



**PPI**<sup>®</sup>



**3mm Trimmer Capacitors**



### Product Features

- Low Cost Applications
- Low Temperature Drift
- Designed for reflow soldering
- Low Magnetics
- Surface Mount Design
- Half Turn Adjustment
- Tape & Reel Packaging

### Product Applications

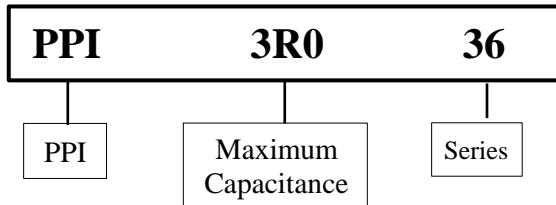
- NMR/ MRI Applications/Pre-Amplifiers
- Commercial Instrumentation
- RFID
- Tunable Filter Circuits

### Specifications

- Capacitance Range: 1.5pF to 30pF
- DC Working Voltage: 100V
- DC Withstanding Voltage: 220V

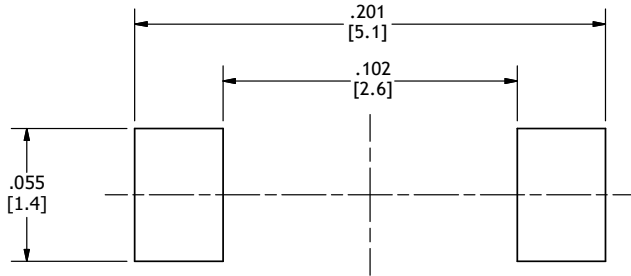


### Part Numbering



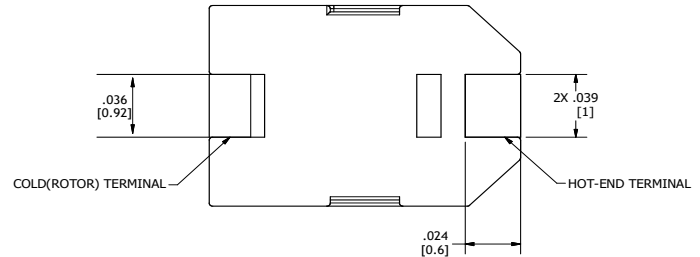
Part Number	PPI3R036	PPI6R036	PPI10036	PPI20036	PPI30036
Capacitance (pF)	Minimum 1.5 Maximum 3.0	2.0 +50% -0% 6.0	3.0 +50% -0% 10.0	5.8 +50% -0% 20.0	8.0 +50% -0% 30.0
Marking Color	Black	Blue	Ivory	Pink	Green
DC Working Voltage	100	100	100	100	100
DC Withstanding Voltage	220	220	220	220	220
Temperature Coefficient (ppm/°C)	0 ± 300	0 ± 200	750 ± 400	1300 ± 400	1300 ± 400
Q (min.) at 1 MHz	300	500	600	250	250
Self Resonant Frequency at Maximum Rated Capacitance	1.4 GHz	1.07 GHz	.86 GHz	0.59 GHz	0.46 GHz
Insulation Resistance	10 <sup>4</sup> megaohms				
Operating Temperature	-25°C to +85°C				
Torque	15 to 72 gf.cm max.   0.21 to 1.0 in-oz max.				
Packaging	All parts furnished on 12mm tape and reel; 1,000 pcs per reel				

