



MPD

MEMORY PROTECTION DEVICES
Certified Global Manufacturer of Electronic Components

Test Probe Tips

Long Life/High Reliability

MPD introduces a new line of High-Durability Contact Probes.

Our High-Performance Contact Probes are Built to Last Over 1 Million Cycles!

Memory Protection Devices Inc. (MPD), a global leader in high-reliability electronic components, is proud to announce the launch of its latest innovation: **Contact Probes** engineered for PCB testing and automated test equipment (ATE) applications.

Boost Your Testing Accuracy and Longevity

Whether you're running large-scale production or developing new PCBs, MPD's probes deliver the durability and performance needed for modern electronics manufacturing. By switching to our long-life contact probes, engineers and manufacturers will benefit by reducing downtime and maintenance costs while increasing testing efficiency.

Product Overview

Contact probes – also known as spring-loaded pins or pogo pins, are vital tools used in quality control process for printed circuit boards (PCBs). These precision-engineered components are designed to temporarily establish an electrical connection between a test system and PCB test points without soldering or permanent attachment.

Intended Use

MPD's contact probes ensure reliable electric contact with minimal signal loss, even after extensive repetitive use making them ideal for:

- **ICT (In-Circuit Testing)**
- **Functional Testing of Assembled PCBs**
- **Test Fixtures for Mass Production Lines**
- **Burn-in Testing**
- **Semiconductor Testing Applications**

How They Work in PCB Testing

During the testing phase, these spring-loaded probes are mounted into a test fixture. The fixture is then aligned with the PCB, pressing the probes against specific test pads or vias. As the spring compresses, the probe creates a secure and consistent contact, allowing test signals to pass through and verify circuit functionality, continuity, and signal integrity.

Superior Construction Materials

Exceptional durability and precision engineering set MPD's contact probes apart.

- **Plunger:** Hardened Tool Steel with Gold Plating – ensuring corrosion resistance and optimal conductivity.
- **Spring:** Piano Wire with Gold Plating – for consistent mechanical performance and low signal resistance.
- **Barrel:** Phosphorous Bronze with Gold Plating – providing superior strength and wear resistance.

This tri-material combination results in contact probes that **outlast the competition** with **over 1 million tested strokes**, far surpassing the industry standard of just 100,000.

Why Choose MPD Contact Probes?

- **Tested for 1,000,000+ cycles** – 10x the industry standard
- **Reliable contact and low resistance**
- **Gold plating on all components for long-lasting corrosion resistance**
- **Ideal for high-throughput, high-precision testing environments**
- **Globally available and fully RoHS compliant**

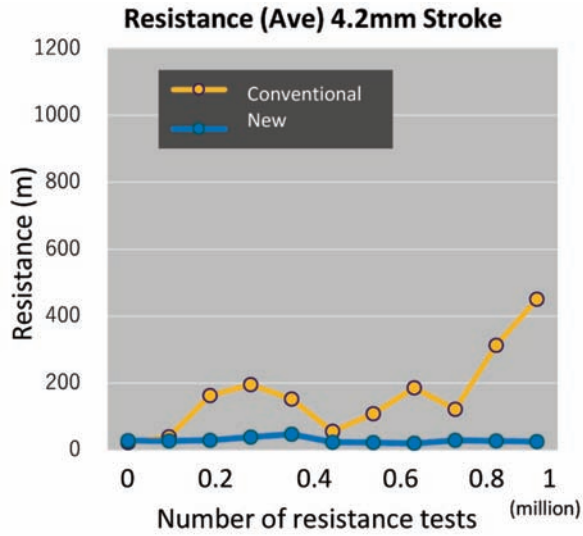
Contact your MPD representative today or visit www.memoryprotectiondevices.com to learn more and request free samples!



Memory Protection Devices Inc.
Precision Made. Performance Proven.

