

Firstohm[®]

*Quality, Reliability,
Cost-Down via Technology*



第一電阻電容器股份有限公司

FIRST RESISTOR & CONDENSER CO., LTD.

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~ To be your valuable partner in the component industry through
constant product innovation and customer satisfaction ~

~ Firstohm, where OHM comes FIRST ~



Certificate No. FM 577844



Certificate No. EMS 594693

Product Reference Table

MM (P)	MMP	MO	MP	MSD	MVM*	MVR	NFR	NL	PMA	PPR	PSR	PWR	R-Series	SCP	SFP	SGS	SLC	SM	SRM	SSR	SWA	SWM	WA	ZMM	ZOM
Metal Film MELF Resistor (Pulse Withstanding)	Metal Film MELF Precision Resistor	Metal Oxide Film Fixed Resistor	Metal Film Precision Resistor	Pulse Safety Resistor	Medium Voltage MELF Resistor	Medium Voltage Resistor	Non Flammable Carbon Film Resistor	Non-inductive Resistor	Professional Metal Film Axial Resistor	Pulse Protective Resistor	Power Sink Resistor	Power Metal Film Resistor	Carbon Film Power Resistor	Short Circuit Protection Resistor	Stabilized Film Power MELF Resistor	Spark-Gap Surge Absorber	Slug Resistor Center Coated	Stabilized Metal Film MELF Resistor	Surge Resistant MELF Resistor	Surge Safety Resistor	Anti-Surge Wirewound Resistor	Anti-Surge Wirewound MELF Resistor	Wirewound Resistors	Zero Ohm Metal Film MELF Resistor	Zero Ohm Metal Film Resistor
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*available late 2014/early 2015

Product Reference Table

Type		C3	C3M	CM	CSM	CSR	EFP	EFR	ESM	FGE	FGE26C	FM	HDR	HFT	HVM	HVR	HVR	IG	ISC*	ISW#	M-Series	MM	
Product Name		Composite Film-type Ceramic Composition Resistor	Composite Film-Type Ceramic Composition MELF Resistor	Carbon Film MELF Resistor	Current Sense MELF Resistor	Current Sense Resistor	Enhanced Film Power MELF Resistor	Enhanced Film Fixed Resistor	ESD Surge Absorber MELF	Fusible Resistor	Fusible Resistor Constant Current	Fusible MELF Resistor	High Voltage Discharge Resistor	High Frequency Terminator Resistor	High Voltage MELF Resistor	High Voltage Resistor	High Voltage Resistor (High Power)	Ignition Fixed Resistor	Ignition Noise Suppression Resistor (Film/Ceramic Composite Type)	Ignition Noise Suppression Resistor (Wirewound Type)	Metal Film Fixed Resistor	Metal Film MELF Resistor	
Industries	Power Supply	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					●	
	Telecomm	●	●	●	●	●	●		●				●	●	●								●
	Meter	●	●	●	●	●	●	●	●	●			●	●	●	●	●						●
	Medical	●	●	●	●	●	●	●	●	●			●	●	●	●	●						●
	Automotive			●	●	●	●	●	●	●				●	●	●		●	●	●			●
	Lighting			●	●	●	●	●	●	●				●	●	●	●						●
Surface Mount Enabled			●	●	●		●		●			●		●	●				●	●		●	




Product Reference Table

MM (P)	MMP	MO	MP	MSD	MVM*	MVR	NFR	NL	PMA	PPR	PSR	PWR	R-Series	SCP	SFP	SGS	SLC	SM	SRM	SSR	SWA	SWM	WA	ZMM	ZOM
Metal Film MELF Resistor (Pulse Withstanding)	Metal Film MELF Precision Resistor	Metal Oxide Film Fixed Resistor	Metal Film Precision Resistor	Pulse Safety Resistor	Medium Voltage MELF Resistor	Medium Voltage Resistor	Non Flammable Carbon Film Resistor	Non-inductive Resistor	Professional Metal Film Axial Resistor	Pulse Protective Resistor	Power Sink Resistor	Power Metal Film Resistor	Carbon Film Power Resistor	Short Circuit Protection Resistor	Stabilized Film Power MELF Resistor	Spark-Gap Surge Absorber	Slug Resistor Center Coated	Stabilized Metal Film MELF Resistor	Surge Resistant MELF Resistor	Surge Safety Resistor	Anti-Surge Wirewound Resistor	Anti-Surge Wirewound MELF Resistor	Wirewound Resistor	Zero Ohm Metal Film MELF Resistor	Zero Ohm Metal Film Resistor
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*available late 2014/early 2015

Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>C3 Composite Film-Type Ceramic Composition Resistor</p> <ul style="list-style-type: none"> • Innovative and cost-effective C3 technology (NOTE 1) • Conforms to ANSI/AAMI norm EC53:1995/(R)2008 5.5.3 • Suitable replacement for ceramic composition resistors, which are required in most applications. • Maximum permissible surge voltage: 15KV • Typical 1.2/50us pulse load: 90000W 	2W	33R ~ 22K	±5%, ±10%, ±20%
	<p>CM Carbon Film MELF Resistor</p> <ul style="list-style-type: none"> • SMD enabled structure • Excellent solderability termination 	1/6W ~ 1/2W	0R ~ 10M	± 5%
	<p>CSM Current Sense MELF Resistor</p> <ul style="list-style-type: none"> • High power handling with superior reliability and stability • Conformal multi-layer coating against humidity • SMD enabled structure with excellent solderability • HeatSink™ technology for better heat dissipation • Typical temperature coefficient: 50ppm ~ 600ppm 	1/4W ~ 3W	10mR ~ 510mR	± 1% ~ 5%


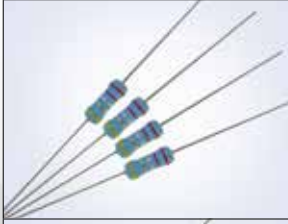
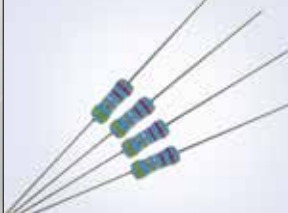
* All products are RoHS/REACH compliant unless otherwise specified. * NOTE 1: patent pending

Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>CSR Current Sense Resistor</p> <ul style="list-style-type: none"> • Offers better reliability than regular low-ohm resistors using our proprietary HeatSink™ technology • Lead-free tin plated deoxygenized copper wire provides stable value of resistor during operation. • Flame-proof coating available • Typical temperature coefficient: 100ppm ~ 300ppm 	1/4W ~ 5W	68mR ~ 510mR	± 1% ~ 5%
	<p>EFP Enhanced Film Power MELF Resistor</p> <ul style="list-style-type: none"> • High power handling • Superior reliability and stability • SMD enabled structure with excellent solderability • Typical temperature coefficient: 200ppm ~ 800ppm 	1/2W ~ 5W	0R ~ 10M	± 0.5% ~ 5%
	<p>EFR Enhanced Film Fixed Resistor</p> <ul style="list-style-type: none"> • Flameproof multi-layer coating meets UL 94 V-0 • Flameproof feature meets overload test UL 1412 • High power handling in small size • Typical temperature coefficient: 50ppm ~ 500ppm 	1/2W ~ 5W	1R ~ 1M	± 1%, ± 2%, ± 5%

