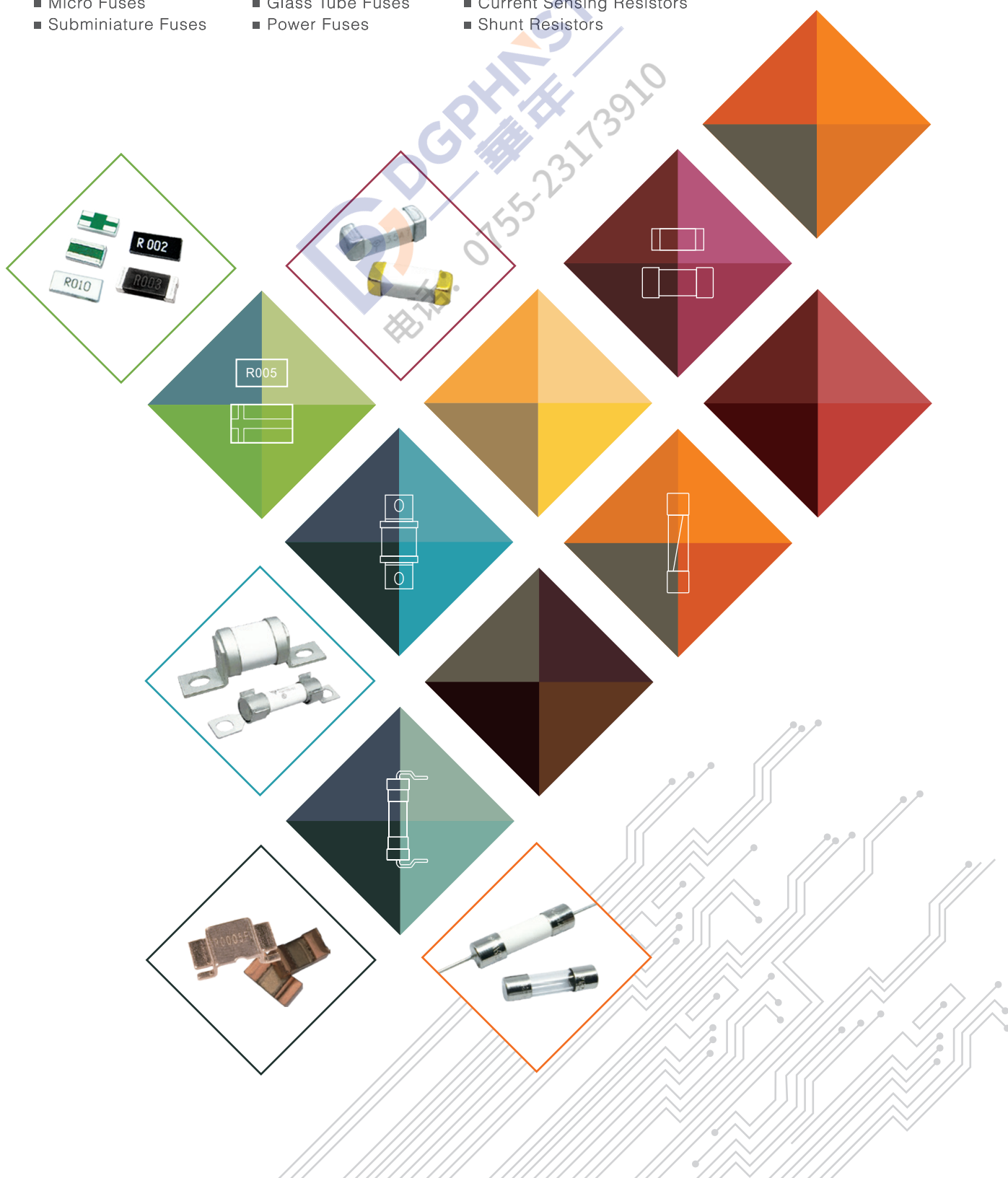


PRODUCT OVERVIEW

- 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.	0603F	0603T	1206F
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.	1206T	1206HC	6125SF
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.	6125SH	2410F	2410H
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.	2410LT	1032SF	1032ST / 1032HB
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.	FCP	TCP	FEP	TEP
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.	2000	2010	2020	2040
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.	ICP	SCC / SCP	FSC / FSC(P)	FHP
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.	TSC / TSC(P)	TSC+P	MTP	
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				