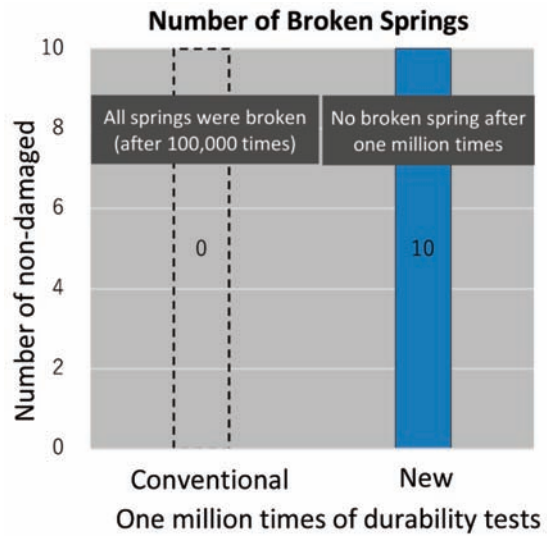
Electrical Resistance (PTP2L)

Standard Stroke 4.2mm



Springs Durability (PTP2L)

Over Stroke 6.0mm



Contact Surface	Solder Surface *
Stroke Amount	4.2 mm (Standard Stroke)
Number of Durability Tests	One Million Times **

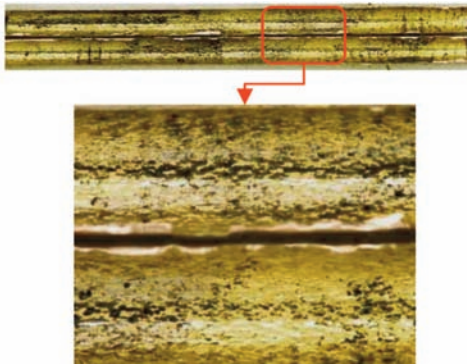
Contact Surface	Solder Surface
Stroke Amount	6.0 mm (Over Stroke)
Number of Durability Tests	One Million Times

* Solder surface when testing and measuring
 ** Data collected after every 100,000 times.

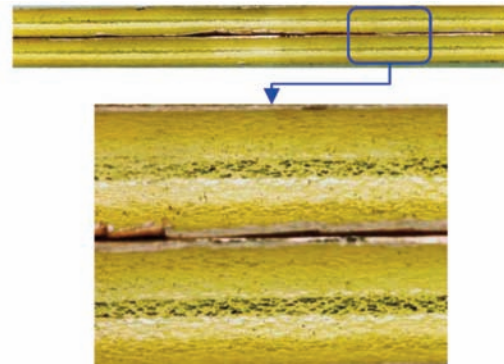
Comparison of Inside Barrel Abrasion (PTP2L)

Enlarged pictures of inside of the barrel after the durability test

Test Results for Conventional Model



Test Results for Redesigned Model



Abrasion has been Significantly Reduced.

Contact Surface	Solder Surface
Stroke Amount	4.2 mm (Standard Stroke)
Number of Durability Tests	One Million Times

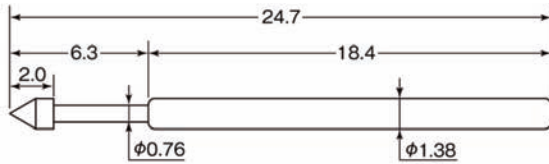
* All data has been collected under our strict controlled conditions. Results may vary under different circumstances.

PITCH 2.54 mm
100 mil

- Full Stroke 4.3 mm
- Recommended Working Stroke 2.8 mm
- Electrical Current Rating 5A

Probe Specifications

* K model is 25.7

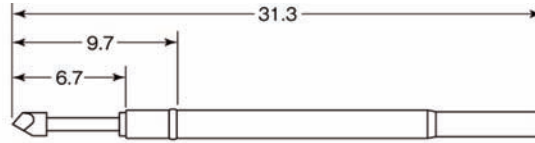


PTP-2P2L

Assembled Diagram

Example: Probe PTP-2P2
Socket PTS-2NO

* K model is 32.3



PTP-2P2L

Product Name: PTS-2 ■ - ■ **GA**

Material: Plunger – Steel/Gold Plating
Spring – Piano Wire/Gold Plating
Barrel – Phosphorous Bronze/Gold Plating

■ **Tip Shape**

Please select the probe tip shape from table below.

