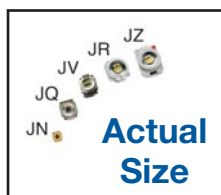
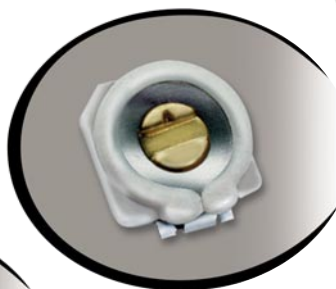


Ceramic Chip Trimmer Capacitors

**J Series
Outperforms
All Other Similar
Trimmers**



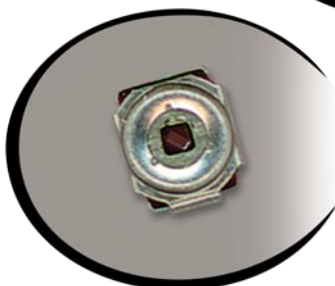
**JZ
Series**



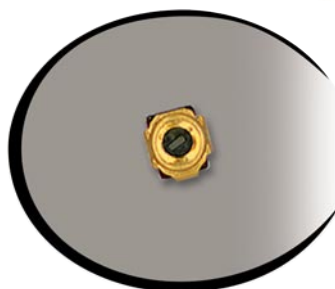
**JR
Series**



**JV
Series**



**JQ
Series**



**JN
Series**



Most Stable Over Time

- <1% Capacitance Drift
- High Q Performance
- Tape & Reel Format
- In Stock and Ready to Ship

**Introducing the JZ_HV and JR_HV Series:
High Voltage in a small package design!**



2250 Northwood Drive
Salisbury, Maryland 21801
Phone: 410.749.2424
www.voltronicscorp.com

We now offer our JZ and JR series in a High-Voltage package: the JZ_HV and JR_HV. See pages 3 and 5 respectively for further details and be sure to order your engineering kits today!

Dear Valued Customer:

Voltronics has been offering high-performance, high Q, half-turn trimmer capacitors for over two decades. The J-Series is a proven performer that delivers uncompromising stability for even the most demanding applications, such as RFID, medical devices, cellular technologies, and much more.

In years prior, we offered the J-Series exclusively to the United States but through recent acquisition as the manufacturer, we now supply the entire line worldwide.

As indicated in the pages of this brochure, we offer the series in a variety of packages and specifications. Some additional information about the J-Series includes the following:

- We have sold tens of millions of J-Series components.
- They are the component of choice in thousands of designs worldwide.
- We offer direct-cross replacements for Sanshin part numbers.
- We offer engineering kits for all our J-Series components.

When your design demands indiscriminate performance, and when reliability becomes a high priority, choose the very best, which is the Voltronics J-Series ceramic chip trimmer capacitors.

