



**The IP&E
Specialist**

in Electronic Component Distribution

Line Card

TTI, Inc., – A Berkshire Hathaway Company



The IP&E Specialist

The Specialist in Electronics Component Distribution

Founded in 1971, TTI has steadily grown to become a world leading specialist distributor of electronic components. The company was founded on the premise that passive component purchasing could be made more efficient by offering product specialization, customer-driven service and proprietary supply chain solutions.

Why TTI?

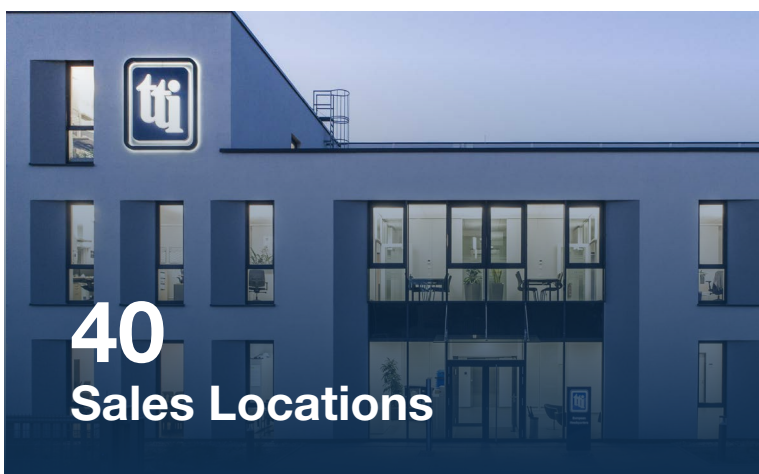
• **Technical Experts** TTI's European team of field-based Sales Engineers and local Product and Technical Specialists are here to support you; from understanding component trends, sustainable sourceability and new product roadmaps, to in depth technical support for your design from our technical engineering experts.

• **Value Added Services** Connector assembly is one of the most important value-added services at TTI, Inc. – Europe. We are specialized in distributing manufacturer controlled and certified connectors and interconnect solutions from globally leading suppliers. Thanks to a large inventory level of connector components, TTI, Inc. – Europe can serve any market requirements.

• **Global Distribution Centers** Our European headquarters is located just outside of Munich, Germany in Maisach-Gernlinden. In total, we have 45.000m² of dedicated warehouse space and local sales and technical support in over 40 locations across Europe. TTI has more than 195.000m² of automated warehousing in North America, Europe and Asia. All are linked into a global warehouse management system that provides superior customer service and overall business efficiencies. Wherever you are in the world, TTI can support you. Year after year, customers rate our inventory availability, on-time delivery and accuracy among the very best in the industry – contact us today to find out what a true specialist has to offer.

• **Quality and Reliability** TTI's global warehouses are all ISO-registered and have received certification to the ISO 9001 and ISO 14001 Standards. TTI Europe is also certified to EN9120/EN9100, IECQ-CECC and ISO/IEC 27001 Standards. Additionally, our European sales branches are ISO 9001 certified. TTI has one global documentation system that ensures that every TTI branch and warehouse in the world follows the same processes.





24/7
Available to Order Online



www.ttieurope.com



**The IP&E
Specialist**

in Electronic Component Distribution

TTI distributes premier electronic component brands around the globe.
Our Line Card includes all of our suppliers, brand products and product families.

3M Interconnect Solutions

A

Abracon

Advanced Energy

Artesyn
Excelsys
SL Power
Ultravolt

AlpsAlpine

Amphenol

ACS
Aerospace
AET
AirLB
Alden
ALL SENSORS
Amphenol Advanced Sensors
Anytek
Assembletech
Audio
Australia
Automotive
Auxel
Cablescon
Canada
CIT
Tri-Star
CDI
Conec
Connex
Elcab
FEP
Fiber Optics
FTG
FZE
GEC TPI
i2s
India
Industrial
Limited
Lütze
LTW
Martec
Matrix
Nexus
NovaSensor
PCD
Piher Sensing Systems
Positronic
RF
SGX SENSORTECH
Sincere
Sine
Socapex
SOLAR
Spectra-Strip
SSI Technologies
SV Microwave
TELAire
Teradyne Connection (TCS)
TFC
Times Microwave
Thermometrics Ltd
Tuchel
Wilcoxon

