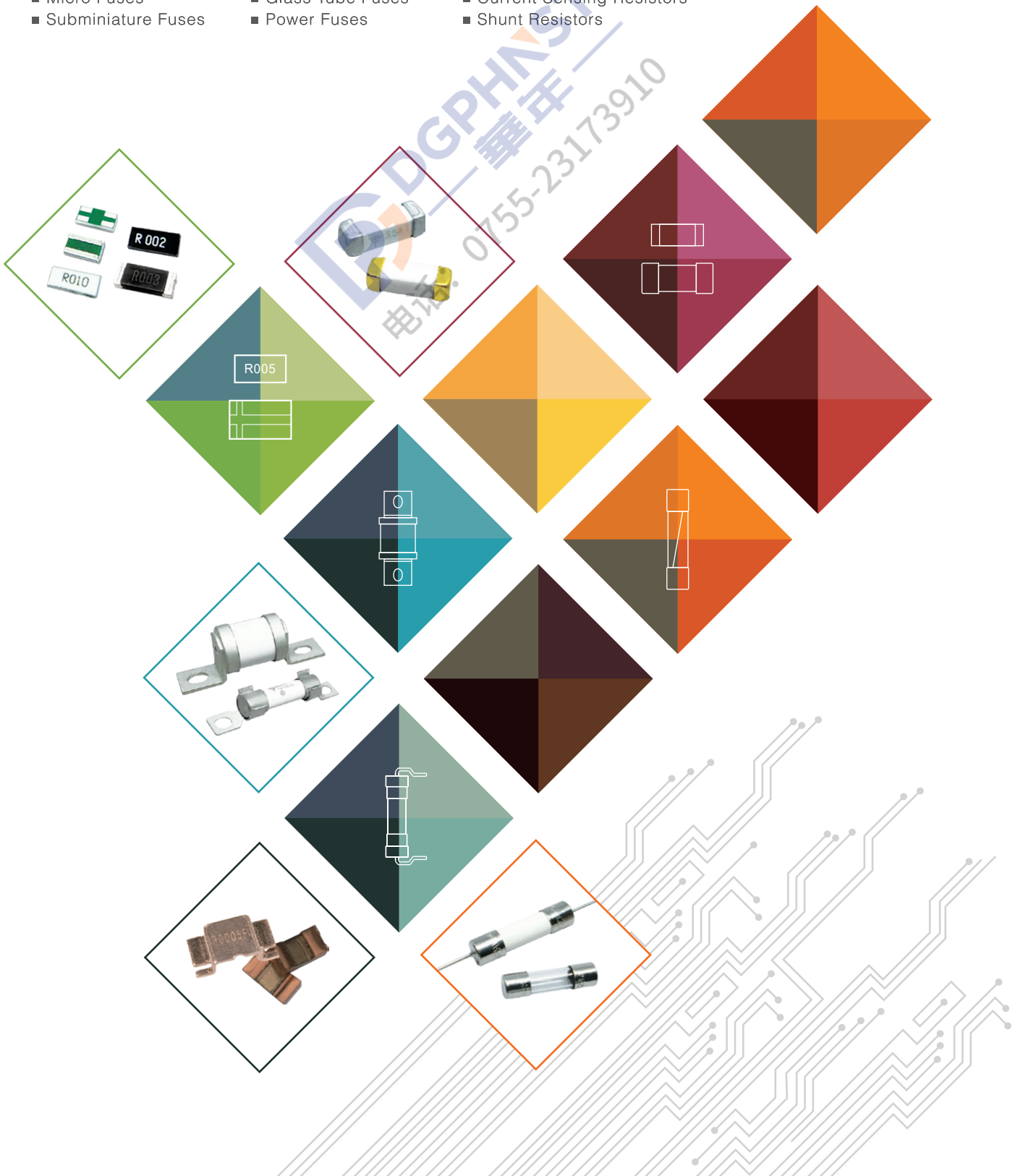


# PRODUCT OVERVIEW

- Surface Mount Fuses
- Micro Fuses
- Subminiature Fuses
- Ceramic Tube Fuses
- Glass Tube Fuses
- Power Fuses
- FuseHolders & Accessories
- Current Sensing Resistors
- Shunt Resistors