### Land Pattern Dimensions (inches/mm)

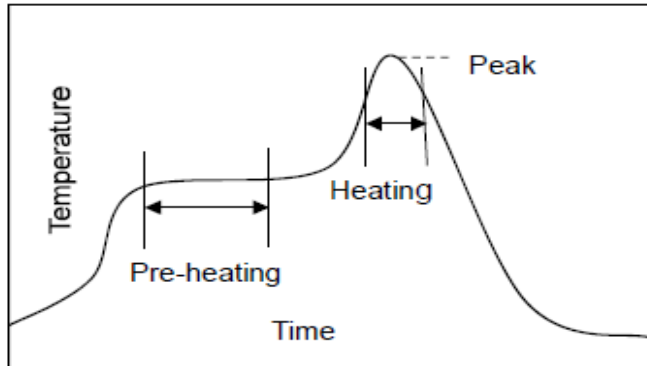


**SUGGESTED FOOTPRINT**  
SOLDER PASTE THICKNESS OF 0.15 [mm] RECOMMENDED

### Dimensions (inches/mm)

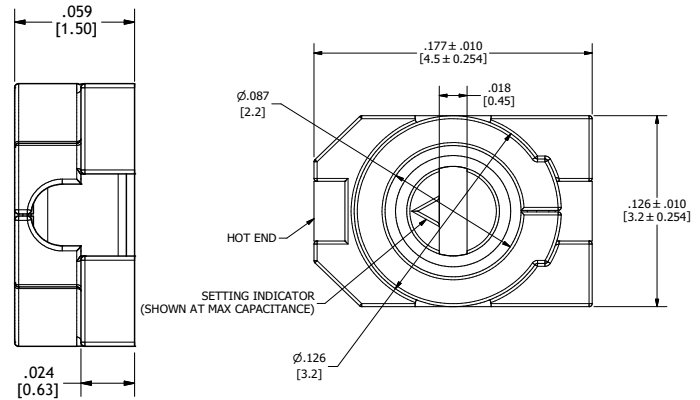


### Suggested Soldering Profile



Stage	SAC305 Solder	Eutectic Solder
<b>Pre-Heating</b>	Temp: 150°C - 180°C Time: 60 - 120 Seconds	Temp: 120°C - 150°C Time: 60 - 120 Seconds
<b>Heating</b>	Temp: 220°C Min Time: 30 - 60 Seconds	Temp: 183°C Min Time: 30 - 60 Seconds
<b>Peak Heat</b>	Temp: 265°C Time: 3 Seconds Max	Temp: 265°C Time: 3 Seconds Max
<b>Reflow Cycles</b>	2 Times Max	2 Times Max
<b>Soldering Iron</b>		
<b>Spec</b>	Temperature: 400°C Max Time: 3 Seconds Max	

While PPI makes every effort to provide up to date and complete industry standard information, individual reflow equipment and applications vary. No guarantee is given that the suggested profile is suitable for any application or use.

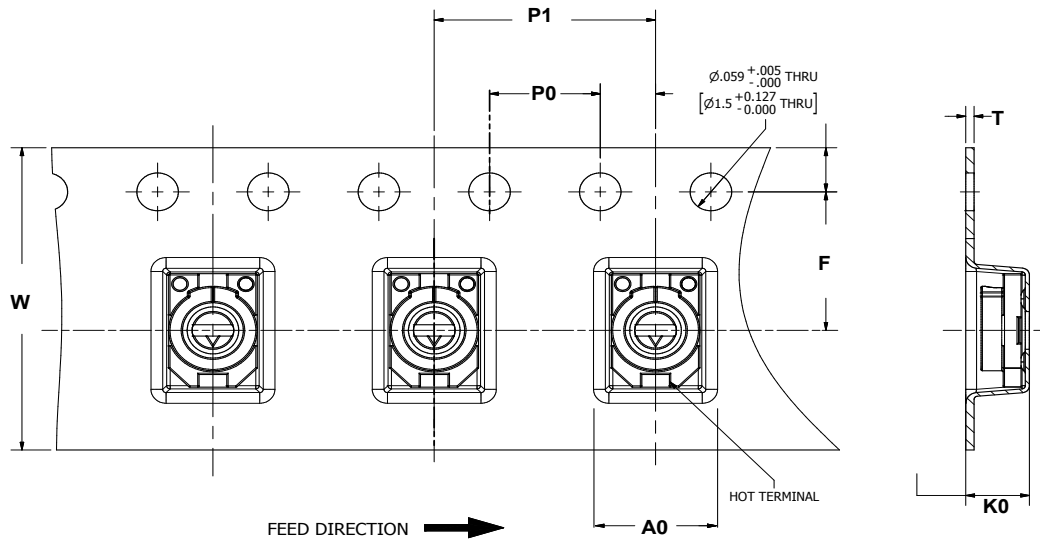


**Tape & Reel Specifications**

Series	Measurement Unit	W	P0	P1	T	F	Minimum Qty per Reel	Tape Material
36	in.	0.472	0.157	0.315	0.012	0.217	1000	Plastic
	mm	12.0	4.0	8.0	0.3	5.5		

$A_0K_0$

- Determined by component size. Typical clearance between the cavity and the component is: .50 (.002) min to .65 (.026) max for 12mm tape.
- The component cannot rotate more than 20° within the determined cavity.