■ **Spring Force** [Initial Load : Load at 2/3 stroke]

00 – [0.19 (20) : 0.55N (56gf)] 2 – [0.72 (74) : 1.53N (156gf)]
0 – [0.36 (37) : 0.77N (79gf)] 3 – [0.88 (90) : 2.00N (205gf)]
1 – [0.54 (55) : 1.14N (116gf)]

Probe Shaft Dia.

$\phi 0.76$

$\phi 1.37$

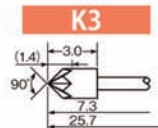
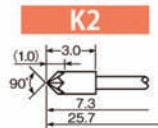
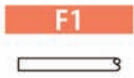
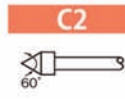
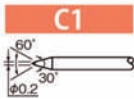
$\phi 1.80$

$\phi 2.00$

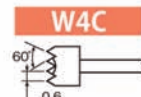
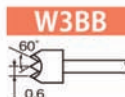
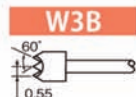
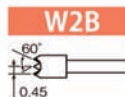
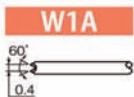
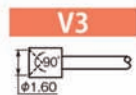
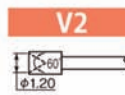
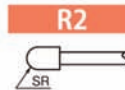
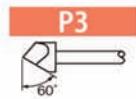
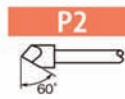
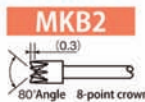
$\phi 2.40$

$\phi 3.50$

Tip Shapes



Head length of K model tip is + 1mm, 7.3mm so Total Length is also + 1mm, 25.7mm.



NOTE: * Other models are available. Please contact us for details.
** The above specifications are subject to change without notice.

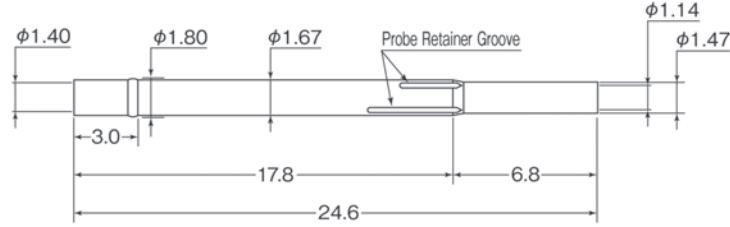
(Dimensions: mm)

PITCH 2.54 mm
100 mil

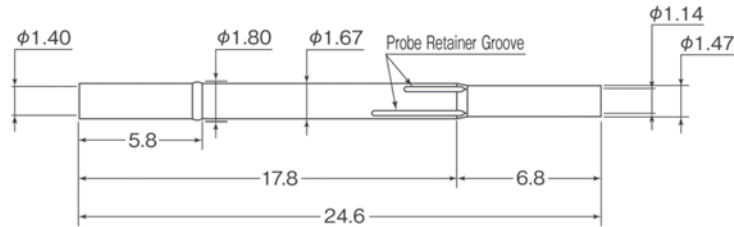
Socket Specifications

Material: Nickel Silver/Gold Plating

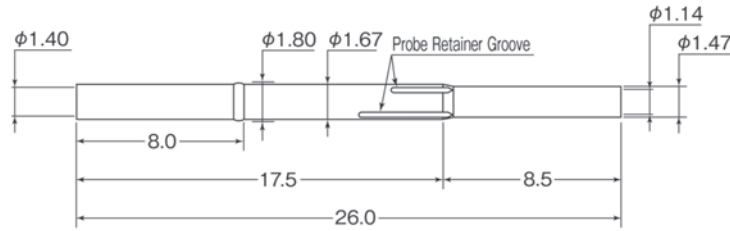
Product Name: PTS-2N



Product Name: PTS-2T

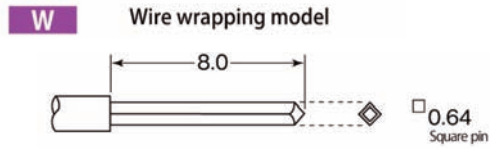
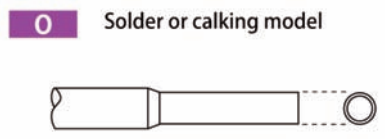
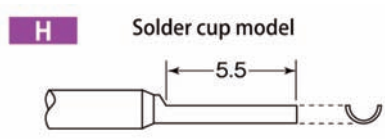


Product Name: PTS-2M



Terminal Shapes

Please select from the following diagrams.