About Walter 华德介绍

In order to become closer to our customers and provide better services, the factory was established in the Yangtze River Delta-Jiangsu Wujiang in the year 2000. The products are not only sold in China but also exported all over the world. In 2006, the company received technical support from Japan's major manufacturers of current sense resistors, and began to develop resistance components, while obtaining certifications from renown manufacturers. In 2015, the company launched power fuses. Markets includes solar systems, industrial power supplies, communication power supplies, UPS, power batteries, electric vehicles, instrumentation, etc.

2000年设厂于长三角—江苏吴江，产品不仅内销中国，更出口世界各地。2006年，获得日本大厂电流感测电阻相关产品技术支持，开始发展电阻元件，并获得知名大厂认证。2015年推出电力保险丝，市场涵盖太阳能系统、工业电源、通讯电源、UPS、电力电池、电动汽车、仪器仪表...等。

Product Development 产品自开发

Walter possesses advanced R&D capability and holds all intellectual property rights. In an effort to enhance product development capabilities, we recruited senior engineers from the Industrial Technology Research Institute of Taiwan to strengthen Walter's engineering team.

In recent years, Walter increased interactions and partnerships with reputable industry groups such as scholastic organizations from Japan, Taiwan, and Mainland China.

华德所有产品均源于自身研发技术，拥有自主品牌和知识产权。为加快产品开发，公司从台湾工研院引入高级研发人才不断壮大技术队伍。近年来，华德加强与外界技术交流与合作，例如与日本学术机构技术交流，与台湾、大陆多所高等院校在电子化工技术领域保持密切的联系和项目合作。

Automated Equipment Production Line 自动化生产线

90% of the automated production equipment is crafted in-house, which greatly enhances production efficiency and the quality of our products.

90%以上先进自主化生产设备，均根据FUSE生产需要而研发制作，大大提高了我们的生产效率、同时提升了我们的品质。

Planet 环保理念

Certifications / 相关认证	Factory / 工厂	
	Suzhou / 苏州	Jiangmen / 江门
ISO 9001	✓	✓
ISO 14001	✓	✓
IATF 16949	✓	✓
IECQ QC080000	✓	

List of Inspection Items 检测项目列举

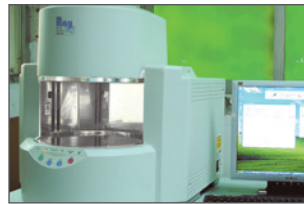
- Salt spray test / 盐雾试验
- Digital microscope test / 电子显微镜测试
- Isolation test / 绝缘测试
- Thermal shock / 热冲击
- Soldering heat resistance test / 耐焊接测试
- Temperature raising test / 温升测试
- Environmental test / 环境实验
- Plated-thickness major material analysis / 镀层厚度仪及材料分析



Electronic Load Testing Equipment (CHROMA) / 电子负载测试机组 (CHROMA)



3D High Rating Microscope (Keyence) / 3D 高倍率立体显微镜(Keyence)



RoHS Elements X-Ray Detector / 岛津光谱仪



For SMD type products, simulating IR RELOW testing / 高温无铅回流焊机(晋力达)