3mm Surface Mount  
Trimmer Capacitors

**46 Series**

### Product Features

- Low Cost Applications
- Low Temperature Drift
- Designed for reflow soldering
- Low Magnetics
- Surface Mount Design
- Half Turn Adjustment
- Tape & Reel Packaging
- RoHS Compliant

### Product Applications

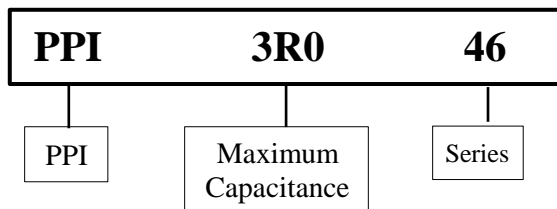
- NMR/ MRI Applications/Pre-Amplifiers
- Commercial Instrumentation
- RFID
- Tunable Filter Circuits



### Specifications

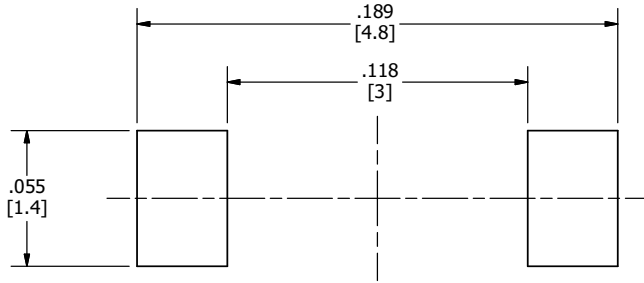
- Capacitance Range: 1.5pF to 40pF
- DC Working Voltage: 125V
- DC Withstanding Voltage: 250V

### Part Numbering



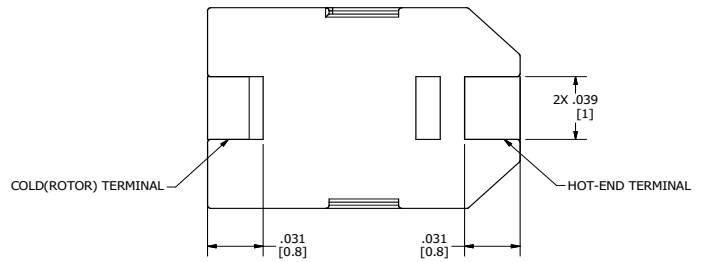
Part Number	PPI3R046	PPI6R046	PPI10046	PPI15046	PPI20046	PPI30046	PPI40046	
Capacitance (pF)	Minimum	1.5	2.0	2.0	3.0	4.5	5.5	8.0
	Maximum	3.0	6.0 <sup>+50%</sup> <sub>-0%</sub>	10.0 <sup>+50%</sup> <sub>-0%</sub>	15.0 <sup>+100%</sup> <sub>-0%</sub>	20.0 <sup>+100%</sup> <sub>-0%</sub>	30.0 <sup>+100%</sup> <sub>-0%</sub>	40.0 <sup>+100%</sup> <sub>-0%</sub>
Marking Color	Black	Blue	White	Pink	Red	Orange	Yellow	
DC Working Voltage	125	125	125	125	125	125	125	
DC Withstanding Voltage	220	220	220	220	220	220	220	
Temperature Coefficient (ppm/°C)	0 ± 200	0 ± 300	0 ± 300	0 ± 500	0 ± 500	-1500 ± 1000	-1500 ± 1000	
Q (min.) at 1 MHz	500	500	500	500	500	200	200	
Self Resonant Frequency at Maximum Rated Capacitance	2.1 GHz	1.5 GHz	1.16 GHz	0.92 GHz	0.81 GHz	0.70 GHz	0.60 GHz	
Insulation Resistance	10 <sup>4</sup> megaohms							
Operating Temperature	-40°C to +85°C							
Torque	11 to 72 gf.cm max.   0.14 to 1.0 in-oz max.							
Packaging	All parts furnished on 12mm tape and reel; 1,000 pcs per reel							