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1986

Acquired precision resistor technology from Japan

Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>ESM ESD Surge Absorber MELF</p> <ul style="list-style-type: none"> Protects the circuit by sparking over the porous layer when surge exceeds the spark-over voltage Patented construction with reduced costs High insulation resistance, low capacitance, and fast response time 	<p>80A $\left(\begin{array}{c} 2/10\mu\text{s} \\ \text{waveform} \end{array} \right)$ $\left(\begin{array}{c} \text{Surge} \\ \text{Current} \\ \text{Capacity} \end{array} \right)$</p>	<p>1300V $\left(\begin{array}{c} \text{DC} \\ \text{Spark-Over} \\ \text{Voltage} \end{array} \right)$</p>	<p>± 30%</p>
	<p>FGE Fusible Resistor</p> <ul style="list-style-type: none"> Flameproof multi-layer coating meets UL 94 V-0 Flameproof feature meets overload test UL 1412 Color code per MIL & EIA standards Special tin-plated electrolytic copper lead wire Typical fusing condition - (a) Standard Type: Fuses within 10 sec. at 5W ~ 6.25W (b) Power Types: Fuses within 60 sec. at 8W ~ 20W 	<p>1/4W ~ 2W</p>	<p>2R2 ~ 15K</p>	<p>± 5%</p>
	<p>FGE26C Fusible Resistor Constant Current</p> <ul style="list-style-type: none"> Delay fusing within 60 sec. in case of excessive current Constant current fusing type Fuses at low magnification of power rating (5.2 times) Flameproof multi-layer coating meets UL 94 V-0 Flameproof feature meets overload test UL 1412 Special tin-plated electrolytic copper lead wire Fuses within 10 sec. at 1.6W 	<p>1/4W</p>	<p>0R1 ~ 0R91</p>	<p>±5% ~ 10%</p>

* All products are RoHS/REACH compliant unless otherwise specified.

1989

Acquired chip resistor technology
from Japan

Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>FM Fusible MELF Resistor</p> <ul style="list-style-type: none"> • SMD enabled structure • Excellent solderability termination • Fuses within 10 sec. at 9.8W ~ 10.5W 	1/3W ~ 1/2W	2R2 ~ 10K	± 5%
	<p>HDR High Voltage Discharge Resistor</p> <ul style="list-style-type: none"> • Excellent anti-surge characteristic • Suitable for medium to high working voltage • Flameproof coating available • Typical 1.2/50us pulse load: 100W ~ 990W 	1/4W ~ 2W	100K ~ 56M	± 5%
	<p>HFT High Frequency Terminator Resistor</p> <ul style="list-style-type: none"> • SMD enabled structure • Superior frequency response • Excellent solderability termination 	1/4W ~ 1/3W	25R ~ 75R	± 0.1% ~ 1%

* All products are RoHS/REACH compliant unless otherwise specified.

1991




Developed Surge/Pulse Resistant Resistors

Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>HVM High Voltage MELF Resistor</p> <ul style="list-style-type: none"> • Handles much higher working voltage than general purpose resistors do • Pure tin-plated termination for excellent solderability • SMD enabled structure • Anti-surge feature available • Maximum working voltage: 600V DC ~ 8400V DC 	1/6W ~ 3W	56K ~ 68M	± 1% ~ 5%
	<p>HVR High Voltage Resistor</p> <ul style="list-style-type: none"> • Special conductive film withstands high voltage • Maximum working voltage far over that of general-purpose resistors • Suitable for applications such as TV's, high voltage power supply, and high voltage detection. • Entire series is VDE0860 (EN60065) approved under license number 40011593 • Maximum working voltage: 1.6KV DC ~ 12KV DC • Typical temperature coefficient: 200ppm ~ 800ppm 	1/4W ~ 3W	91K ~ 100M	± 1% ± 5%
	<p>HVR High Voltage Resistor (High Power)</p> <ul style="list-style-type: none"> • Special conductive film withstands voltage far over the maximum working voltage of general-purpose resistors. • Suitable for applications such as TV's, high voltage power supply, and high voltage detection. • Maximum working voltage: 35KV DC • Typical temperature coefficient: 800ppm 	10W ~ 15W	100K ~ 100M	± 1%, ± 5%

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1991

Developed MELF Resistor

Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>IG Ignition Fixed Resistor</p> <ul style="list-style-type: none"> • Special coating technique to ensure fast ignition • Color code per MIL & EIA standards • Special conductive film to fuse at high temperature • Auto cut-off after fusing/no sustaining fire hazard • Special tin-plated electrolytic copper lead wire for optimal ease of soldering and mounting 	1/6W ~ 1/3W	1R ~ 150R	± 5%
	<p>M-Series Metal Film Fixed Resistor</p> <ul style="list-style-type: none"> • Conformal multi-layer coating • Color code per MIL & EIA standards • Special tin-plated electrolytic copper lead wire 	1/6W ~ 3W	0R1 ~ 10M	± 0.1% ~ 5%
	<p>MM(P) Metal Film MELF Resistor (Pulse Withstanding)</p> <ul style="list-style-type: none"> • SMD enabled structure • Excellent solderability termination • Enhanced pulse withstanding capability • Maximum 1.2/50us pulse load: 1000W ~ 1600W • Typical temperature coefficient: 50ppm, 100ppm 	1/6W ~ 1/2W	0R1 ~ 330K	± 1%, ± 2%, ± 5%