Surface Mount Fuses

Series No.	<b>0603F</b>	<b>0603T</b>	<b>1206F</b>
Fuse Size	1.6 x 0.8mm	1.6 x 0.8mm	3.2 x 1.6mm
Current	500mA~6A	1A~6A	500mA~10A
Voltage	63V / 125V	32V	63V / 125V
Characteristic	Fast Acting Type	Time-Lag Type	Fast Acting Type
Safety Approvals			
Series No.	<b>1206T</b>	<b>1206HC</b>	<b>6125SF</b>
Fuse Size	3.2 x 1.6mm	3.2 x 1.6mm	6.1 x 2.5mm
Current	1A~10A	12A~30A	1A~20A
Voltage	63V	35V / 48V	65V / 125V
Characteristic	Time-Lag Type	High Inrush Type	Inrush Type
Safety Approvals			
Series No.	<b>6125SH</b>	<b>2410F</b>	<b>2410H</b>
Fuse Size	6.1 x 2.5mm	6.1 x 2.5mm	6.1 x 2.5mm
Current	1A~6.3A	1A~5A	1A~5A
Voltage	125V	125V / 250V	125V / 250V
Characteristic	High Inrush Type	Fast Acting Type	High Inrush Type
Safety Approvals			
Series No.	<b>2410LT</b>	<b>1032SF</b>	<b>1032ST / 1032HB</b>
Fuse Size	6.1 x 2.7mm	10.25 x 3.2mm	10.25 x 3.2mm
Current	0.5A~6.3A	20A~60A	0.5A~5A
Voltage	125V / 250V	100V / 250V	250V
Characteristic	Time-Lag Type	Fast Acting Type	Inrush Type
Safety Approvals			





Micro Fuses

Series No.	<b>FCP</b>	<b>TCP</b>	<b>FEP</b>	<b>TEP</b>
Fuse Size	3.0 x 7.3mm	3.0 x 7.3mm	3.7 x 8.0mm	3.7 x 8.0mm
Current	160mA~6.3A	160mA~6.3A	250mA~6.3A	250mA~6.3A
Voltage	125V	125V	250V	250V
Characteristic	Fast Acting Type	Time-Lag Type	Fast Acting Type	Time-Lag Type
Safety Approvals				

Subminiature Fuses





















Series No.	<b>2000</b>	<b>2010</b>	<b>2020</b>	<b>2040</b>
Fuse Size	Ø8.5 x 8.0mm	8.5 x 8.5 x 4mm	8.5 x 5 x 4mm	12.4 x 6.4 x 9.2mm
Current	100mA~6.3A	100mA~10A	100mA~6.3A	800mA~6.3A
Voltage	250V / 300V	250V / 300V	250V / 300V / 400V	250V / 300V
Characteristic	Time-Lag Type	Time-Lag Type	Time-Lag Type	Time-Lag Type(TT)
Safety Approvals				

Ceramic Tube Fuses

Series No.	<b>ICP</b>	<b>SCC / SCP</b>	<b>FSC / FSC(P)</b>	<b>FHP</b>
Fuse Size	3.6 x 10mm	5.2 x 20mm	5.2 x 20mm	5.2 x 20mm
Current	250mA~6.3A	100mA~10A	250mA~15A	8A~16A
Voltage	250V	125V / 250V	250V	420V
Characteristic	Time-Lag Type	Time-Lag Type	Fast Acting Type	Fast Acting Type
Safety Approvals				
Series No.	<b>TSC / TSC(P)</b>	<b>TSC+P</b>	<b>MTP</b>	
Fuse Size	5.2 x 20mm	5.2 x 20mm	6.35 x 31.75mm	
Current	200mA~16A	200mA~16A	15A~30A	
Voltage	250V	250V	250V	
Characteristic	Time-Lag Type	Time-Lag Type	Time-Lag Type	
Safety Approvals				



Glass Tube Fuses

			
Series No.	<b>FAP</b>	<b>TAP</b>	<b>FSD / FSD(P)</b>
Fuse Size	3.6 x 10mm	3.6 x 10mm	5.2 x 20mm
Current	100mA-6.3A	100mA-6.3A	200mA-15A
Voltage	125V / 250V	125V / 250V	125V / 250V
Characteristic	Fast Acting Type	Time-Lag Type	Fast Acting Type
Safety Approvals			
			