### Land Pattern Dimensions (inches/mm)

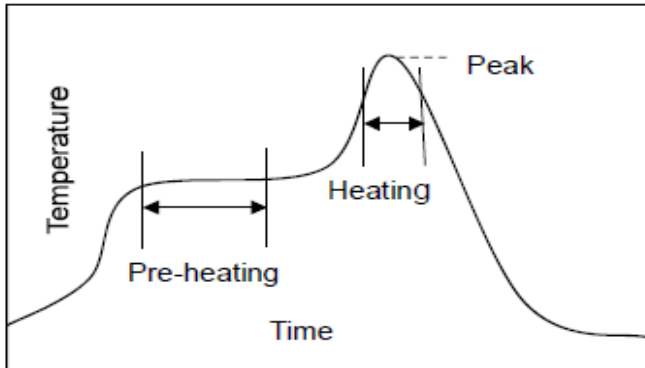


SUGGESTED FOOTPRINT  
SOLDER PASTE THICKNESS OF 0.15 [mm] RECOMMENDED

### Dimensions (inches/mm)

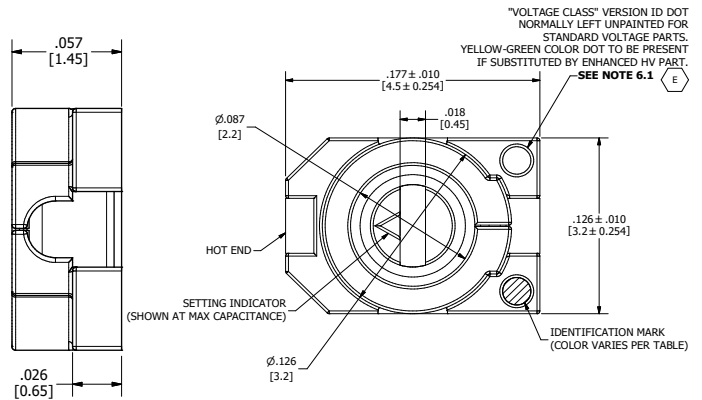


### Suggested Soldering Profile



Stage	SAC305 Solder	Eutectic Solder
<b>Pre-Heating</b>	Temp: 150°C - 180°C Time: 60 - 120 Seconds	Temp: 120°C - 150°C Time: 60 - 120 Seconds
<b>Heating</b>	Temp: 220°C Min Time: 30 - 60 Seconds	Temp: 183°C Min Time: 30 - 60 Seconds
<b>Peak Heat</b>	Temp: 265°C Time: 3 Seconds Max	Temp: 265°C Time: 3 Seconds Max
<b>Reflow Cycles</b>	2 Times Max	2 Times Max
<b>Soldering Iron</b>		
<b>Spec</b>	Temperature: 400°C Max Time: 3 Seconds Max	

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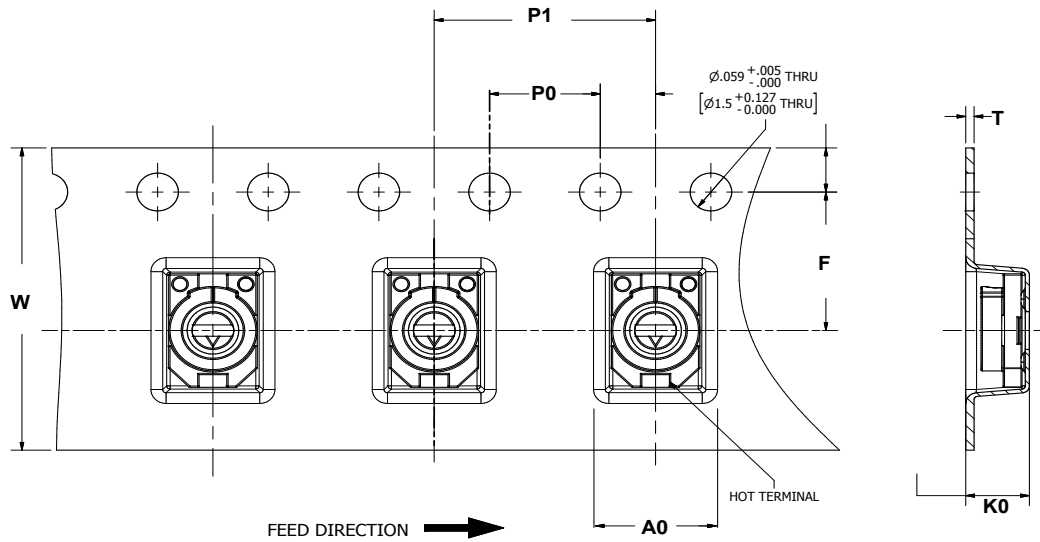


## ≠ Tape & Reel Specifications

Series	Measurement Unit	W	P0	P1	T	F	Minimum Qty per Reel	Tape Material
46	in.	0.472	0.157	0.315	0.012	0.217	1000	Plastic
	mm	12.0	4.0	8.0	0.3	5.5		

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- Determined by component size. Typical clearance between the cavity and the component is: .50 (.002) min to .65 (.026) max for 12mm tape.
- The component cannot rotate more than 20° within the determined cavity.