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1998


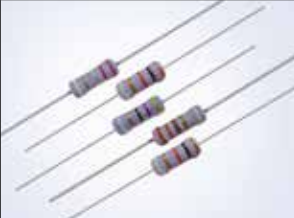

Developed High-Voltage Resistors

Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>MM Metal Film MELF Resistor</p> <ul style="list-style-type: none"> • SMD enabled structure • Excellent solderability termination • Typical 1.2/50us pulse load: 32W ~ 70W • Typical temperature coefficient: 25ppm ~ 100ppm 	1/6W ~ 1/2W	0R51 ~ 10M	± 1%, ± 2%, ± 5%
	<p>MMP Metal Film MELF Precision Resistor</p> <ul style="list-style-type: none"> • SMD enabled structure • Excellent solderability termination • Typical 1.2/50us pulse load: 32W ~ 70W • Typical temperature coefficient: 5ppm ~ 50ppm 	1/6W ~ 1/2W	10R ~ 1M	± 0.1%, ± 0.25%, ± 0.5%
	<p>MO Metal Oxide Film Fixed Resistor</p> <ul style="list-style-type: none"> • Flameproof multi-layer coating meets UL 94 V-0 • Flameproof feature meets overload test UL 1412 • Solvent resistant • Special tin-plated electrolytic copper lead wire 	1/2W ~ 10W	0R1 ~ 330K	± 5%




* All products are RoHS/REACH compliant unless otherwise specified.

1999

Established management system according to ISO14000 standards

Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>MP Metal Film Precision Resistor</p> <ul style="list-style-type: none"> • Conformal multi-layer coating • Color code per MIL & EIA standards • Special tin-plated electrolytic copper lead wire • Typical temperature coefficient: 10ppm ~ 50ppm 	1/6W ~ 1/2W	10R ~ 1M	± 0.05% ~ 0.5%
	<p>MSD Pulse Safety Resistor</p> <ul style="list-style-type: none"> • Special composite film on high grade ceramic substrate • Flameproof coating meets UL 94 V-0 and overload test UL 1412 • Excellent anti-surge capability. Typical 1.2/50us pulse load: 140W ~ 4500W • Absorbs pulse from city power line, direct crossing or inductive coupling and protects electric equipment or parts from accidental shock • Low-cost alternative to wire-wound resistors 	1/4W ~ 6W	0R1 ~ 1M	± 0.1% ~ 5%
	<p>MVR Medium Voltage Resistor</p> <ul style="list-style-type: none"> • Higher working voltage with improved reliability • Proprietary conductive film • Especially suitable for SMPS & lighting devices • Low-cost alternative to metal-glazed resistors • Maximum working voltage: 550V DC ~ 7KV DC • Typical temperature coefficient: 100ppm ~ 800ppm 	1/4W ~ 2W	47K ~ 100M	± 0.1% ~ ± 5%



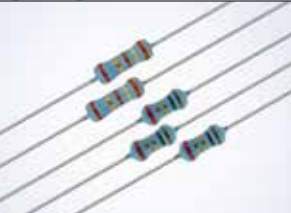
* All products are RoHS/REACH compliant unless otherwise specified.

Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>NFR Non Flammable Carbon Film Resistor</p> <ul style="list-style-type: none"> • Conformal multi-layer non-flammable coating • Color code per MIL & EIA standards • Special tin-plated electrolytic copper lead wire 	1/6W ~ 2W	1R ~ 10M	± 5%
	<p>NL Non-inductive Resistor</p> <ul style="list-style-type: none"> • Proprietary conductive film • Required by operating environment that demands consistent performance • Performs with virtually no inductance • Typical temperature coefficient: 100ppm ~ 300ppm 	1/2W ~ 20W	0R1 ~ 47K	± 1% ± 5%
	<p>PMA Professional Metal Film Axial Resistor</p> <ul style="list-style-type: none"> • Conformal multi-layer coating • Excellent stability and better power handling • Typical temperature coefficient: 5ppm ~ 100ppm 	1/4W ~ 1.2W	1R ~ 4M7	± 0.1% ~ 5%

* All products are RoHS/REACH compliant unless otherwise specified.