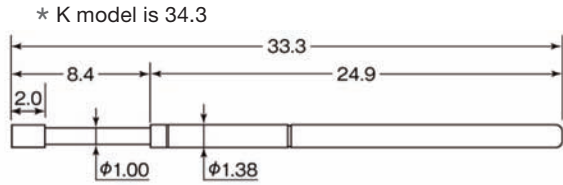


NOTE: * The above specifications are subject to change without notice.

PITCH 2.54 mm
100 mil

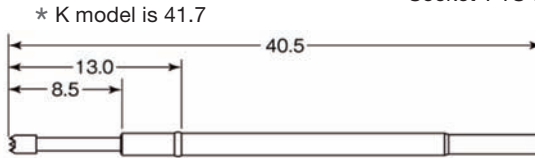
- Full Stroke 6.4 mm
- Recommended Working Stroke 4.2 mm
- Electrical Current Rating 5A

Probe Specifications



Assembled Diagram

Example: Probe PTP-2W2BL
Socket PTS-2NLO



Product Name: PTP-2 ■ **Tip Shape** ■ **Spring Force** [Initial Load : Load at 2/3 stroke]

Material: Plunger – Steel/Gold Plating Please select the probe tip shape from table below.

Spring – Piano Wire/Gold Plating

Barrel – Phosphorous Bronze/Gold Plating

00 – [0.24 (25) : 0.72N (74gf)]	2 – [0.50 (51) : 1.50N (153gf)]
0 – [0.31 (31) : 0.92N (94gf)]	3 – [0.64 (65) : 2.21N (226gf)]
1 – [0.40 (41) : 1.20N (123gf)]	

Probe Shaft Dia.	$\phi 1.00$	$\phi 1.37$	$\phi 1.50$	$\phi 1.80$	$\phi 3.50$
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Tip Shapes

<p>C1L</p> <p>F1L</p> <p>MC1L NEW</p> <p>MBL</p> <p>M1L</p> <p>N1L</p> <p>N1LM</p> <p>P1L</p> <p>PE1L</p>	<p>C2L</p> <p>F2L</p> <p>K2L</p> <p>MKB2L</p> <p>M2L</p> <p>P2L</p> <p>PK1L</p> <p>PK2L NEW</p> <p>V2L</p> <p>W2BL</p>	<p>C3L</p> <p>F3L</p> <p>K3L NEW</p> <p>MKB3L</p> <p>M2L</p> <p>P3L</p> <p>PK3L NEW</p> <p>R3L</p> <p>V3L</p> <p>W3BL</p> <p>W5EL</p>
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Head length of K model tip is + 1mm, 9.4mm so Total Length is also + 1mm, 34.3mm.

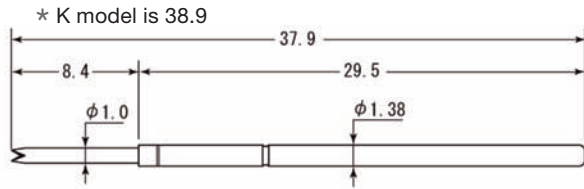
NOTE: * Other models are available. Please contact us for details.
** The above specifications are subject to change without notice.

(Dimensions: mm)

PITCH 2.54 mm
100 mil

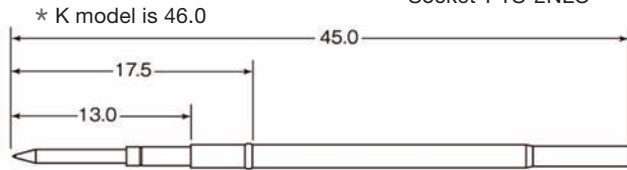
- Full Stroke 6.4 mm
- Recommended Working Stroke 4.2 mm
- Electrical Current Rating 5A