3mm Surface Mount  
Trimmer Capacitors

**46 HV Series**

### Product Features

- High Voltage
- Low Cost Applications
- Low Temperature Drift
- Designed for reflow soldering
- Low Magnetics
- Surface Mount Design
- Half Turn Adjustment
- Tape & Reel Packaging
- RoHS Compliant

### Product Applications

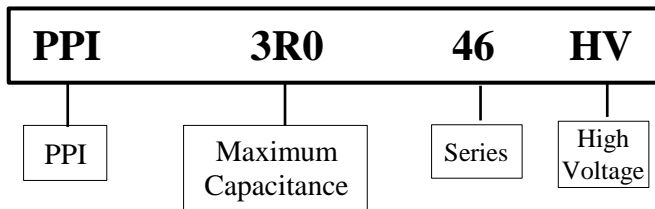
- NMR/ MRI Applications/Pre-Amplifiers
- Commercial Instrumentation
- RFID
- Tunable Filter Circuits



### Specifications

- Capacitance Range: 1.5pF to 40pF
- DC Working Voltage: 350V
- DC Withstanding Voltage: 700V

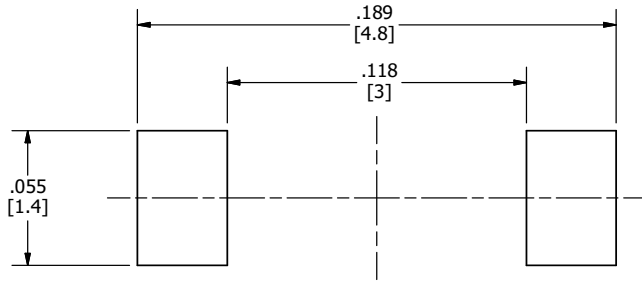
### Part Numbering



Part Number	PPI3R046HV	PPI6R046HV	PPI10046HV	PPI15046HV	PPI20046HV	PPI30046HV	PPI40046HV	
Capacitance (pF)	Minimum	1.5	2.0	2.0	3.0	4.5	5.5	8.0
	Maximum	3.0	6.0	10.0	15.0	20.0	30.0	40.0
Marking Color	Black & Green	Blue & Green	White & Green	Pink & Green	Red & Green	Orange & Green	Yellow & Green	
DC Working Voltage	350	350	350	350	350	350	350	
DC Withstanding Voltage	770	770	770	770	770	770	770	
Temperature Coefficient (ppm/°C)	0 ± 200	0 ± 300	0 ± 300	0 ± 500	0 ± 500	-1500 ± 1000	-1500 ± 1000	
Q (min.) at 1 MHz	500	500	500	500	500	200	200	
Self Resonant Frequency at Maximum Rated Capacitance	2.1 GHz	1.5 GHz	1.16 GHz	0.92 GHz	0.81 GHz	0.70 GHz	0.60 GHz	
Insulation Resistance	10 <sup>4</sup> megaohms							
Operating Temperature	-40°C to +85°C							
Torque	11 to 72 gf.cm max.   0.14 to 1.0 in-oz max.							
Packaging	All parts furnished on 12mm tape and reel; 1,000 pcs per reel							