Sincere regards,

The Voltronics Team



**World-Class Technology
Worldwide Availability**

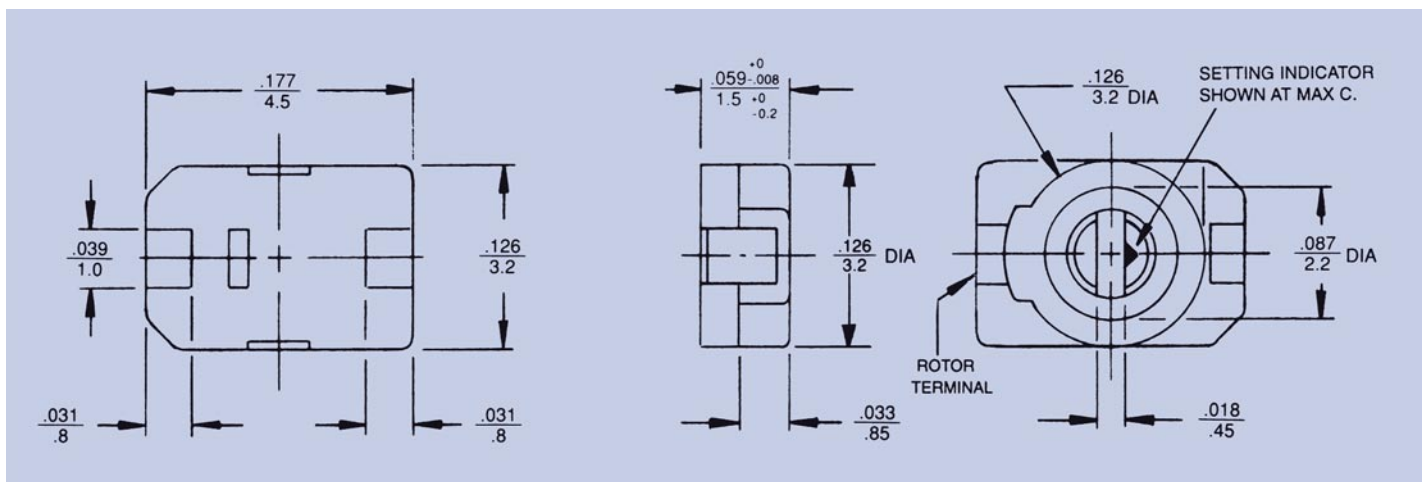
Product Selection Guide

Product Line	Actual Size Length x Width x Height	Part Number	Cap. Range Min. Max. pF	Temperature Coefficient	SRF GHz	Mounting	Page
JZ and JZ_HV*	.177 x .126 x .059 in 4.5 x 3.2 x 1.5 mm	JZ030	1.5 – 3.0	0±200	2.1	Surface	2 & 3
		JZ060	2.0 – 6.0	0±300	1.5		
		JZ080	3.0 – 8.0	–750±500	1.25		
		JZ100	2.0 – 10.0	0±300	1.16		
		JZ150	3.0 – 15.0	0±300	0.92		
		JZ200	4.5 – 20.0	0±500	0.81		
		JZ300	5.5 – 30.0	–750±500	0.7		
		JZ400	8.0 – 40.0	–750±500	0.6		
* Note: We now offer the series in a HIGH VOLTAGE VERSION. The JZ_HV series specifications are identical to the specifications listed above with this important exception: DC Working Voltage 350DC, Withstanding Voltage 750.							
JR and JR_HV*	.138 x .122 x .045 in 3.5 x 3.1 x 1.15 mm	JR030	1.5 – 3.0	0±200	2.9	Surface	4 & 5
		JR060	2.0 – 6.0	0±300	2.05		
		JR080	3.0 – 8.0	–750±500	1.8		
		JR100	2.0 – 10.0	0±300	1.6		
		JR150	3.0 – 15.0	0±500	1.3		
		JR200	4.5 – 20.0	0±500	1.15		
		JR300	5.5 – 30.0	–750±500	0.92		
		JR400	8.0 – 40.0	–750±500	0.84		
* Note: We now offer the series in a HIGH VOLTAGE VERSION. The JR_HV series specifications are identical to the specifications listed above with this important exception: DC Working Voltage 350DC, Withstanding Voltage 750.							
JV	.126 x .098 x .049 in 3.2 x 2.5 x 1.25 mm	JV010	0.5 – 1.0	0±300	4.6	Surface	6
		JV025	0.65 – 2.5	0±300	2.9		
		JV030	1.5 – 3.0	0±300	2.6		
		JV060	2.5 – 6.0	0±300	1.9		
		JV100	3.0 – 10.0	0±300	1.4		
		JV200	4.5 – 20.0	–750±500	1.0		
		JV250	5.5 – 25.0	–750±500	0.9		
		JV450	8.0 – 45.0	–1000±500	0.6		
JQ	.106 x .087 x .04 in 2.7 x 2.2 x 1.0 mm	JQ060	3.0 – 6.0	0±300	1.6	Surface	7
		JQ100	3.5 – 10.0	0±300	1.2		
		JQ200	7.0 – 20.0	–750±500	0.9		
JN	.067 x .059 x .035 in 1.7 x 1.5 x 0.9 mm	JN010	0.55 – 1.0	0±300	6.0	Surface	8
		JN015	0.7 – 1.5	0±300	4.8		
		JN040	1.5 – 4.0	0±500	2.7		
		JN080	3.0 – 8.0	–750±500	1.8		
Engineering Kits and Q Data Charts							9

JZ SERIES - Ceramic Chip Trimmer Capacitors

General Specifications

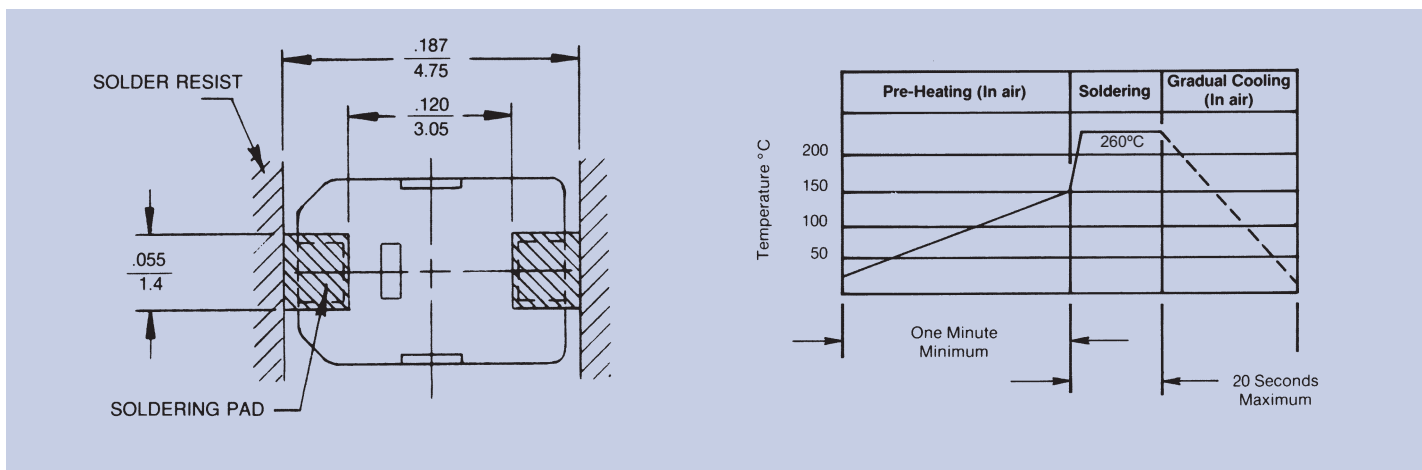
Part Number	JZ030	JZ060	JZ080	JZ100	JZ150	JZ200	JZ300	JZ400	
Capacitance (pF)	Minimum	1.5	2.0	3.0	2.0	3.0	4.5	5.5	8.0
	Maximum	3.0 ^{+50%} _{- 0%}	6.0 ^{+50%} _{- 0%}	8.0 ^{+50%} _{- 0%}	10.0 ^{+100%} _{- 0%}	15.0 ^{+100%} _{- 0%}	20.0 ^{+100%} _{- 0%}	30.0 ^{+100%} _{- 0%}	40.0 ^{+100%} _{- 0%}
Marking Color	Black	Blue	Violet	White	Pink	Red	Orange	Yellow	
DC Working Voltage	125	125	125	125	125	125	125	125	
DC Withstanding Voltage	250	250	250	250	250	250	250	250	
Temperature Coefficient (ppm/°C)	0 ± 200	0 ± 300	-750 ± 500	0 ± 300	0 ± 300	0 ± 500	-750 ± 500	-750 ± 500	
Q (min.) at 1 MHz	500	1000	1500	1500	1500	1500	1500	1500	
Self Resonant Frequency at Maximum Rated Capacitance	2.1 GHz	1.5 GHz	1.25 GHz	1.16 GHz	0.92 GHz	0.81 GHz	0.70 GHz	0.60 GHz	
Insulation Resistance	10 ⁴ megohms								
Operating Temperature	-40°C to +85°C								
Torque	0.14 to 1.0 in-oz								
Packaging	All parts furnished on 12mm tape and reel. 1,000 pcs. per reel.								