Probe Specifications



Assembled Diagram

Example: Probe PTP-2C1LL
Socket PTS-2NLO

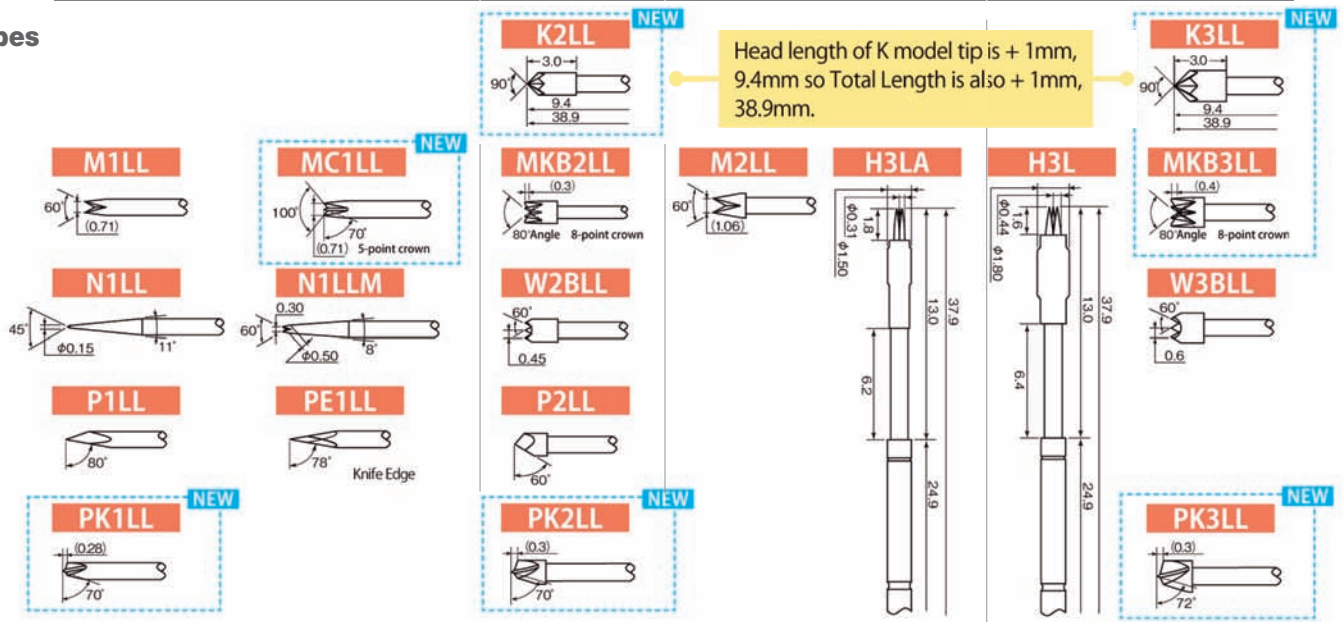


Product Name: PTP-2- GA **Tip Shape** **Spring Force** [Initial Load : Load at 2/3 stroke]

Material: Plunger – Steel/Gold Plating Please select the probe tip shape from table below. 0 – [0.24 (24) : 0.74N (76gf)] 2 – [0.51 (52) : 1.57N (161gf)]
 Spring – Piano Wire/Gold Plating 0 – [0.27 (28) : 0.88N (90gf)] 3 – [0.59 (61) : 2.16N (220gf)]
 Barrel – Phosphorous Bronze/Gold Plating 1 – [0.37 (37) : 1.18N (120gf)]

Probe Shaft Dia.	$\phi 1.00$	$\phi 1.37$	$\phi 1.50$	$\phi 1.80$
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Tip Shapes



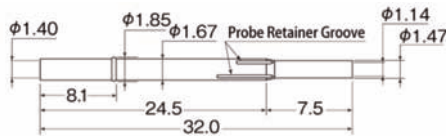
※PTP spring force to be selected from 2L.