Series No.	<b>TSD / TSD(P)</b>	<b>TMD / TMD(P)</b>	<b>CIS / CSP</b>
Fuse Size	5.2 x 20mm	5.2 x 20mm	5.2 x 20mm
Current	100mA-6.3A	100mA-15A	100mA-10A
Voltage	250V	125V / 250V	125V / 250V
Characteristic	Time-Lag Type	Time-Lag Type	Fast Acting Type
Safety Approvals			
			
Series No.	<b>SIC / SIP</b>	<b>MGC / MGP</b>	<b>MDC / MDP</b>
Fuse Size	5.2 x 20mm	6.35 x 31.75mm	6.35 x 31.75mm
Current	100mA-7A	100mA-15A	100mA-15A
Voltage	125V / 250V	125V / 250V	125V / 250V
Characteristic	Time-Lag Type	Fast Acting Type	Time-Lag Type
Safety Approvals			
			
Series No.	<b>MTG</b>		
Fuse Size	6.35 x 31.75mm		
Current	10A-20A		
Voltage	250V		
Characteristic	Time-Lag Type		
Safety Approvals			



Power Fuses

			
Series No.	<b>WN-Series</b> WN10 / WN20 / WN30 / WN40	<b>WM-Series</b> WM10 / WM20 / WM30 / WM40 / WM45 / WM55 / WM70 / MHC / MHP	<b>WL-Series</b> WL12 / WL25 / WL40 / WL50 / WL53 / WL55 / WL55P / WL60 / WL60P / WL62 / LFC / LFP
Fuse Size	5 x 20mm	6 x 30mm	10 x 85mm
Current	0.2A~20A	0.2A~50A	1A~80A(1A~40A)
Voltage	400~500Vdc / 600Vac	500~1000Vdc / 250~1000Vac	200~1500Vdc / 250~600Vac
Interrupt	200A~2000A	1K~30KA	1.5K~50KA
Safety Approvals			
			
Series No.	<b>WH-Series</b> WH25 / WH33 / WH42 / WH62	<b>WE-Series</b> WE33 / WE53	<b>WD-Series</b> WD22 / WD38 / WD63
Fuse Size	18x45 / 18x25mm	30 x 65 / 30 x 50mm	37 x 70 / 37 x 50mm
Current	5A~600A	50A~600A	125A~400A
Voltage	150~700Vdc	500~700Vac	500~700 Vac / Vdc
Interrupt	6KA~10KA	10KA~50KA	50KA
Safety Approvals			
			
Series No.	<b>WJ-Series</b> WJ42 / WJ38 / WJ70P	<b>WS-Series</b> WS22 / WS23 / WS24 / WS25 / WS32 / WS35 / WS37 / WS40 / WS42 / WS70 / WS72 / WS80	<b>WHE / WHL-Series</b> WHET / WHFM / WHFMM WHE / WLET / WLMT
Fuse Size	14 x 40mm	27 x 22 x 59 / 48 x 43 x 85mm	27 x 22 x 59 ~ 48 x 43 x 85mm
Current	40A~80A	100A~630A	100A~630A
Voltage	800~1000Vac	750~1500Vac	750~1500Vac
Interrupt	50KA	20KA~50KA	20KA~50KA
Safety Approvals		JASOD622 ISO8820	JASOD622 ISO8820



FuseHolders & Accessories

Series No.	WL-210E	WL-210A	WL-210D
Fuse Size	Ø5mm	Ø5.2mm	Ø5.2mm
Current	20A	10A	10A
Voltage	500DC / 600AC	250AC	250AC
Series No.	WL-211A	WL-211	WL-216M
Fuse Size	Ø6mm	Ø6.35mm	Ø10mm
Current	30A	15A	80A
Voltage	1000DC / 660AC	250AC	1000DC / 1000AC
Series No.	WL-52H	WL-52H-2P	WL-52H-3P
Fuse Size	Ø10mm	Ø10mm	Ø10mm
Current	30A	30A	30A
Voltage	1100DC / 600AC	1100DC / 600AC	1100DC / 600AC
Safety Approvals			
Series No.	WL-60H	WJ-30H	
Fuse Size	Ø10mm	Ø14mm	
Current	30A	30A	
Voltage	1500DC	1500DC	
Safety Approvals			