Drawing tolerances where not specified ± 0.008 in.
 ± 0.200 mm

SOLDER PAD LAYOUT

RECOMMENDED REFLOW SOLDER TEMPERATURE PROFILE FOR ALL J-SERIES TRIMMER CAPACITORS

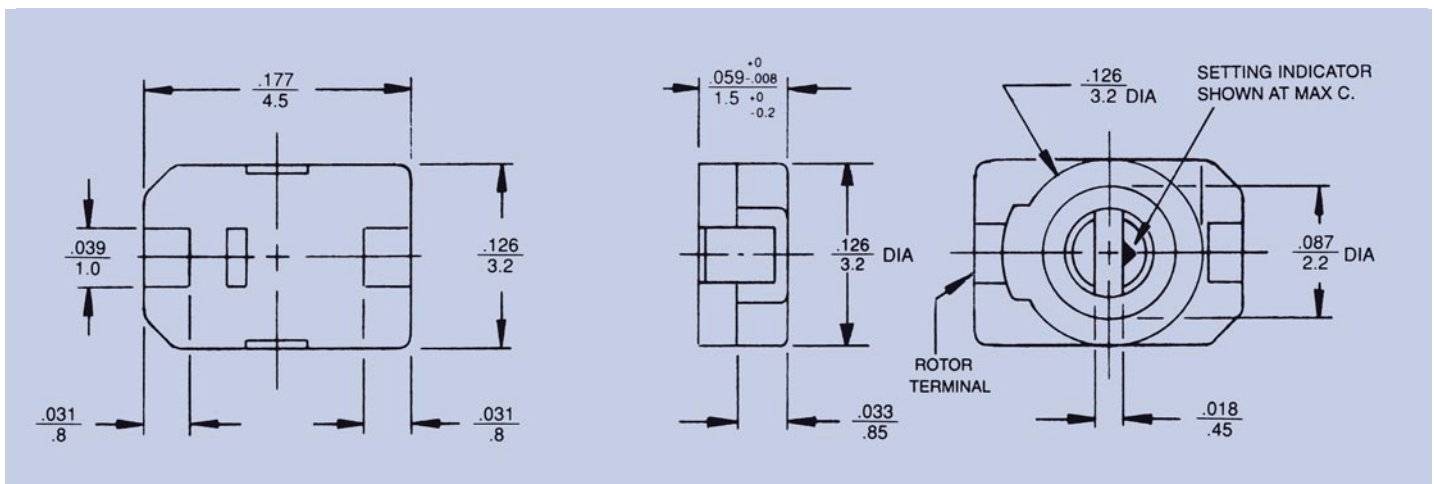


Recommended thickness of solder paste 0.15mm

JZ_HV SERIES - Ceramic Chip Trimmer Capacitors

General Specifications

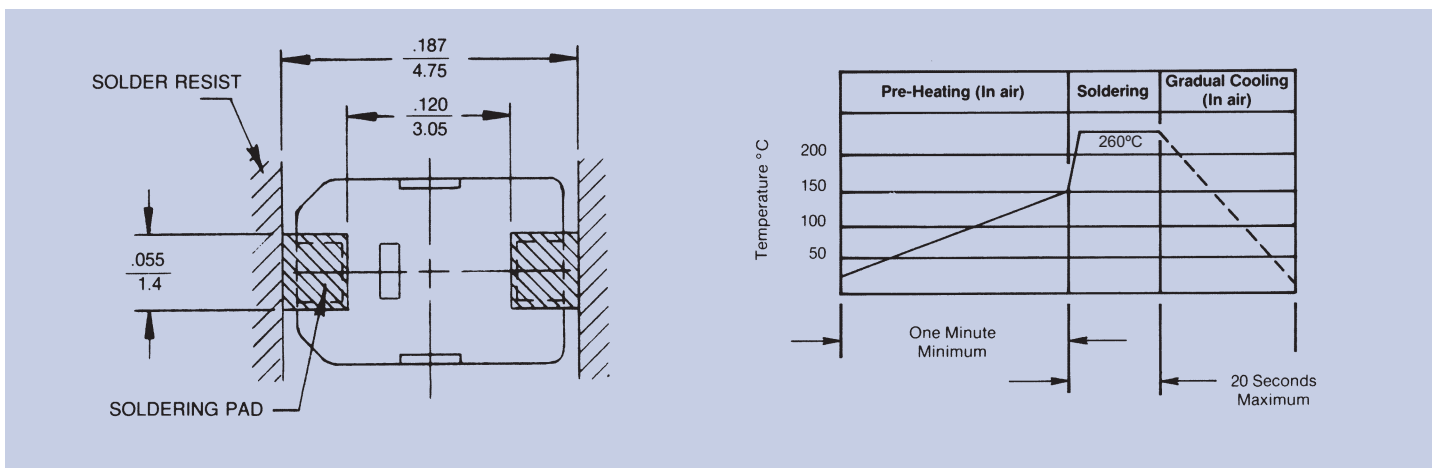
Part Number	JZ030	JZ060	JZ080	JZ100	JZ150	JZ200	JZ300	JZ400
Capacitance (pF)	1.5	2.0	3.0	2.0	3.0	4.5	5.5	8.0
Minimum	1.5	2.0	3.0	2.0	3.0	4.5	5.5	8.0
Maximum	3.0 ^{+50%} _{-0%}	6.0 ^{+50%} _{-0%}	8.0 ^{+50%} _{-0%}	10.0 ^{+100%} _{-0%}	15.0 ^{+100%} _{-0%}	20.0 ^{+100%} _{-0%}	30.0 ^{+100%} _{-0%}	40.0 ^{+100%} _{-0%}
Marking Color	Black	Blue	Violet	White	Pink	Red	Orange	Yellow
DC Working Voltage	350	350	350	350	350	350	350	350
DC Withstanding Voltage	750	750	750	750	750	750	750	750
Temperature Coefficient (ppm/°C)	0 ± 200	0 ± 300	-750 ± 500	0 ± 300	0 ± 300	0 ± 500	-750 ± 500	-750 ± 500
Q (min.) at 1 MHz	500	1000	1500	1500	1500	1500	1500	1500
Self Resonant Frequency at Maximum Rated Capacitance	2.1 GHz	1.5 GHz	1.25 GHz	1.16 GHz	0.92 GHz	0.81 GHz	0.70 GHz	0.60 GHz
Insulation Resistance	10 ⁴ megohms							
Operating Temperature	-40°C to +85°C							
Torque	0.14 to 1.0 in-oz							
Packaging	All parts furnished on 12mm tape and reel. 1,000 pcs. per reel.							