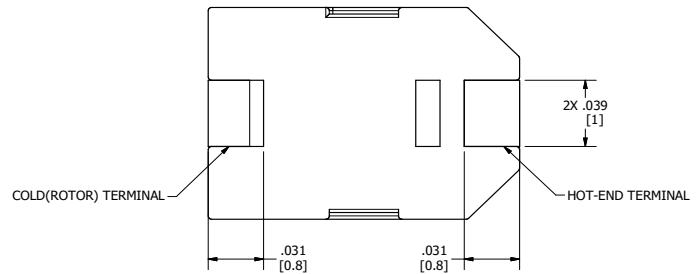


### Land Pattern Dimensions (inches/mm)

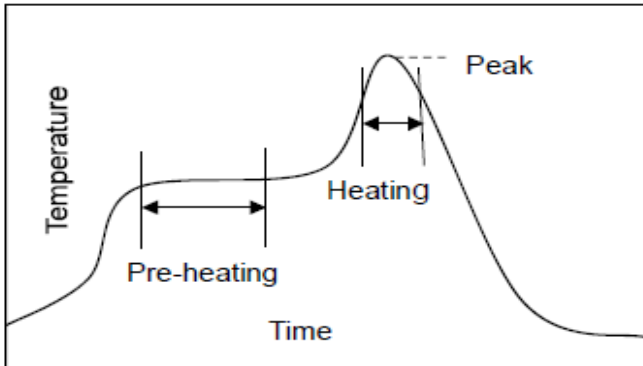


SUGGESTED FOOTPRINT  
SOLDER PASTE THICKNESS OF 0.15 [mm] RECOMMENDED

### Dimensions (inches/mm)

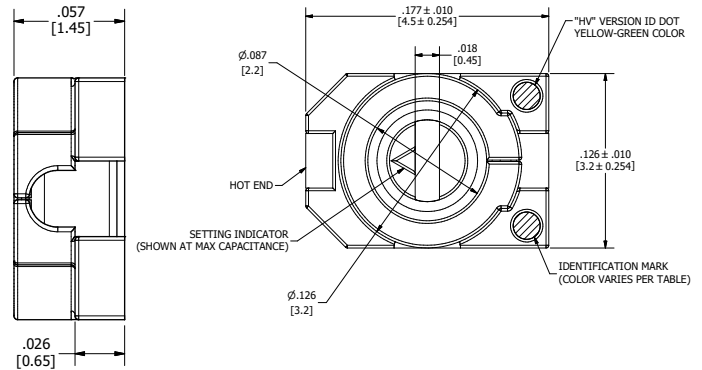


### Suggested Soldering Profile



Stage	SAC305 Solder	Eutectic Solder
<b>Pre-Heating</b>	Temp: 150°C - 180°C Time: 60 - 120 Seconds	Temp: 120°C - 150°C Time: 60 - 120 Seconds
<b>Heating</b>	Temp: 220°C Min Time: 30 - 60 Seconds	Temp: 183°C Min Time: 30 - 60 Seconds
<b>Peak Heat</b>	Temp: 265°C Time: 3 Seconds Max	Temp: 265°C Time: 3 Seconds Max
<b>Reflow Cycles</b>	2 Times Max	2 Times Max
<b>Soldering Iron</b>		
<b>Spec</b>	Temperature: 400°C Max Time: 3 Seconds Max	

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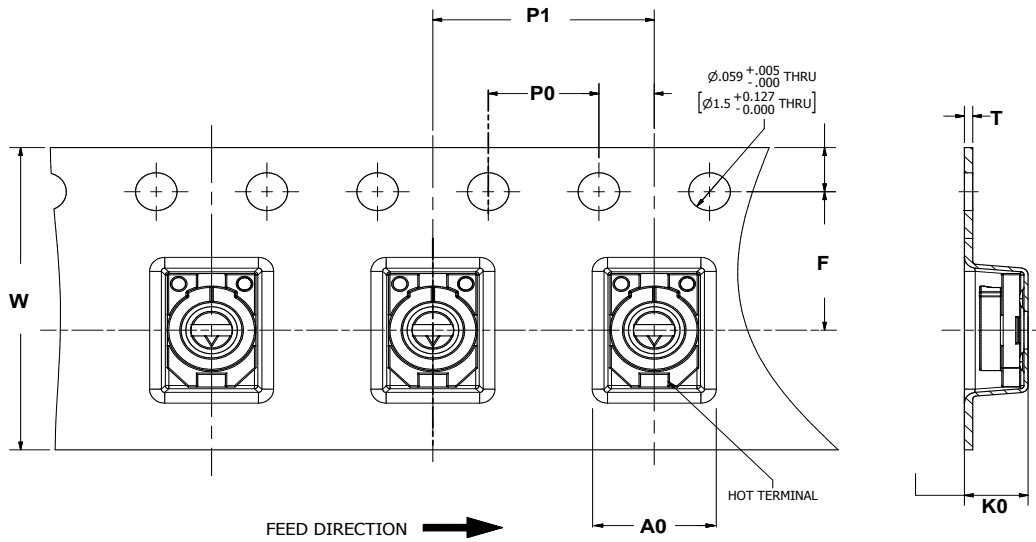