DGPANST  
 电话: 0755-23119910





Current Sensing Resistors / Shunt Resistor

Series No.	Product images	Model	Pr(Watt)	Ro(mΩ)	Rt(%)	TCR(ppm)
			Power rating at 70°C or below	Device normal resistance	Normal resistance tolerance	Temperature coefficient of resistance
<b>STE / STE Auto-Series</b>						
	0603-□-W50-R-□□□-□	0.5(1/2)	5~60	±0.5,±1	±50~±100	
	0805-□-W75-R-□□□-□	0.75(3/4)	3~200	±0.5,±1	±50~±100	
	1206-□-1W0-R-□□□-□	1.0	3~400	±0.5,±1	±50~±100	
	2010-□-1W0-R-□□□-□	1.0	2~400	±0.5,±1	±50~±100	
	2512-□-2W0-R-□□□-□	2.0	2~400	±0.5,±1	±50~±100	
	3921-□-3W0-R-□□□-□	3.0	2~100	±0.5,±1	±50~±100	
	4527-□-4W0-R-□□□-□	4.0	2~100	±0.5,±1	±50~±100	
	0603-□-W50-R-□□□-Auto	0.5	5~20	±0.5,±1	±50~±100	
	0805-□-W75-R-□□□-Auto	0.75	5~200	±0.5,±1	±50~±100	
	1206-□-1W0-R-□□□-Auto	1.0	3~570	±0.5,±1	±50~±100	
	2010-□-1W0-R-□□□-Auto	1.5	5~300	±0.5,±1	±50~±100	
	2512-□-2W0-R-□□□-Auto	2.0	50~350	±0.5,±1	±50	
<b>HTC / HTE-Series</b>						
	0805-□-1W0-R-□□□-□	1.0	1~100	±0.5,±1	±50~±100	
	1206-□-1W5-R-□□□-□	1.5	1~100	±0.5,±1	±50~±100	
	1508-□-2W0-R-□□□-□	2.0	1~100	±0.5,±1	±50~±100	
	2010-□-3W0-R-□□□-□	2.0	1~100	±0.5,±1	±50~±100	
	2512-□-3W0-R-□□□-□	3.0	1~100	±0.5,±1	±50~±100	
	3008-□-3W0-R-□□□-□	3.0	1~100	±0.5,±1	±50~±100	
	3015-□-4W0-R-□□□-□	4.0	1~100	±0.5,±1	±50~±100	
	3618-□-4W0-R-□□□-□	4.0	1~100	±0.5,±1	±50~±100	
	3921-□-5W0-R-□□□-□	5.0	1~100	±0.5,±1	±50~±100	
	5931-□-10W0-R-□□□-□	10.0	1~50	±0.5,±1	±50~±100	
<b>HTE Auto-Series</b>						
	0805-□-1W0-R-□□□-Auto	1.0	2~500	±0.5,±1	±50~±100	
	1206-□-1W5-R-□□□-Auto	1.5	2~100	±0.5,±1	±50~±100	
	2010-□-2W0-R-□□□-Auto	2.0	2~100	±0.5,±1	±50~±100	
	2512-□-3W0-R-□□□-Auto	3.0	1~100	±0.5,±1	±50~±100	
	3008-□-3W0-R-□□□-Auto	3.0	1~100	±0.5,±1	±50~±100	
<b>HFCL-Series / HFCL Auto-Series</b>						
	0603-□-0W33-R-□□□-□	0.33	1~25	±0.5,±1	±50~±200	
	1206-□-1W0-R-□□□-□	1.0	0.5~25	±0.5,±1	±50~±200	
	1206-□-1W0-R-□□□-Auto	1.0	0.5~0.75	±3	±150	
			1~2	±2	±100	
			2.5~4	±1	±100	
5~25			±0.5,±1	±50		
<b>HFPL-Series</b>						
	0603-□-0W33-R-□□□-□	0.33	2.5~5	±1%,±2%	±100	
	0805-□-0W5-R-□□□-□	0.5	1~2	±1%,±2%,±3%,±5%	±100	
	1206-□-1W0-R-□□□-□	1.0	0.5	±0.5%,±1%	±100	
			1~5	±0.5%,±1%	±75	