Apem

IDEC
MEC

APTIV

HellermanTyton
KUM

ARATAS

B

Binder* *Regional Franchise Only*

Bourns

C

Chemi-Con

Cree LED

CTS

Tusonix

D

Dialight

E

EATON

Bussmann
Coiltronics
PowerStor
Souriau-Sunbank

F

Flex Power Modules

G

Glenair

Gowanda InRcore

InRcore
Vanguard

H

Harting

Harwin

Honeywell

City Technology
Sensing and Safety Technologies

I

ITT Cannon

J

JAE

JST

K

Kingbright

Knowles

Capacitor
CDE (Cornell Dubilier)
DLI
Novacap
Syfer
Voltronics

KOA

KYOCERA AVX

AB Electronics
American Technical Ceramics
Elco
Ethertronics

L

Lelon

Littelfuse

Carling Technologies
C&K
Hamlin
IXYS
Littelfuse Automotive
Raychem
Teccor
US Sensor
Western Automation

LYNXEO (former Nexans)

M

MEAN WELL

Molex

Airborn
Brad®

Contrinex

FCT

Flamar®

GWconnect™

ISI

mPm®

Smiths Interconnect

Hypertac
IDI

Sabritech
Woodhead

Murata

Murata Power Solutions

N

Nichicon

O

OHMITE

OmniOn Power

P

Panasonic

Panasonic Industry

Panduit

Panjit

Phoenix Contact

PKC Group

PRECI-DIP

Q

Qnity (former Laird)

R

Radiall

Rosenberger

S

Samsung

Samtec

Schurter

Sensata Technologies

Airpax
BEI Sensors
Cynergy3
Crydom
Gigavac
Klixon

Spectrum Control

Standex Meder

Switchcraft

T

Taiyo Yuden

Taoglas

TDK

TE Connectivity

AGASTAT ALCOSWITCH
AMP
AMP NETCONNECT
AST
AUGAT
AXICOM
BetaTHERM
CII Technologies
Corcom
Deutsch
DRI Relays
ELCON
Entrelec
ERNI
First Sensor
HARTMANN
HTS
Intercontec
Jaquet

Kemtron

KILOVAC

Kissling

MADISON CABLE

Measurement Specialties Inc

MICRODOT

NANONICS

OEG

Polamco

Potter & Brumfield

Raychem

Schaffner

SCHRACK

SMI

SSI

TE Sensors

Teledyne Relays

Toshiba

TT Electronics

AB Elektronik

BI Technologies

IRC

Optek

Semelab

Welwyn

V

Vishay

Angstrohm

Barry

BC components

Beyschlag

Cera-Mite

Dale

Draloric

Electro-Films

General Semiconductors

Huntington/Milwaukee

MCB

Roederstein

Sfernice

Siliconix

Spectrol

Sprague

Techno

Thin Film

Vishay Semiconductors

Vitramon

Vishay Precision Group

Vishay Foil Resistors

W

WIMA

Y

Yageo Group

Ferroxcube

Kemet

Arcotronics

Evov Rifa

NEC Tokin

Nexensos

Phycomp

Pulse Electronics

Egston

Chilisin

Bothhand

Larsen

MagLayers

Shibaura

Telemecanique Sensors

X-Semi

Yageo

Brightking

Vitrohm

Yazaki



Connectors

[illegible]