2004

High-Voltage Resistor (HVR series) passed VDE0860 (EN60065)




Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>PPR Pulse Protective Resistor</p> <ul style="list-style-type: none"> • Application: high-frequency, sharp-impulse circuits. • Protects active components in missile detonators, triac switching circuits, etc. • Offers better performance than carbon composition resistor. • No "sintering effect" caused by high surge that greatly decreases resistance value. • Conformal multi-layer non-flammable coating • Maximum permissible surge voltage: 5KV ~ 20KV • Typical 1.2/50us pulse load: 75W ~ 1300W 	1/6W ~ 2W	2R2 ~ 4M7	± 5%
	<p>PSR Power Sink Resistor</p> <ul style="list-style-type: none"> • Designed to replace cement resistors • Auto insertion feasible • Enhanced conductive film absorbs pulse noise • Superior-grade ceramic core dissipates heat efficiently • Flameproof multi-layer coating meets UL 94 V-0 & overload test UL 1412 • Maximum permissible surge voltage: 20KV • Typical 1.2/50us pulse load: 1700W 	6W	1R ~ 4M7	± 5%
	<p>PWR Power Metal Film Resistor</p> <ul style="list-style-type: none"> • Conformal multi-layer coating • Color code per MIL & EIA standards • Special tin-plated electrolytic copper lead wire • Typical temperature coefficient: 250ppm 	0.6W ~ 2W	0R22 ~ 1M	± 5%

* All products are RoHS/REACH compliant unless otherwise specified.




Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>R-Series Carbon Film Power Resistor</p> <ul style="list-style-type: none"> • Conformal multi-layer coating • Color code per MIL & EIA standards • Special tin-plated electrolytic copper lead wire • Non-flammable coating option available 	1/6W ~ 3W	1R ~ 10M	± 5%
	<p>SCP Short Circuit Protection Resistor</p> <ul style="list-style-type: none"> • Advanced multi-functional design • Cut-off on overload or accidental short circuit • Transient withstanding for power-line coupling • Flameproof multi-layer coating meets UL 94 V-0 and overload test UL 1412 • Better alternative to wire-wound resistors • Maximum overload voltage: 600V ~ 700V • Fuses within 60 sec. at 12W ~ 30W 	1/2W ~ 3W	2R2 ~ 10K	± 5%
	<p>SFP Stabilized Film Power MELF Resistor</p> <ul style="list-style-type: none"> • Low temperature coefficient and tolerances • Excellent stability • Superior power handling • Typical temperature coefficient: 50ppm ~ 200ppm 	1/2W ~ 3W	0R5 ~ 10M	± 0.5% ~ 5%

* All products are RoHS/REACH compliant unless otherwise specified.




First non-resistor product officially launched - Spark-Gap Surge Absorber (SGS) **2010**

Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>SGS Spark-Gap Surge Absorber</p> <ul style="list-style-type: none"> • Low-cost patented construction (EP 09000962.2) • No light-dark effect • Low capacitance / short response time / fast ignition • Response time: $\leq 1\text{ns}$ 	<p>80A $\left\{ \begin{array}{l} 2/10\mu\text{s} \\ \text{waveform} \end{array} \right\}$ $\left\{ \begin{array}{l} \text{Surge} \\ \text{Current} \\ \text{Capacity} \end{array} \right\}$</p>	<p>1550V ~ 3300V $\left\{ \begin{array}{l} \text{DC} \\ \text{Spark-Over} \\ \text{Voltage} \end{array} \right\}$</p>	<p>$\pm 30\%$</p>
	<p>SLC Slug Resistor Center Coated</p> <ul style="list-style-type: none"> • Specially treated metal caps withstand abrasions, impacts, and corrosions, so as to reduce contact resistance during operation. conductive film is enhanced to withstand abrasions, impacts, and corrosions as well. Suitable for clip-in (embedded) application like switches with neon indicators, neon/LED modules, LED display array, etc. 	<p>1/6W ~ 1/2W</p>	<p>1R ~ 9M1</p>	<p>$\pm 5\% \sim 10\%$</p>
	<p>SM Stabilized Metal Film MELF Resistor</p> <ul style="list-style-type: none"> • Conformal coating against humidity • Excellent solderability termination • Typical 1.2/50μs pulse load: 32W ~ 70W • Typical temperature coefficient: 25ppm ~ 100ppm 	<p>1/6W ~ 1/2W</p>	<p>0R51 ~ 10M</p>	<p>$\pm 1\% \sim 5\%$</p>