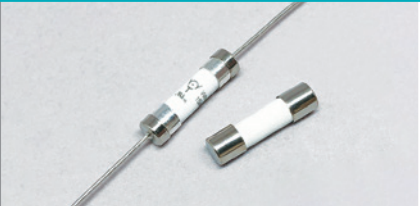
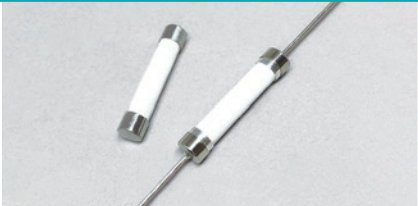
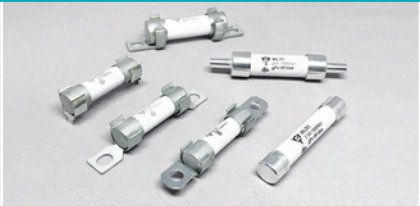
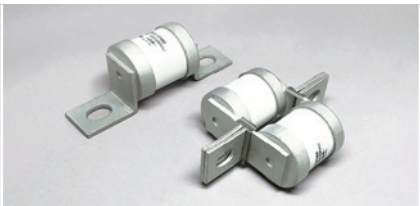


Glass Tube Fuses

Series No.	FAP	TAP	FSD / FSD(P)
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.	TSD / TSD(P)	TMD / TMD(P)	CIS / CSP
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.	SIC / SIP	MGC / MGP	MDC / MDP
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.	MTG		
Fuse Size	6.35 x 31.75mm		
Current	10A~20A		
Voltage	250V		
Characteristic	Time-Lag Type		
Safety Approvals			

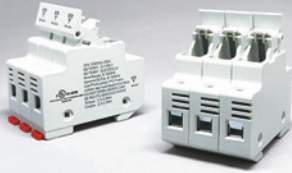
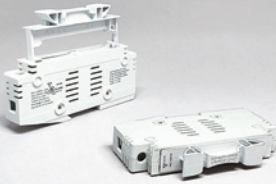


Power Fuses

Series No.									
	WN-Series WN10 / WN20 / WN30 / WN40			WM-Series WM10 / WM20 / WM30 / WM40 / WM45 / WM55/ WM70 / MHC / MHP			WL-Series 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.									
	WH-Series WH25 / WH33 / WH42 / WH62			WE-Series WE33 / WE53			WD-Series 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.									
	WJ-Series WJ42 / WJ38 / WJ70P			WS-Series WS22/ WS23 / WS24 / WS25/ WS32 / WS35 / WS37 / WS40 / WS42 / WS70 / WS72 / WS80			WHE / WHL-Series WHET / WHFM / WHFMM WHE / WLET / WLMT		
	Fuse Size 14 x 40mm			27 x 22 x 59 / 48 x 43 x 85mm			27 x 22 x59 ~ 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		Fuse Size		Fuse Size	
	Ø5mm		Ø5.2mm		Ø5.2mm	
	Current		Current		Current	
		20A				
		Voltage				
		500DC / 600AC				
		250AC				
		250AC				
Series No.						
	WL-211A		WL-211		WL-216M	
	Fuse Size		Fuse Size		Fuse Size	
	Ø6mm		Ø6.35mm		Ø10mm	
	Current		Current		Current	
		30A				
		Voltage				
		1000DC / 660AC				
		250AC				
		1000DC / 1000AC				
Series No.						
	WL-52H		WL-52H-2P		WL-52H-3P	
	Fuse Size		Fuse Size		Fuse Size	
	Ø10mm		Ø10mm		Ø10mm	
	Current		Current		Current	
		30A				
		Voltage				
		1100DC / 600AC				
		1100DC / 600AC				
		1100DC / 600AC				
		Safety Approvals				
						
						
						
Series No.						
	WL-60H		WJ-30H			
	Fuse Size		Fuse Size			
	Ø10mm		Ø14mm			
	Current		Current			
		30A				
		Voltage				
		1500DC				
		1500DC				
		Safety Approvals				
						
						