	3M	Amphenol	Binder*	EATON (Souriau-Sunbank)	Harting	Harwin	ITT Cannon	JAE	JST	Kyocera AVX	Molex	Preci-Dip	Radiall	Rosenberger	Santec	Smiths Interconnect	TE Connectivity
Backplane																	
10 Gb/s+ Solutions	■	■			■			■		■	■				■	■	■
2.00mm	■	■			■					■							■
Assemblies (Backplane)	■	■		■							■						■
ATCA/MicroTCA	■	■									■					■	
Cable Assemblies	■	■	■			■				■							■
Card Edge	■	■			■					■							■
Compact PCI	■	■									■						■
DIN 41612 (Eurocard)	■	■								■							■
Fiber Optic	■	■		■	■			■			■		■		■		■
Future Bus	■	■															■
Hard Metric	■	■			■												■
PCI Express	■	■						■	■		■						■
Power	■	■									■				■	■	■
RF/Ganged RF	■	■		■				■						■	■		■
SCA-2		■									■					■	■
Board-to-Board																	
Ball Grid Array (BGA)	■	■								■	■	■				■	■
Battery Connectors	■	■				■	■	■	■								■
Board Stacking	■	■			■		■	■				■					■
Breakaway Headers	■	■			■							■				■	■
Compression	■	■				■				■	■						■
Headers & Receptacles	■	■			■					■	■						■
Mezzanine/FPC	■	■		■						■	■					■	■
Power	■	■		■		■					■						■
SCSI	■	■									■						■
Shunts	■	■			■					■		■					■
Stacking	■	■				■		■			■					■	■
Device-to-Board																	
DIMM		■						■	■		■						■
DIP	■	■			■							■				■	■
PCMCIA	■	■						■									■
PGA	■	■									■	■					■
PLCC	■	■			■							■					■
RIMM/DIMM/SIMM		■						■	■								■
SIP	■				■							■				■	■
SO DIMM & RIMM		■						■	■		■						■
Test/Burn-In Sockets	■											■					■
Transistor			■									■					■

[illegible]

* Regional Franchise Only

Connectors

Industrial Factory & Process Automation

	3M	Amphenol	EATON (Souriau-Sunbank)	Harwin	JST	Kyocera AVX	Molex	Phoenix Contact	Rosenberger	Samtec	Smiths Interconnect	TE Connectivity
M8/M12 Field Attachable												
M8/M12 circular connector												
M17/M23 circular connector												
M40/M58 circular connector												
Plastic Circular Connector												
Industrial USB												
Industrial I/O connector												
Industrial RJ45												
SPE – Single Pair Ethernet												
Industrial Network cable												
Distribution Modules												
Active I/O Modules												
Heavy Duty rectangular												
Terminal Blocks												
DIN Valve connector												
Industrial Power connector												
Industrial raw cable												
Terminal & Splices												
Wire to Board												
Wire to Wire												
By Market Segment												
Automation Controls												
Motion & Drives												
Machine Tools												
Robotic, AGV's & AMR's												
Warehouse Automation												
Smart Home & Security												
HVAC & Heating												
Smart Metering												
Lighting												
Renewable Energy												
Energy Storage & EV Charging												
Data Center Infrastructure												

Input/Output

	3M	Amphenol	Aptiv	Binder *	EATON (Souriau-Sunbank)	Glenair	ITT Cannon	Harwin	JAE	JST	Kyocera AVX	Molex	Phoenix Contact	Radial	Rosenberger	Samtec	Smiths Interconnect	Taoglas	TE Connectivity	Yageo PULSE
1394 & 1394b																				
Audio																				
Audio ¼" Phone																				
Audio 3.5mm PCB																				
Audio BNC 75ohm																				
Audio XLR																				
Audio MP Multipin																				
Camera Link/Mini Camera Link																				
Circular																				
Combo I/O																				
Display Port																				
D-Subminiature																				
DVI																				
Fiber Channel																				
Fiber Optic																				
Filtered I/O																				
HDMI/Micro HDMI																				
Ipas (Mini SAS)																				
InfiniBand®																				
M12/M12D/M8																				
Micro D																				
Mini DIN/Circular DIN																				
Mini D-Subminiature																				
Mobile Systems																				
Modular Plugs & Jacks																				
PCI Express																				
Power																				
Push/Pull																				
Rectangular																				
RF/Coax/Microwave																				
RJ/Industrial Ethernet																				
SATA/SAS/Mini SATA																				
SCSI																				
SFP/XFP																				
TDP																				
USB/Mini USB/USB OTG																				

