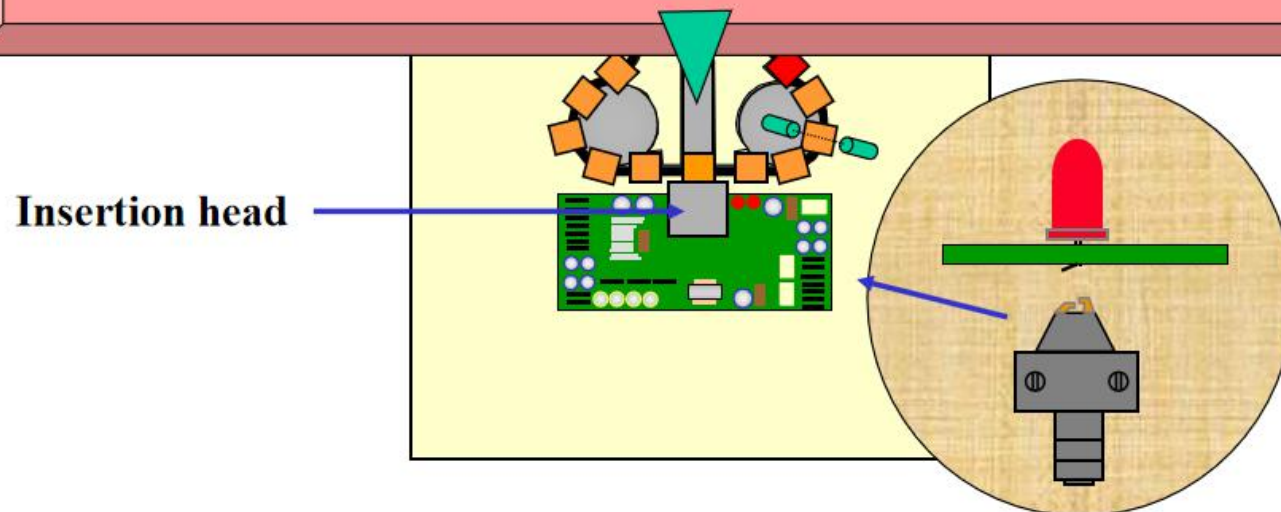
Radial Process



Radial Process



- The Clinch cuts the component leads and clinches them before returning to its lower position



WELCOME INQUIRY

Please visit

www.smthelp.com

Find us more

<https://www.facebook.com/autoinsertion>

Know more our team

<https://cn.linkedin.com/in/smtsupplier>

Welcome to our factory in Shenzhen China

See more machine working video, please Youtube Auto Insertion

Google

Auto+insertion, to get more informations

Looking forward to your email

shaoyong@smthelp.com