Current Sensing Resistors / Shunt Resistor / Jumper

Series No.	Product images	Model	Pr(Watt)	Ro(mΩ)	Rt(%)	TCR(ppm)	
			Power rating at 70°C or below	Device normal resistance	Normal resistance tolerance	Temperature coefficient of resistance	
<b>SFCA-Series</b>							
		1206-□-0W5-R-□□□-□	0.5	0.5~100	±0.3,±0.5,±1	±25~±50	
<b>MSH-Series</b>							
		1206-□-2W0-R-□□□-□	1.0	5	±0.5,±1	±75	
			1.5	10, 15	±1	±75	
		2512-□-2W0-R-□□□-□	2.0	1~50	±1,±3,±5	±50~100	
		2512-□-3W0-R-□□□-□	3.0	1~4	±1,±3,±5	±50~100	
		2512-□-3W0-R-□□□-□□	3.0	5~50	±1,±3,±5	±50~100	
<b>MSHL-Series</b>							
		2512-□-2W0-R-□□□-□□	2.0	1/1.5	±0.5,±1	±100	
			2.0	2~10	±0.5,±1	±50	
		2512-□-3W0-R-□□□-□	3.0	1~3	±0.5,±1	±50~±100	
			3.0	5~8	±0.5,±1	±50	
<b>MSH-LR Series</b>							
		2512-□-2W0-R-□□□-LR	2.0	0.50/0.75	±1	±150	
				1/1.5	±0.5,±1	±100	
				2~50	±0.5,±1	±50	
<b>MSE Series</b>							
		2512-□-2W0-R-□□□-□	2.0	0.5~450	±1	±50	
			3.0	0.5~100	±1	±50	
		2725-□-4W0-R-□□□-□	4.0	0.25~3	±1	±50	
			4.0	4~600	±1	±50	
			4527-□-5W0-R-□□□-□	5.0	0.5~500	±1	±50
<b>MSTC Series</b>							
		0201-□-0W2-R-□□□-□	0.2	2.5~20	±1,±3,±5	±100~±150	
			0.33	2.5~20	±1,±3,±5	±100~±150	
			0.33	2~20	±1,±3,±5	±100~±150	
			0.5	1.5~20	±1,±3,±5	±100~±150	
			1.0	1~20	±1,±3,±5	±100~±150	
<b>MHTC Series</b>							
		0805-□-1W0-R-□□□-□	1.0	1~1.5	±1,±2	±150	
			1.0	2~5	±1,±2	±100	
			1.0	1~5	±1	±50	
<b>MSU Series</b>							
		MSU2512	3~6	0.2~3	±1,±5	±100~±200	
			MSU3921	4~9	0.2~4	±1,±5	±100~±150
			MSU5931	7~15	0.2~3	±1,±5	±100~±175
Series No.	Product images	Model	Rmax(mΩ)	I <sub>max</sub> (A)	Insulation resistance Ri(MΩ)	Ta(°C)	
<b>MSTJ Series</b>							
		MSTJ0201	1.0	8	>100	70	
			MSTJ0402	0.5	20	>100	105
			MSTJ0603	0.2	26	>100	105
			MSTJ0805	0.2	35	>100	105
			MSTJ1206	0.2	40	>100	105



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**苏州华德电子有限公司**

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**The Name You Always Trust**

**就是可以信赖**

**Suzhou Walter Electronic**  
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