Memory Card Connectors

	3M	Amphenol	C&K Components	JAE	JST	Kyocera AVX	Molex	TE Connectivity
CompactFlash™								
DDR/DDR2/Mini DDR2/DDR3/DDR4/DDR5								
Express Card								
Memory Stick/Duo								
Micro SD								
Mini SD								
MMC								
PC Card/CardBus								
PCMCIA								
SD (Secure Digital)								
Smart Card (SIM)								

Military & Avionics Specifications

	Amphenol	EATON (Souriau-Sunbank)	Glenair	Harwin	ITT Cannon	Smiths Interconnect	TE Connectivity
EN2997/ESC							
EN3645							
EN4165							
HE301							
HE308							
MIL-22992							
MIL-DTL-26482 Series 1 Crimp							
MIL-DTL-26482 Series 1 Solder							
MIL-DTL-26482 Series 2							
MIL-DTL-27599 Solder							
MIL-DTL-28840 Shipboard							
MIL-DTL-38999 Series I & II							
MIL-DTL-38999 Series III							
AS50151							
MIL-DTL-55302							
MIL-C-81511							
MIL-DTL-83723							
Hermetics							
VG95234							
VG95328							
VG96912							
VG96929							
MIL-DTL-12883							
MIL-DTL-24308 Solder 1 & 3							
MIL-DTL-24308 Crimp 2 & 4							
MIL-DTL-24308 PC Tail 23 & 24							
MIL-DTL-26500							
MIL-DTL-29504							
MIL-DTL- 38999 Series IV							
MIL-DTL-39012							
MIL-DTL-55339							
MIL-DTL-83513							
AS81511							
AS81714							

Military Connectors & Accessories

	Amphenol	Binder *	EATON (Souriau-Sunbank)	Glenair	ITT Cannon	Harwin	HellermannTyton	Molex	Panduit	Preci-Dip	Radial	Rosenberger	Samtec	Smiths Interconnect	TE Connectivity
Backshells & Accessories															
Coax/RF															
Contacts															
D-Subminiature															
Discrete Sockets															
Filtered Audio Connector															
Micro D															
Rack & Panel															
Sealed Plugs															
Microwave															
Terminal Blocks															
Terminals															
Tools															

Connectors

RF/Coaxial/ Microwave

	3M	Amphenol	EATON (Souriau-Sunbank)	ITT Cannon	JAE	JST	Kyocera AVX	Molex	Radiall	Rosenberger	Samtec	Smiths Interconnect	Taoglas	TE Connectivity
1.0/2.3														
1.6/5.6														
7/16														
BMA														
BNC (50/75Ω)														
BNC (Miniature)														
B to B Blindmate/Compression														
BSA														
FAKRA														
MCX/MMCX														
MHV/SHV														
Precision1														
QMA														
Reverse Polarity2														
Shielded Terminators														
SMA														
SMB (50/75Ω)														
SMB (Miniature)														
SMC														
SMP														
SMT														
SSMA														
TNC														
Triax														
Twinax														
Type F/G														
Type N														
UHF/MiniUHF														

Speciality Connectors

	3M	Amphenol	Aptiv	Binder *	Bourns	EATON (Souriau-Sunbank)	Glenair	ITT Cannon	Harting	Harwin	HellermannTyton	JAE	JST	Molex	Kyocera AVX	Phoenix Contact	Rosenberger	Samtec	Smiths Interconnect	Switchcraft	TE Connectivity
Automotive																					
Battery																					
COTS																					
EMI Shielded																					
Filtered																					
Harsh Environment																					
Hermetic																					
High Voltage																					
Industrial																					
LED Connector																					
Micro Miniature/Nano																					
Motor Connectors																					
Solar																					
Data Center Power Whip Cables																					