* All products are RoHS/REACH compliant unless otherwise specified.



Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>SRM Surge Resistant MELF Resistor</p> <ul style="list-style-type: none"> • Miniaturized MELF design handles high power • Special conductive film enhances anti-surge capability • Absorbs harmful surge which damages precious devices or components • SMD-enabled alternative to carbon composition resistors • Maximum permissible surge voltage: 2KV ~ 10KV • Typical 1.2/50us pulse load: 60W ~ 6000W 	1/4W ~ 3W	0R1 ~ 1M	± 1% ~ 5%
	<p>SRS Spark Noise Suppression Slug Resistor</p> <p>Dedicatedly designed for high-voltage spark ignition systems. Proprietary conductive film withstands high-voltage surge impacts with long-term stability. One of few sources in the world capable of manufacturing such type of resistor. Maximum surge load: 20KV/10ns, 35KV/20ns, 50KV/20ns, 50KV/30ns Note: to be replaced by ISC/ISW series effectively March 2015.</p>	1/2W ~ 4W	10R ~ 33K	± 5% ~ 20%
	<p>SSR Surge Safety Resistor</p> <ul style="list-style-type: none"> • Designed to replace carbon or ceramic composition resistor • Absorbs harmful surge energy, so to prevent hazard of fire and circuit damage caused by surge energy with a flame proof coating • High-surge applications: fuel ignition systems, power charging/discharging circuits, TV sets, etc. • Maximum permissible surge voltage: 7.5KV ~ 35KV • Typical 1.2/50us pulse load: 450W ~ 17000W 	1/6W ~ 5W	10R ~ 330K	± 5%

* All products are RoHS/REACH compliant unless otherwise specified.

Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>SWA Anti-Surge Wirewound Resistor</p> <ul style="list-style-type: none"> • Flameproof multi-layer coating meets UL 94 V-0 • Flameproof feature meets overload test UL1412 • SWA series can be adopted for high surge applications such as high rush current protection for power capacitor, motor start-up protection, car & motorcycle engine ignition, etc. to absorb harmful surge energy and prevent hazard of circuit damage caused by surge impact. • Enhanced weld spot is reliable against surge impact • Special tin-plated electrolytic copper lead wire • Typical 1.2/50us pulse load: 12000W ~ 36000W** 	1W ~3W	0R1 ~ 1K5	± 5%
	<p>SWM Anti-Surge Wirewound MELF Resistor</p> <ul style="list-style-type: none"> • SMD enabled structure • Flameproof multi-layer coating meets UL 94 V-0 • Flameproof feature meets overload test UL 1412 • SWM series can be adopted for high surge applications such as high rush current protection for power capacitor, motor start-up protection, car & motorcycle engine ignition, etc. to absorb harmful surge energy and prevent hazard of circuit damage caused by surge impact. • Enhanced weld spot is reliable against surge impact • Typical 1.2/50us pulse load: 8000W ~ 32000W** 	1W ~4W	0R1 ~ 1K5	± 5%
	<p>WA Wirewound Resistors</p> <ul style="list-style-type: none"> • Flameproof multi-layer coating meets UL 94 V-0 • Flameproof feature meets overload test UL 1412 • Color code per MIL & EIA standards • Special tin-plated electrolytic copper lead wire 	1/2W ~ 8W	0R1 ~ 3K3	± 2% ± 5%

* All products are RoHS/REACH compliant unless otherwise specified.