## ≠ Tape & Reel Specifications

Series	Measurement Unit	W	P0	P1	T	F	Minimum Qty per Reel	Tape Material
46HV	in.	0.472	0.157	0.315	0.012	0.217	1000	Plastic
	mm	12.0	4.0	8.0	0.3	5.5		

$A_0K_0$

- Determined by component size. Typical clearance between the cavity and the component is: .50 (.002) min to .65 (.026) max for 12mm tape.
- The component cannot rotate more than 20° within the determined cavity.





3mm Surface Mount  
Trimmer Capacitors

**56 Series**

### Product Features

- Low Cost Applications
- Low Temperature Drift
- Designed for reflow soldering
- Low Magnetics
- Surface Mount Design
- Half Turn Adjustment
- Tape & Reel Packaging
- RoHS Compliant

### Product Applications

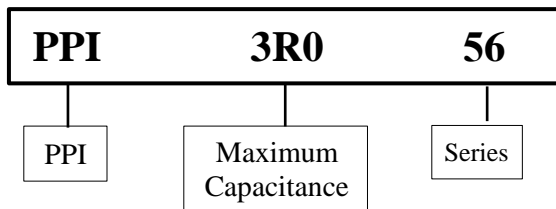
- NMR/ MRI Applications/Pre-Amplifiers
- Commercial Instrumentation
- RFID
- Tunable Filter Circuits



### Specifications

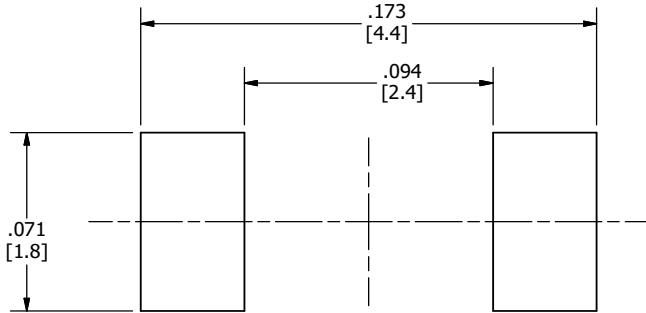
- Capacitance Range: 1.5pF to 40pF
- DC Working Voltage: 125V
- DC Withstanding Voltage: 250V

### Part Numbering



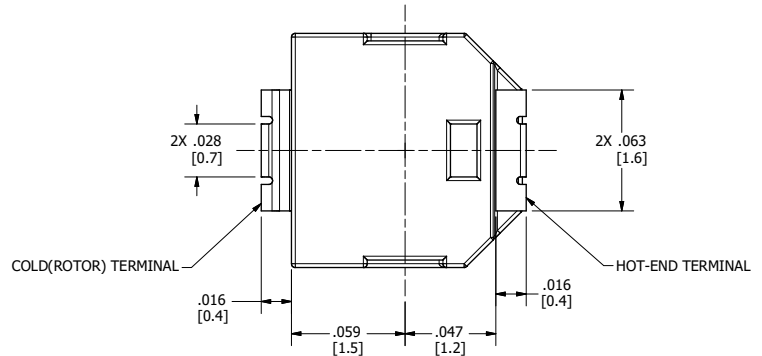
Part Number	PPI3R056	PPI6R056	PPI10056	PPI15056	PPI20056	PPI30056	PPI40056	
Capacitance (pF)	Minimum	1.5	2.0	2.0	3.0	4.5	5.5	8.0
	Maximum	3.0 <sup>+50%</sup> <sub>-0%</sub>	6.0 <sup>+50%</sup> <sub>-0%</sub>	10.0 <sup>+100%</sup> <sub>-0%</sub>	15.0 <sup>+100%</sup> <sub>-0%</sub>	20.0 <sup>+100%</sup> <sub>-0%</sub>	30.0 <sup>+100%</sup> <sub>-0%</sub>	40.0 <sup>+100%</sup> <sub>-0%</sub>
Marking Color	Black	Blue	White	Pink	Red	Orange	Yellow	
DC Working Voltage	125	125	125	125	125	125	125	
DC Withstanding Voltage	220	220	220	220	220	220	220	
Temperature Coefficient (ppm/°C)	0 ± 200	0 ± 300	0 ± 300	0 ± 500	0 ± 500	-1500 ± 1000	-1500 ± 1000	
Q (min.) at 1 MHz	500	500	500	500	500	200	200	
Self Resonant Frequency at Maximum Rated Capacitance	2.9 GHz	2.05 GHz	1.6 GHz	1.3 GHz	1.15 GHz	0.92 GHz	0.84 GHz	
Insulation Resistance	10 <sup>4</sup> megaohms							
Operating Temperature	-40°C to +85°C							
Torque	11 to 72 gf.cm max.   0.14 to 1.0 in-oz max.							
Packaging	All parts furnished on 12mm tape and reel; 1,000 pcs per reel							