Drawing tolerances where not specified ± 0.008 in.
 ± 0.200 mm

SOLDER PAD LAYOUT

RECOMMENDED REFLOW SOLDER TEMPERATURE PROFILE FOR ALL J-SERIES TRIMMER CAPACITORS

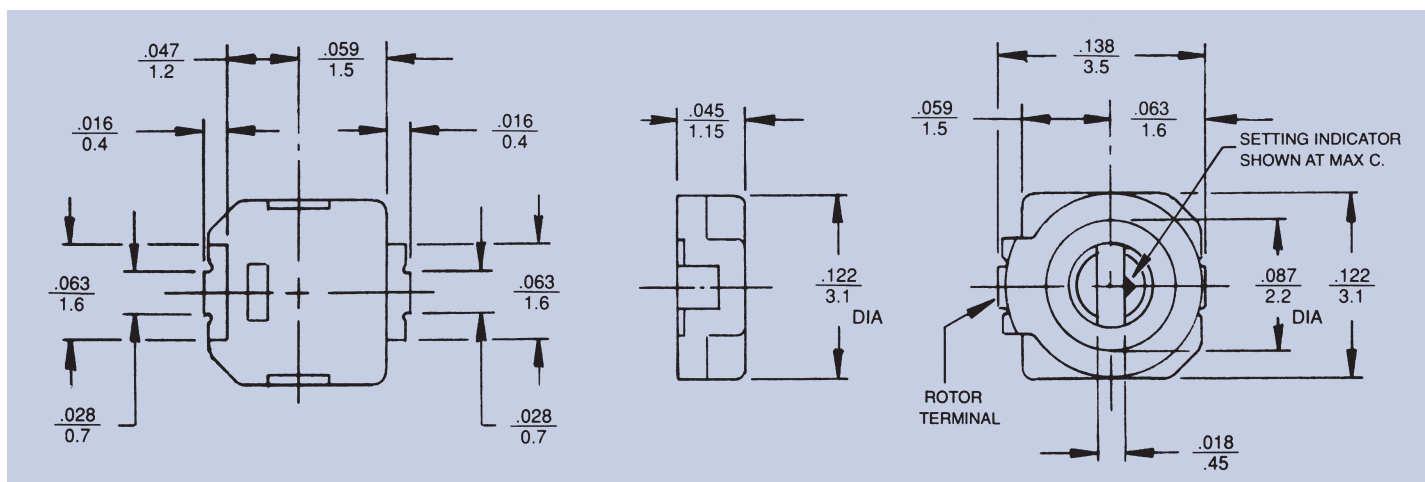


Recommended thickness of solder paste 0.15mm

JR SERIES - Ceramic Chip Trimmer Capacitors

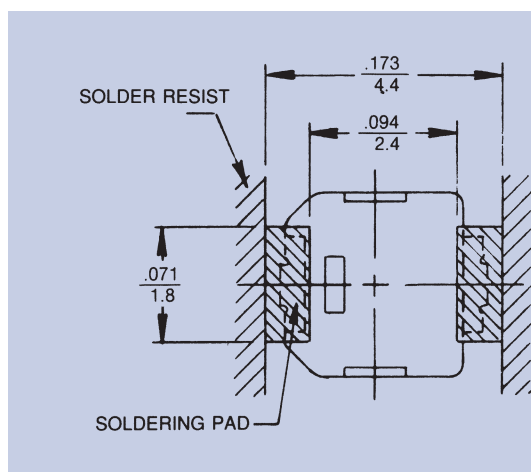
General Specifications

Part Number	JR030	JR060	JR080	JR100	JR150	JR200	JR300	JR400
Capacitance (pF)	1.5	2.0	3.0	2.0	3.0	4.5	5.5	8.0
	3.0 ^{+50%} _{-0%}	6.0 ^{+50%} _{-0%}	8.0 ^{+50%} _{-0%}	10.0 ^{+100%} _{-0%}	15.0 ^{+100%} _{-0%}	20.0 ^{+100%} _{-0%}	30.0 ^{+100%} _{-0%}	40.0 ^{+100%} _{-0%}
Marking Color	Black	Blue	Violet	None	Pink	Red	Orange	Yellow
DC Working Voltage	125	125	125	125	125	125	125	125
DC Withstanding Voltage	250	250	250	250	250	250	250	250
Temperature Coefficient (ppm/°C)	0 ± 200	0 ± 300	-750 ± 500	0 ± 300	0 ± 500	0 ± 500	-750 ± 500	-750 ± 500
Q (min.) at 1 MHz	500	1000	1500	1500	1500	1500	1500	1500
Self Resonant Frequency at Maximum Rated Capacitance	2.9 GHz	2.05 GHz	1.8 GHz	1.6 GHz	1.3 GHz	1.15 GHz	0.92 GHz	0.84 GHz
Insulation Resistance	10 ⁴ megohms							
Operating Temperature	-40°C to +85°C							
Torque	0.6 in-oz max.							
Packaging	All parts furnished on 12mm tape and reel. 1,000 pcs. per reel.							