** estimated

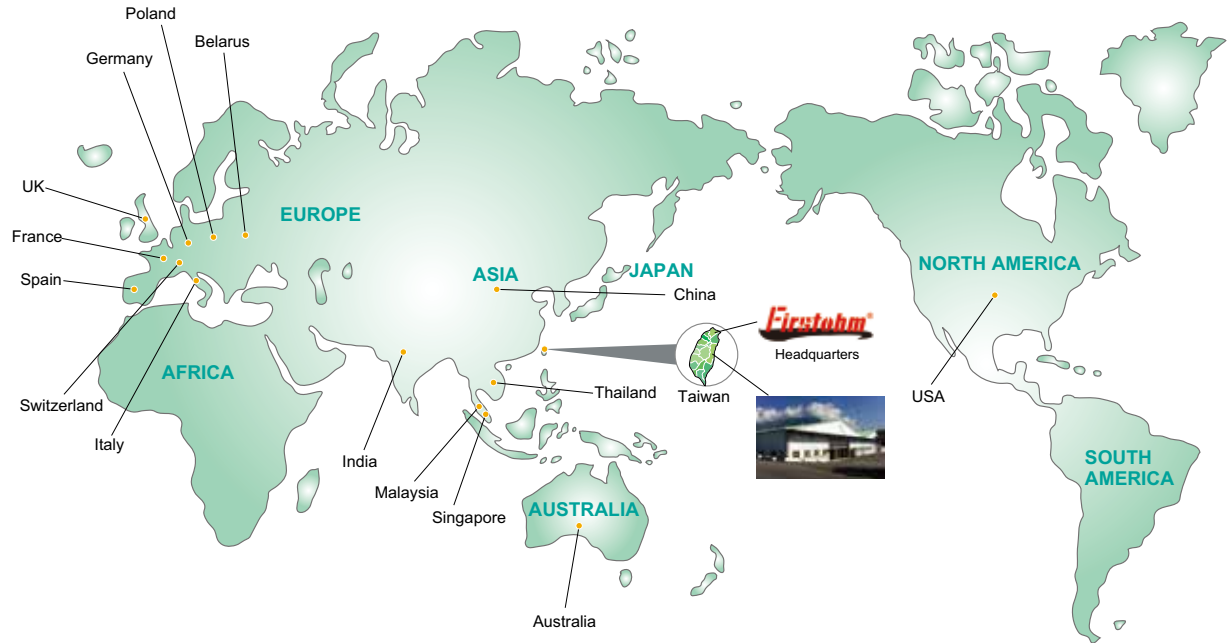
Resistor	Key Features	Power Rating	Ohm Range	Tolerance
	<p>ZMM Zero Ohm Metal Film MELF Resistor</p> <ul style="list-style-type: none"> • SMD enable structure • Excellent solderability termination • Stable metal film construction 	<p>2A ~ 4A { Maximum Current }</p>	< 20mR	N/A
	<p>ZOM Zero Ohm Metal Film Resistor</p> <ul style="list-style-type: none"> • Conformal multi-layer coating against humidity • Very low resistance • Stable metal film construction • Special tin-plated deoxygenized copper wire for resistance stabilization during operation 	<p>3A ~ 5A { Maximum Current }</p>	< 10mR	N/A

* All products are RoHS/REACH compliant unless otherwise specified.

Detail information of following products can be expected in late 2014/early 2015. Please contact us for more information.

- Size 0102 Metal Film MELF Resistor
- ISC - Ignition Noise Suppression Resistor (Film/Ceramic Composite Type): designed for high-voltage spark ignition systems
- ISW - Ignition Noise Suppression Resistor (Wirewound Type): designed for high-voltage spark ignition systems
- MVM - Medium Voltage MELF Resistor

Global Reach



Firstohm[®]



FIRST RESISTOR & CONDENSER CO., LTD.

9F., NO.233, Sec. 4, Shinyi Rd., Da-an District, Taipei 106, Taiwan.

<http://www.firstohm.com.tw>

TEL: +886 2 2705 1878 FAX: +886 2 2703 6701

E-mail: general@firstohm.com.tw