**Land Pattern Dimensions** (inches/mm)

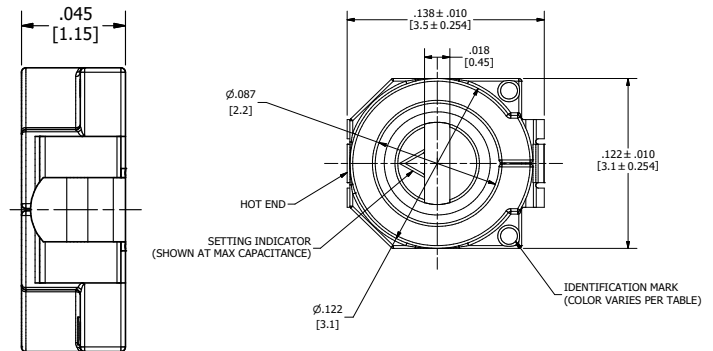
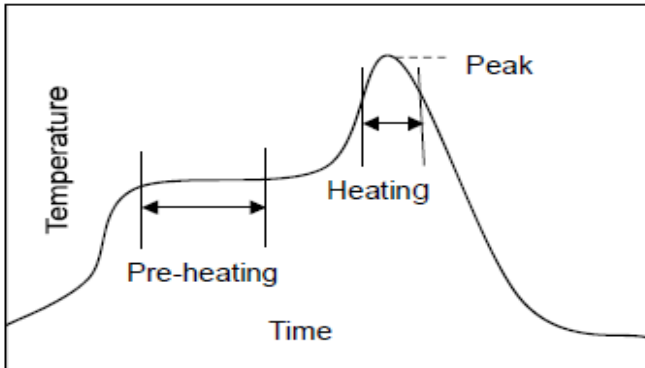


**SUGGESTED FOOTPRINT**  
SOLDER PASTE THICKNESS OF 0.15 [mm] RECOMMENDED

**Dimensions** (inches/mm)



**Suggested Soldering Profile**



Stage	SAC305 Solder	Eutectic Solder
<b>Pre-Heating</b>	Temp: 150°C - 180°C Time: 60 - 120 Seconds	Temp: 120°C - 150°C Time: 60 - 120 Seconds
<b>Heating</b>	Temp: 220°C Min Time: 30 - 60 Seconds	Temp: 183°C Min Time: 30 - 60 Seconds
<b>Peak Heat</b>	Temp: 265°C Time: 3 Seconds Max	Temp: 265°C Time: 3 Seconds Max
<b>Reflow Cycles</b>	2 Times Max	2 Times Max
<b>Soldering Iron</b>		
<b>Spec</b>	Temperature: 400°C Max Time: 3 Seconds Max	

While PPI makes every effort to provide up to date and complete industry standard information, individual reflow equipment and applications vary. No guarantee is given that the suggested profile is suitable for any application or use.



**Tape & Reel Specifications**

Series	Measurement Unit	W	P0	P1	T	F	Minimum Qty per Reel	Tape Material
56	in.	0.472	0.157	0.315	0.012	0.217	1000	Plastic
	mm	12.0	4.0	8.0	0.3	5.5		

A<sub>0</sub>K<sub>0</sub>

- Determined by component size. Typical clearance between the cavity and the component is: .50 (.002) min to .65 (.026) max for 12mm tape.
- The component cannot rotate more than 20° within the determined cavity.