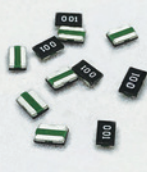
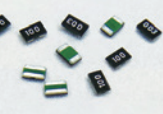
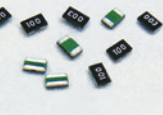


Current Sensing Resistors / Shunt Resistor

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	
Series No.	STE / STE Auto-Series						
		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	
Series No.	HTC / HTE-Series						
		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	
	Series No.	HTE Auto-Series					
			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	
Series No.	HFCL-Series / HFCL Auto-Series						
		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	
				Series No.	HFPL-Series		
	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
Series No.	SFCA-Series					
		1206-□-0W5-R-□□□-□	0.5	0.5~100	±0.3,±0.5,±1	±25~±50
Series No.	MSH-Series					
		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
Series No.	MSHL-Series					
		2512-□-2W0-R-□□□-□□	2.0	1/1.5	±0.5,±1	±100
		2512-□-2W0-R-□□□-□	2.0	2~10	±0.5,±1	±50
		2512-□-3W0-R-□□□-□	3.0	1~3	±0.5,±1	±50~±100
		2512-□-3W0-R-□□□-□□	3.0	5~8	±0.5,±1	±50
Series No.	MSH-LR Series					
		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
Series No.	MSE Series					
		2512-□-2W0-R-□□□-□	2.0	0.5~450	±1	±50
		2512-□-3W0-R-□□□-□	3.0	0.5~100	±1	±50
		2725-□-4W0-R-□□□-□	4.0	0.25~3	±1	±50
		2728-□-4W0-R-□□□-□	4.0	4~600	±1	±50
		4527-□-5W0-R-□□□-□	5.0	0.5~500	±1	±50
	Series No.	MSTC Series				
		0201-□-0W2-R-□□□-□	0.2	2.5~20	±1,±3,±5	±100~±150
		0402-□-0W33-R-□□□-□	0.33	2.5~20	±1,±3,±5	±100~±150
		0603-□-0W33-R-□□□-□	0.33	2~20	±1,±3,±5	±100~±150
		0805-□-0W5-R-□□□-□	0.5	1.5~20	±1,±3,±5	±100~±150
		1206-□-1W0-R-□□□-□	1.0	1~20	±1,±3,±5	±100~±150
Series No.	MHTC Series					
		0805-□-1W0-R-□□□-□	1.0	1~1.5	±1,±2	±150
		0805-□-1W0-R-□□□-□	1.0	2~5	±1,±2	±100
		1206-□-1W0-R-□□□-□	1.0	1~5	±1	±50
Series No.	MSU Series					
		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 _{max} (A)	Insulation resistance Ri(MΩ)	Ta(°C)
Series No.	MSTJ Series					
		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



Suzhou Walter Electronic Co., Ltd.

苏州华德电子有限公司

www.walterfuse.com / E-mail: walter@walterfuse.com

The Name You Always Trust

就是可以信赖

Suzhou Walter Electronic
苏州华德电子

No. 99, Xinli Rd., Fenu Hi-Tech Industrial
Development Zone, Wujiang Dist.,
Suzhou, Jiangsu, 215211, China
215211 江苏省苏州市吴江区
汾湖高新技术产业开发区新黎路99号
Tel: +86-512-63271188

Suzhou Walter Electronic
Dongguan Branch
苏州华德电子-东莞分公司

Rm. 1503, Bldg. S3, Tianan Cyber Park,
Yantian Vil., Fenggang Town, Dongguan,
Guangdong, 523702, China
523702 广东省东莞市凤岗镇
雁田村天安数码城S3栋1503室
Tel: +86-769-87773450

Suzhou Walter Electronic
Shenzhen Branch
苏州华德电子-深圳分公司

Rm. 2508, No. 9966, Shennan Ave.,
Yuehai St., Nanshan Dist., Shenzhen,
Guangdong, 518057, China
518057 广东省深圳市南山区
粤海街道深南大道9966号2508室
Tel: +86-755-26918532

Hong Kong Walter Electronic
Technology Limited, Taiwan Branch
香港商华德高科-台湾分公司
Suzhou Walter Electronic-Taipei Branch
苏州华德电子-台北分公司

4F., No. 48, Minquan W.Rd.,
Zhongshan Dist., Taipei 104026, Taiwan
104026 台北市中山区民权西路48号4楼
Tel: +886-2-25637770