Socket Specifications

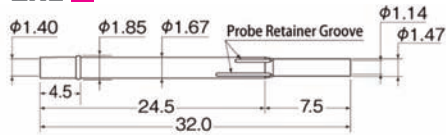
Material: PTS- Nickel Silver/Gold Plating
PTF- Brass/Gold Plating

Common to PTP 2L and 2LL Series

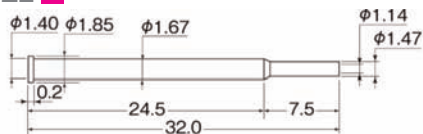
PTS-22NL



PTS-2NL

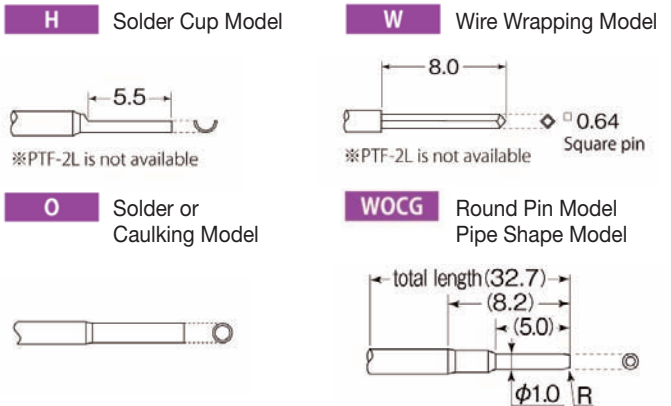


PTS-2L



Terminal Shapes

Please select from the following diagrams.



For PTS-22NL, PTS-2NL only

NOTE: * Other models are available. Please contact us for details.
** The above specifications are subject to change without notice.

(Dimensions: mm)

See Our Other Extensive Product Lines

MPD is a pioneer in power connection technology. We are dedicated to delivering an impressive range of cost-effective, innovative solutions to a global customer base. Download our brochures or view details at our web sites just below.

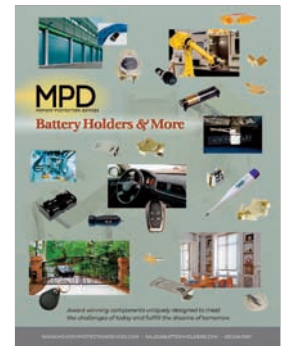
Battery Holders & More – SALES@BATTERYHOLDERS.COM

Award winning components uniquely designed to meet the challenges of today and fulfill the dreams of tomorrow.



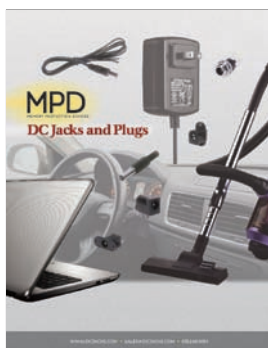
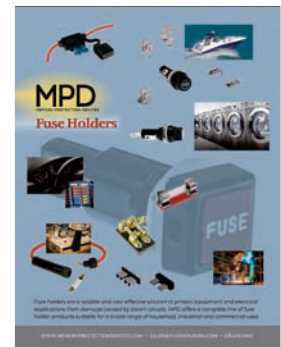
12V Parts – SALES@12V-PARTS.COM

A comprehensive assortment of standard and custom 12 volt parts available up to 20 amp. Ideal for demanding applications, MPD parts provide exceptional reliability and are competitively priced.



Fuse Holders – SALES@FUSEHOLDERS.COM

Fuse holders are a reliable, cost-effective solution to protect equipment and electrical applications from damage caused by blown circuits. MPD offers a complete line of fuse holder products suitable for a broad range of household, industrial and commercial uses.

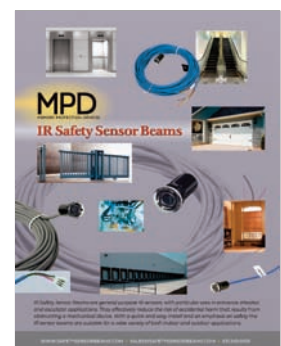


DC Jacks and Plugs – SALES@DCJACKS.COM

MPD is a global manufacturer of DC jacks and plugs offering you a wide variety of solutions for even the most demanding DC connections. MPD parts provide exceptional reliability and are competitively priced.