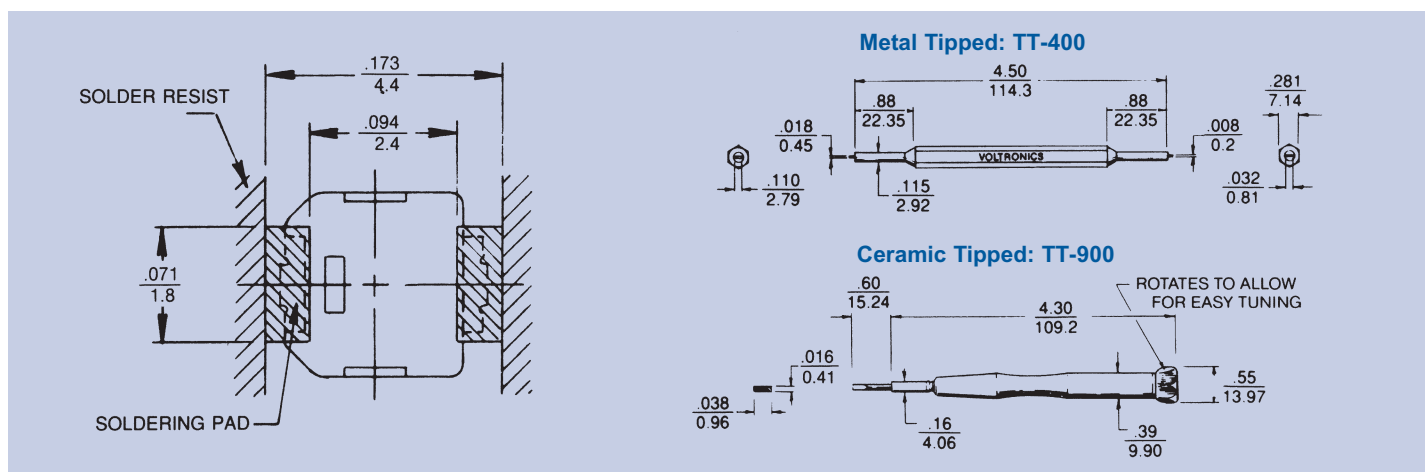


Drawing tolerances where not specified ± 0.008 in.
 ± 0.200 mm

SOLDER PAD LAYOUT



RECOMMENDED TUNING TOOLS FOR JZ AND JR SERIES

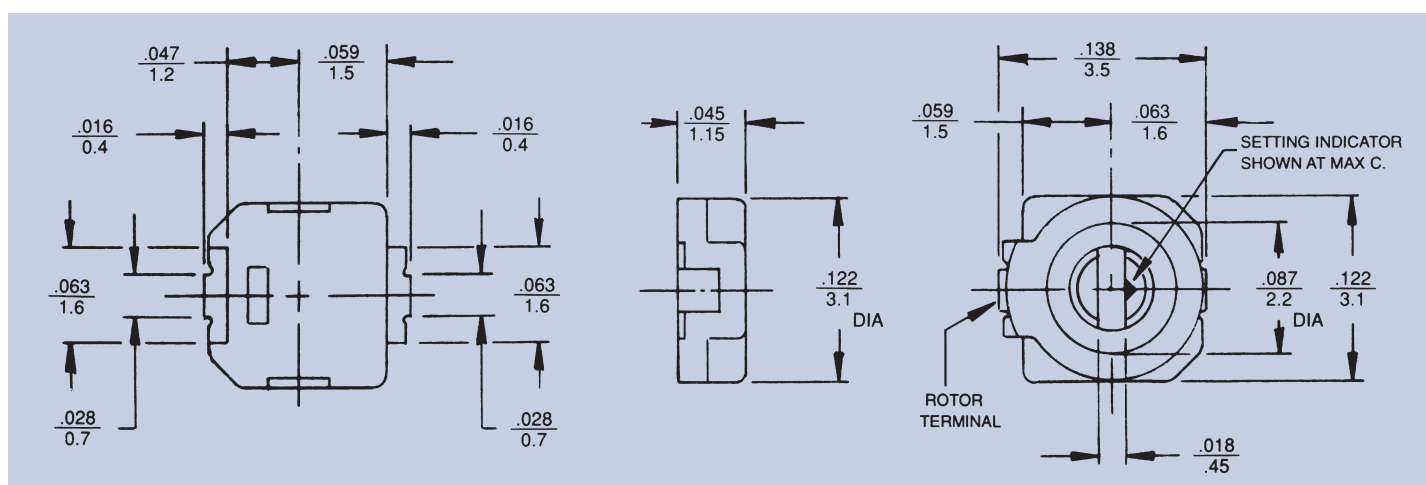


Recommended thickness of solder paste 0.15mm

JR_HV SERIES - Ceramic Chip Trimmer Capacitors

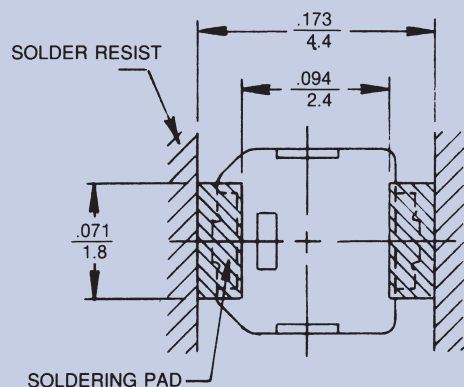
General Specifications

Part Number	JR030	JR060	JR080	JR100	JR150	JR200	JR300	JR400
Capacitance (pF)	1.5	2.0	3.0	2.0	3.0	4.5	5.5	8.0
	3.0 ^{+50%} _{-0%}	6.0 ^{+50%} _{-0%}	8.0 ^{+50%} _{-0%}	10.0 ^{+100%} _{-0%}	15.0 ^{+100%} _{-0%}	20.0 ^{+100%} _{-0%}	30.0 ^{+100%} _{-0%}	40.0 ^{+100%} _{-0%}
Marking Color	Black	Blue	Violet	None	Pink	Red	Orange	Yellow
DC Working Voltage	350	350	350	350	350	350	350	350
DC Withstanding Voltage	750	750	750	750	750	750	750	750
Temperature Coefficient (ppm/°C)	0 ± 200	0 ± 300	-750 ± 500	0 ± 300	0 ± 500	0 ± 500	-750 ± 500	-750 ± 500
Q (min.) at 1 MHz	500	1000	1500	1500	1500	1500	1500	1500
Self Resonant Frequency at Maximum Rated Capacitance	2.9 GHz	2.05 GHz	1.8 GHz	1.6 GHz	1.3 GHz	1.15 GHz	0.92 GHz	0.84 GHz
Insulation Resistance	10 ⁴ megohms							
Operating Temperature	-40°C to +85°C							
Torque	0.6 in-oz max.							
Packaging	All parts furnished on 12mm tape and reel. 1,000 pcs. per reel.							