IR Safety Sensors – SALES@SAFETYSSENSORBEAMS.COM

IR Safety Sensor Beams are general purpose IR sensors, with particular uses in entrance, elevator, and escalator applications. They effectively reduce the risk of accidental harm that results from obstructing a mechanical device. With a quick and easy install and an emphasis on safety our IR sensor beams are suitable for a wide variety of both indoor and outdoor applications.



Distributors

Asian Distributors

Digi-Key	Worldwide	(800) 344-4539	www.digikey.com/us/en/International/global.html
Online Components	Online	(888) 906-8217	www.onlinecomponents.com
AddCom	China (Shanghai)	(86) 2154357506	www.addcom.com.sg
AddCom	China (Shenzhen)	(86) 75583864328	www.addcom.com.sg
AddCom	China (Hong Kong)	(852) 29470728	www.addcom.com.sg
Gagner	China (Shanghai)	(86) 2154315716	www.gagnerproducts.com
Gagner	China (Shen Zhen City)	(86) 75583662671	www.gagnerproducts.com
QuadRep	China (Beijing)	(86) 1062123833	www.quadrep.com.cn
QuadRep	China (Shanghai)	(86) 2163175445	www.quadrep.com.cn
QuadRep	China (Beijing)	(86) 2425621468	www.quadrep.com.cn
Gagner	Hong Kong (Hong Kong)	(852) 28927311	www.gagnerproducts.com
Master Electronics	HongKong (Tsuen Wan)	(852) 35911701	www.masterelectronics.com
AddCom	Indonesia (Singapore)	(65) 68442788	www.addcom.com.sg
AddCom	India (Faridabad)	(91) 01294000408	addcom.com.sg
Tamuz Electronics Ltd.	Israel (Kfar-Saba)	(972) 97633000	www.tamuz-ele.com
AddCom	Japan	(65) 68442788	www.addcom.com.sg
Kaztech	Japan (Tokyo)	(81) 0333877611	www.kaztech.co.jp
AddCom	South Korea (Seoul)	(65) 68442788	www.addcom.com.sg
AddCom	Malaysia (Bayan Lepas Penang)	(60) 46469223	www.addcom.com.sg
Gagner	Malaysia (Puchong, Selangor)	(60) 45075088	www.gagnerproducts.com
Master Electronics	Malaysia (Penang)	(604) 530-1128	www.masterelectronics.com
QuadRep	Malaysia (Penang)	(60) 46581771	www.quadrep.com.sg
AddCom	Philippines (Singapore)	(65) 68442788	www.addcom.com.sg
QuadRep	Philippines (Las Piñas City)	(63) 28052879	www.quadrep.com.sg
AddCom	Singapore (Singapore)	(65) 68442788	www.addcom.com.sg
Gagner	Singapore (TechPark)	(65) 68489430	www.gagnerproducts.com
QuadRep	Singapore (Singapore)	(65) 63461933	www.quadrep.com.cn
AddCom	Thailand (Laksi Bangkok)	(66) 25761988	www.addcom.com.sg
Gagner	Thailand (Bangkok)	(66) 267548146	www.gagnerproducts.com
AddCom	Taiwan (New Taipei City)	(886) 921128259	www.addcom.com.sg
QuadRep	Taiwan (Bangkok)	(886) 226989933	www.quadrep.com.cn
QuadRep Electronics (Hsinchu office)	Taiwan (Taipei)	(886) 35737853	www.quadrep.com.tw
AddCom	Vietnam (Ho Chi Minh City)	(08) 38107677	www.addcom.com.sg
Quadrep Vietnam (Ho Chi Minh)	Vietnam (Ho Chi Minh City)	(84) 87262981	www.quadrep.com.sg
Quadrep Vietnam Office Hanoi	Vietnam (Hanoi)	(84) 0936484282	www.quadrep.com.sg

Australian/Oceanic Distributors

Digi-Key	Worldwide	(800) 344-4539	www.digikey.com/us/en/International/global.html
Online Components	Online	(888) 906-8217	www.onlinecomponents.com
Master Instruments	Australia (Sydney)	(61) 295191200	www.master-instruments.com.au
Active Components	New Zealand (Auckland)	(64) 94439500	www.activecomponents.com

Africa

Brabek PTY	South Africa (Cape Town)	(27) 021 706-3162	www.brabek.co.za
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Our list of distributors continues on the following page.



Distributors (continued from previous page)

Global Catalog Distributors

Digi-Key	Worldwide	(800) 344-4539	www.digikey.com/us/en/International/global.html
Online Components	Online	(888) 906-8217	www.onlinecomponents.com

North American Distributors

ElectroSonic	Canada (Montreal QC)	514-748-7942	www.e-sonic.com
ElectroSonic	Canada (Markham, ON)	905-946-0500	www.e-sonic.com
ElectroSonic	Canada (Vancouver, BC)	604-273-2911	www.e-sonic.com
Inventus Power	Mexico (Tijuana)	(52) 6642314832	www.inventuspower.com
Master Electronics	Mexico (Zapopan)	(33) 21534181	www.masterelectronics.com
Custom Power LLC	USA (Fountain Valley, CA)	1-800-432-3385	www.custompower.com
Excel Components & Supply	USA (Holtsville, NY)	1-631-475-1100	www.excelcomp.com
Inventus Power	USA (Woodridge IL)	1-630-410-7900	www.inventuspower.com
Master Electronics	USA (Phoenix AZ)	1-602-267-1111	www.masterelectronics.com
Master Electronics	USA (Eden Prairie, MN)	1-952-944-2151	www.masterelectronics.com
Master Electronics	USA (Tampa, FL)	1-813-814-2900	www.masterelectronics.com
Master Electronics	USA (Santa Clara, CA)	1-408-970-8090	www.masterelectronics.com
Master Electronics	USA (Bohemia, NY)	1-631-434-9394	www.masterelectronics.com
Master Electronics	USA (Redmond, WA)	1-425-821-5454	www.masterelectronics.com
Master Electronics	USA (Santa Monica, CA)	1-310-452-1229	www.masterelectronics.com
Master Electronics	USA (Miami, FL)	1-305-638-2000	www.masterelectronics.com
Source Research	USA (Schaumburg, IL)	1-800-356-0259	www.sourceresearch.com
Taylor/Master Electronics	USA (Germantown, WI)	1-414-365-6335	www.taylorwisconsin.com

European Distributors

Digi-Key	Worldwide	(800) 344-4539	www.digikey.com/us/en/International/global.html
Online Components	Online	(888) 906-8217	www.onlinecomponents.com
Ineltro	Austria (Wien)	(43) 0161062136	www.ineltro.eu
Ineltro	Switzerland (Regensdorf)	(41) 433437300	www.ineltro.ch
Rossmann Electronic	Germany (Dießen am Ammersee)	(49) 8807949940	www.rossmannweb.de/index.php?lang=de
RC Microelectronica	Spain (Barcelona)	(34) 932602166	www.rcmicro.es
Sorelec Electronics	France (Cesson-Sevigne)	(33) 299837854	www.sorelec.com/l-actu/87-sorelec-distribue-les-solutions-mpd.html
Dissios SA Batteries	Greece (Paiania)	(30) 2106647333	www.batteries.gr/en/rechargeable/accessories/holders.html
HT Componenti Elettronici srl	Italy (Firenze)	(39) 055430310	it.kompass.com/c/ht-componenti-elettronici-srl/it0179298/
Nedelko	Netherlands (Barendrecht)	(31) 180645400	www.nedelko.nl
OEM Electronics AB	Denmark (Allerød)	(46) 087328560	www.oemelectronics.se/leverantorer/mpd
OEM Electronics AB	Norway (Drammen)	(46) 087328560	www.oemelectronics.se/leverantorer/mpd
OEM Electronics Poland	Poland (Warszawa)	(48) 22-86 32 722	www.oemelectronics.pl/
OEM Electronics AB	Sweden (TRANÅS)	(46) 087328560	www.oemelectronics.se/leverantorer/mpd

South American Distributors

Inventus Power	Brazil (Manus)	(55) 92 2126 6400	www.inventuspower.com
Power Circuit EletrônicaLda.	Brazil (São Paulo)	(55) 11-3981-3965	www.powercircuit.com.br



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