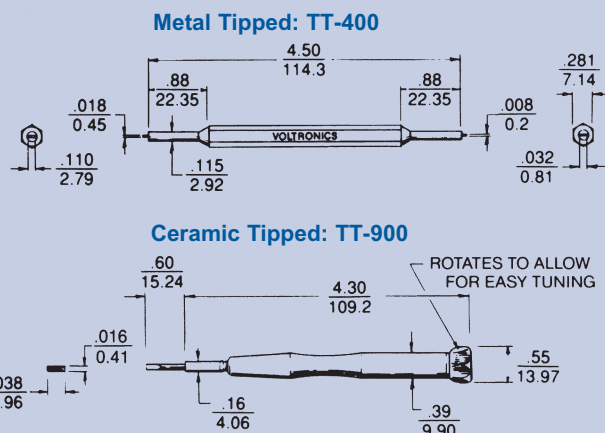


Drawing tolerances where not specified ± 0.008 in.
 ± 0.200 mm

SOLDER PAD LAYOUT



RECOMMENDED TUNING TOOLS FOR JZ AND JR SERIES

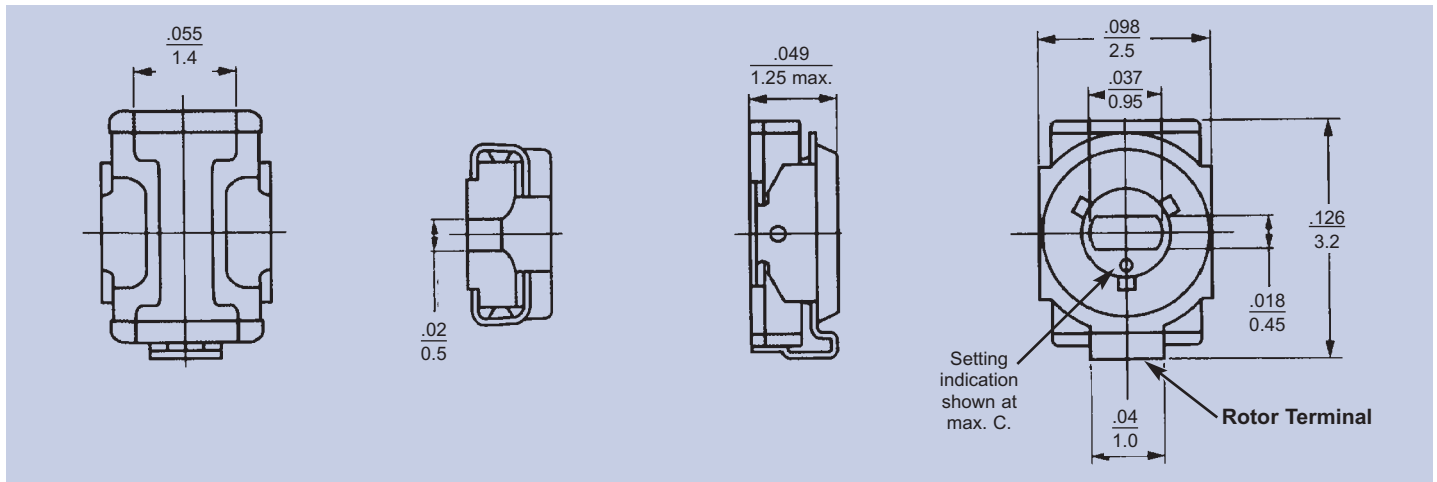


Recommended thickness of solder paste 0.15mm

JV SERIES - Ceramic Chip Trimmer Capacitors

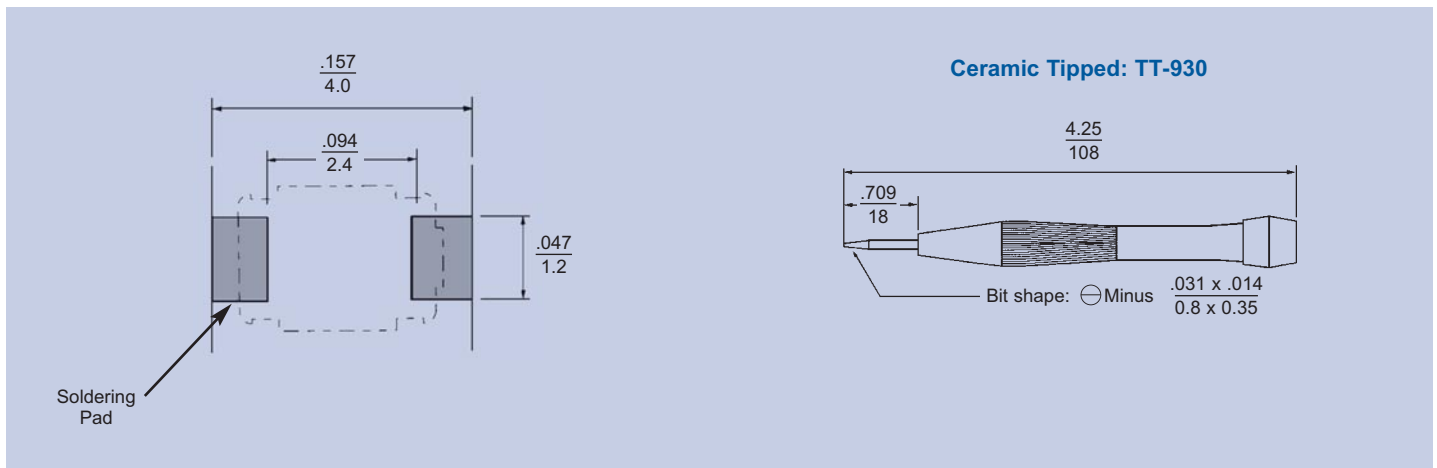
General Specifications

Part Number	JV010	JV025	JV030	JV060	JV100	JV200	JV250	JV450
Capacitance (pF)	0.5	0.65	1.5	2.5	3.0	4.5	5.5	8.0
Minimum	0.5	0.65	1.5	2.5	3.0	4.5	5.5	8.0
Maximum	1.0 ^{+100%} _{-0%}	2.5 ^{+100%} _{-0%}	3.0 ^{+100%} _{-0%}	6.0 ^{+100%} _{-0%}	10.0 ^{+100%} _{-0%}	20.0 ^{+100%} _{-0%}	25.0 ^{+100%} _{-0%}	45.0 ^{+100%} _{-0%}
Marking Color	None	None	None	None	None	None	None	None
DC Working Voltage	25	25	25	25	25	25	25	25
DC Withstanding Voltage	55	55	55	55	55	55	55	55
Temperature Coefficient (ppm/°C)	0±300	0 ±300	0±300	0±300	0±300	-750±500	-750 ±500	-1000±500
Q (min.) at 1 MHz	500	500	500	500	500	500	300	300
Self Resonant Frequency at Maximum Rated Capacitance	4.6 GHz	2.9 GHz	2.6 GHz	1.9 GHz	1.4 GHz	1.0 GHz	0.9 GHz	0.6 GHz
Insulation Resistance	10 ⁴ megohms							
Operating Temperature	-25°C to +85°C							
Torque	0.6 in-oz max.							
Packaging	All parts furnished on 8mm tape and reel. 2,000 pcs. per reel.							



Drawing tolerances where not specified ± 0.020 in.
 ± 0.500 mm

SOLDER PAD LAYOUT

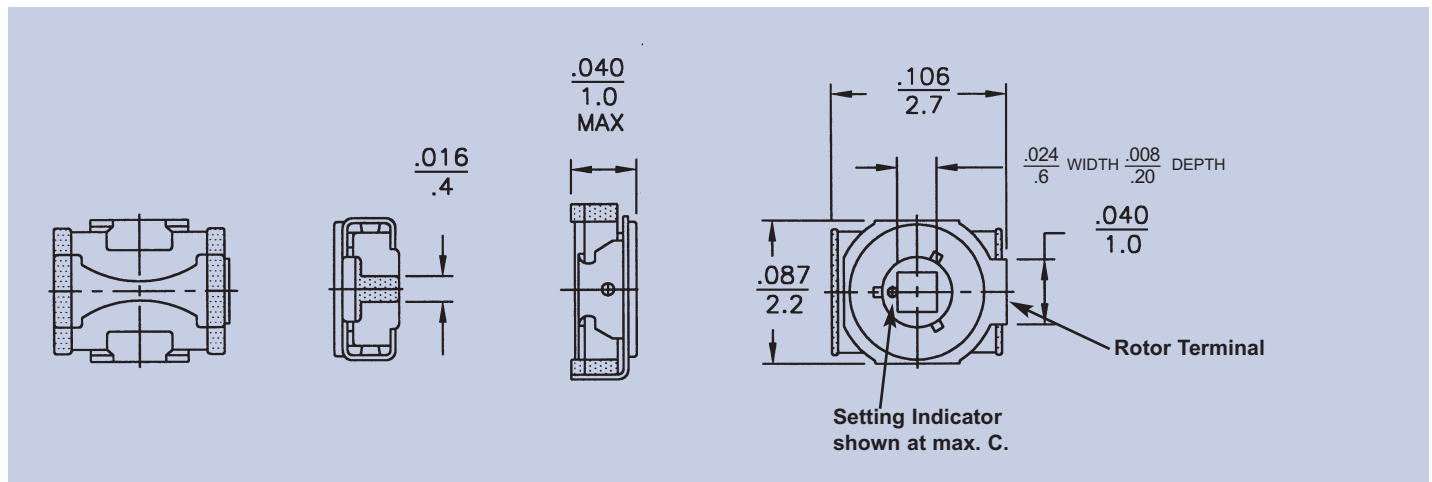


Recommended thickness of solder paste 0.15mm

JQ SERIES - Ceramic Chip Trimmer Capacitors

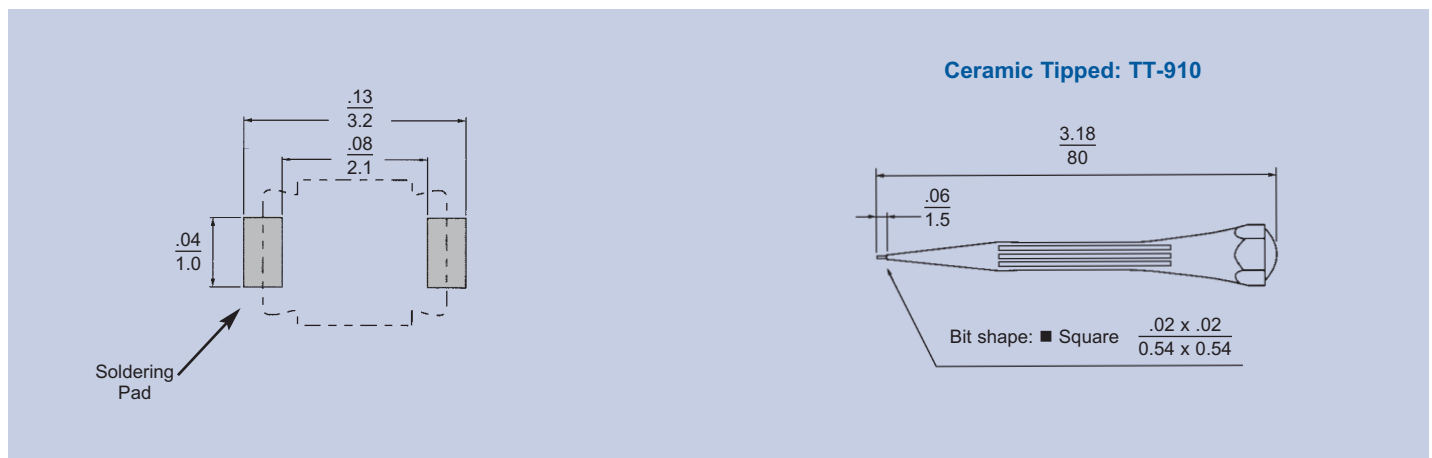
General Specifications

Part Number	JQ060	JQ100	JQ200
Capacitance (pF)	3.0	3.5	7.0
Minimum	6.0	10.0	20.0
Maximum	$+100\%$ -0%	$+100\%$ -0%	$+100\%$ -0%
Marking Color	None	None	None
DC Working Voltage	25	25	25
DC Withstanding Voltage	55	55	55
Temperature Coefficient (ppm/°C)	0 ± 300	0 ± 300	-750 ± 500
Q (min.) at 1 MHz	500	500	500
Self Resonant Frequency at Maximum Rated Capacitance	1.6 GHz	1.2 GHz	0.9 GHz
Insulation Resistance	10 ⁴ megohms		
Operating Temperature	-25°C to +85°C		
Torque	.07 to 7.0 in-oz		
Packaging	All parts furnished on 8mm tape and reel. 3,000 pcs. per reel.		



Drawing tolerances where not specified ± 0.020 in.
 ± 0.500 mm

SOLDER PAD LAYOUT

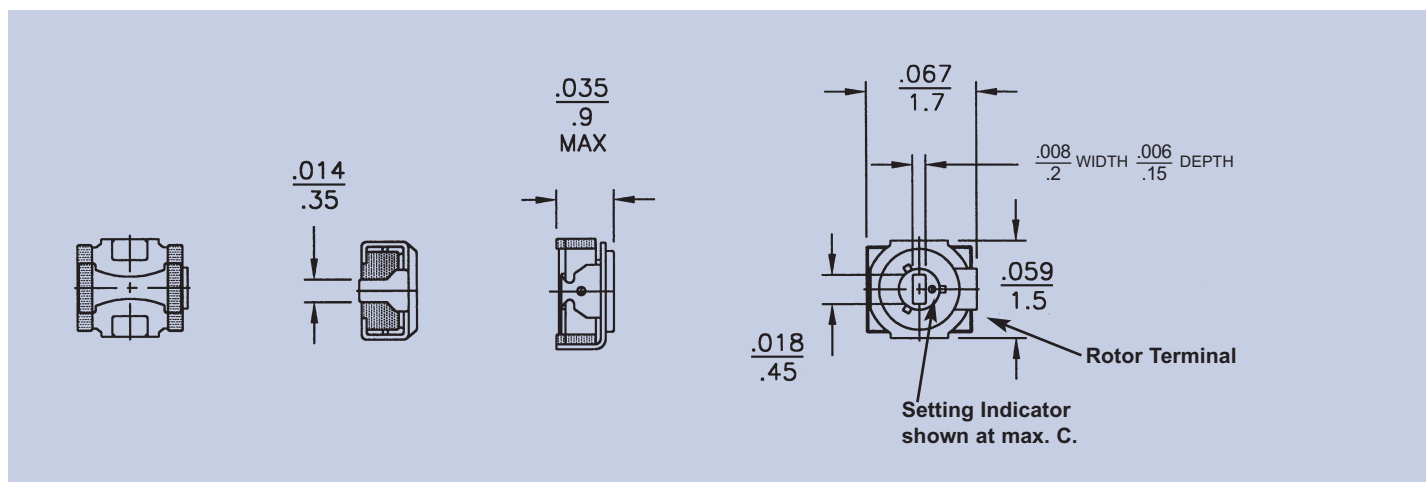


Recommended thickness of solder paste 0.15mm

JN SERIES - Ceramic Chip Trimmer Capacitors

General Specifications

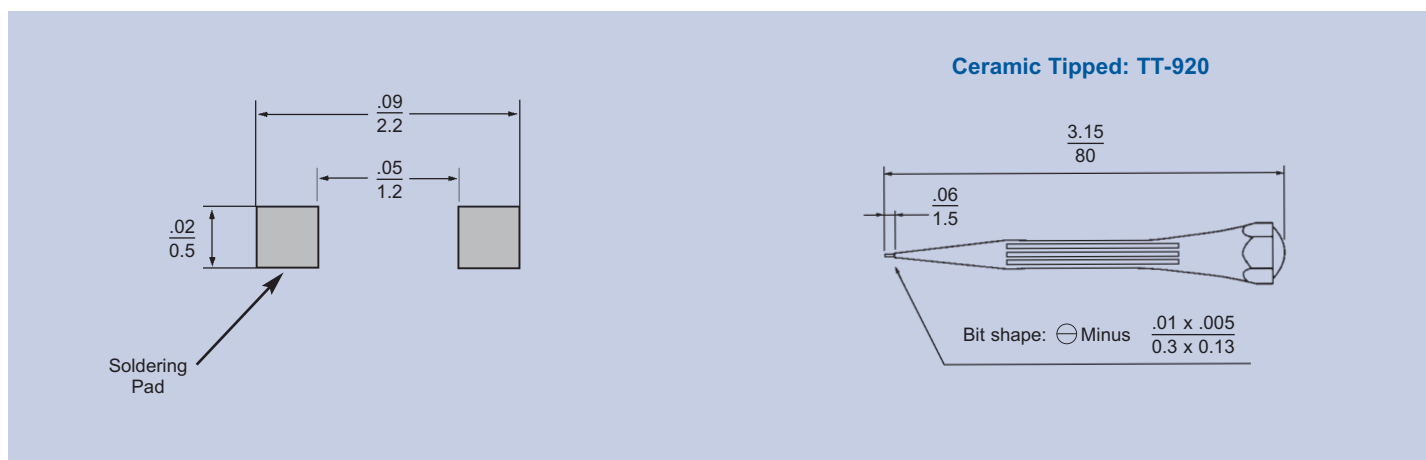
Part Number	JN010	JN015	JN040	JN080
Capacitance (pF)	0.55	0.7	1.5	3.0
Minimum	1.0 ^{+100%} _{-0%}	1.5 ^{+100%} _{-0%}	4.0 ^{+100%} _{-0%}	8.0 ^{+100%} _{-0%}
Maximum				
Marking Color	None	None	None	None
DC Working Voltage	25	25	25	25
DC Withstanding Voltage	55	55	55	55
Temperature Coefficient (ppm/°C)	0 ± 300	0 ± 300	0 ± 500	-750 ± 500
Q (min.) at 1 MHz	500	500	300	300
Self Resonant Frequency at Maximum Rated Capacitance	6.0 GHz	4.8 GHz	2.7 GHz	1.8 GHz
Insulation Resistance	10 ⁴ megohms			
Operating Temperature	-25°C to +85°C			
Torque	.014 to .14 in-oz			
Packaging	All parts furnished on 8mm tape and reel. 3,000 pcs. per reel.			



Drawing tolerances where not specified $\pm \frac{0.020}{0.500}$ in.
mm

SOLDER PAD LAYOUT

RECOMMENDED TUNING TOOL FOR JN SERIES



Recommended thickness of solder paste 0.15mm

Figure 1 is a log-log plot showing the relationship between the number of cycles to failure (N_f) and the logarithm of the mean stress ($\log \sigma_m$) for various JR series. The y-axis represents N_f on a logarithmic scale from 10^1 to 10^6 . The x-axis represents $\log \sigma_m$ on a linear scale from 1.90 to 2.00. The curves are labeled as follows:

- JR200
- JR300
- JR400
- JR600
- JR800
- JR100
- JR150

The curves generally show that N_f decreases as $\log \sigma_m$ increases, with higher JR series values corresponding to higher N_f for a given $\log \sigma_m$.

A log-log plot showing the Q factor (Y-axis, ranging from 1 to 10,000) versus Frequency in MHz (X-axis, ranging from 50 to 5000). Four curves are shown, representing different capacitor types: JVS10, JV100, JV200, and JV450. The Q factor decreases as frequency increases for all types. JVS10 maintains the highest Q factor across the frequency range, while JV450 has the lowest Q factor at higher frequencies.

Frequency (MHz)	JVS10	JV100	JV200	JV450
100	~1000	~800	~600	~400
250	~1200	~600	~400	~250
500	~1000	~400	~250	~150
750	~800	~300	~180	~100
1000	~600	~250	~150	~80
2000	~300	~120	~70	~40
4000	~150	~60	~35	~20

The graph shows the Q factor versus Frequency (MHz) for three different inductors. The y-axis is logarithmic, ranging from 1 to 10,000. The x-axis is logarithmic, ranging from 50 to 2,000 MHz. The three curves represent different inductors: J0200, J0100, and J0060. J0200 has the highest Q factor at low frequencies (around 50 MHz), while J0060 has the highest Q factor at high frequencies (around 1,500 MHz). J0100 is in the middle for both axes.

Frequency (MHz)	Q (J0200)	Q (J0100)	Q (J0060)
50	~600	-	-
100	~400	-	-
200	~250	~800	-
500	~100	~300	~100
1000	~10	~30	~100
1500	-	-	~10

Q

10000

1000

100

10

1

JN015

JN040

JN080

JN010

Frequency (MHz)

100 250 500 750 1000 1500 2000 3000 4000 5000 6000

Kit #	Quantity	Description
JZ Kit*	4	Each Capacitance Range
JZ-HV Kit*		
JR Kit*	4	
JR-HV Kit*	4	
JV Kit**	5	
JQ Kit**	5	
JN Kit**	5	

* Tuning tools are included with this kit.
 ** Tuning tools are not included with this kit.
 Please inquire about tuning tools when ordering.

The J-Series trimmer capacitors can withstand cleaning cycles up to 10 PSI and have been used by customers for more than a decade in many diverse environmental conditions. Without knowing your particular washing or cleaning environment, we recommend these basic guidelines:

- * If a water wash process is used and water does get inside, we recommend that the parts be heated above 100C for a minimum of 15 minutes, so that the water evaporates. After this, the rotor should be turned 1-2 times to redistribute the internal grease.

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Fax: +1 443 260 2268
Email: sales@klmicrowave.com

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email: info@voltronicscorp.com



www.dovercmp.com



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Mouser Electronics

Authorized Distributor

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Voltronics:

[JZ400HV](#) [JZ300HV](#)

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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