Terminal Blocks

	Amphenol	EATON (Souriau-Sunbank)	Harting	Molex	Phoenix Contact	TE Connectivity
Barrier Strips						
Europa						
Eurostyle – Fixed/Pluggable						
2.54mm						
3.50mm						
3.81mm						
5.00mm						
5.08mm						
Filtered						
Interface Modules						
Phenolic						
Rail Mounted						
Screw Terminal						
Spring Clamp						

Wire & Board Management/ Accessories

	3M	Amphenol	Binder *	EATON (Souriau-Sunbank)	Glenair	ITT Cannon	Harting	Harwin	HellermannTyton	JAE	JST	Molex	Kyocera AVX	Panduit	Phoenix Contact	Preci-Dip	Samtec	TE Connectivity
Backshells																		
Cable Clips																		
Cable Management																		
Cable Marker Ties																		
Cable Mounts																		
Cable Spacers																		
Cable Terminals																		
Cable Ties																		
Heat Shrink Products																		
Jumper Links																		
Labelling Systems																		
Labels																		
PCB Spacers																		
PCB Terminals																		
Printers/Software and Ribbons																		
RFI Clips & Spring Fingers																		
Shorting Links																		
Solderless Terminals																		
Splices																		
Stainless Steel Accessories																		
Test Points																		
Tooling																		
Wire & Cable																		

Wire-To-Board/ Wire-To-Wire

	3M	Amphenol	Aptiv	Aratas	Binder *	EATON (Souriau-Sunbank)	Glenair	Harting	Harwin	JAE	JST	Kyocera AVX	Molex	Panasonic Industry	Phoenix Contact	Samtec	Smiths Interconnect	TE Connectivity
1.25mm																		
1.27mm																		
2.00mm																		
2.50mm																		
2.54mm																		
3.00mm																		
3.96mm																		
4.00mm																		
4.20mm																		
5.00mm																		
5.03mm																		
5.08mm																		
6.35mm																		
7.50mm																		
9.00mm																		
10.00mm																		
Bus Bar																		
Cable Assemblies																		
Discrete Wire																		
FFC/FPC																		
IDC Discrete Wire																		
IDC/Mass Termination																		
Mini D Ribbon/Champ																		
Power																		
SATA/SAS/Mini SATA																		
SCSI I, II, III																		

* Regional Franchise Only

Relays & Circuit Breakers

	Aratas	IDEC	Littelfuse	Panasonic Industry	Phoenix Contact	Radiall	Standex Meder	Sensata – Crydom, Cynergy 3	Sensata - Gigavac	TDK Electronics	TE Connectivity – Kilovac, Citi, Kissling	Teledyne	Toshiba	Vishay
Relays														
Automotive	■		■	■			■		■		■			
Communication	■	■	■	■								■		
Contactors/ Electrification	■			■					■	■	■			
Control		■	■	■							■	■		
Counters	■													
Crystal Can (Military)											■	■		
Definite Purpose Contactors	■			■					■		■			
DIN Rail Mounted	■	■		■	■			■			■	■		
Force Guided Contact	■	■									■			
General Purpose	■	■		■							■			
High Frequency Relays	■		■	■		■	■		■		■	■		
High Voltage	■	■	■				■		■		■			
Industrial DC & AC	■	■		■							■	■		
Input/Output Modules	■			■							■			
Magnetic Latching	■			■					■		■	■		
Microwave	■		■				■				■	■		
Military/Space									■		■	■		
Miniature PCB	■			■				■			■	■		
MOSFET/PhotoMOSTM	■		■								■	■	■	
Panel/Plug-In	■	■		■	■			■	■		■	■		
Power	■	■	■	■					■		■	■		
Pre-Charge Relays	■			■						■				
Reed			■				■	■			■	■		
Safety	■	■		■							■			
Signal	■		■				■				■	■		
Sockets	■	■	■	■					■		■			
Solid State Relays	■	■	■	■	■			■	■		■	■		
Time Relays	■	■	■	■	■						■			
Circuit Breakers														
Magnetic Circuit Breakers					■						■			
Thermal Circuit Breakers					■						■			

Switches

	AlpsAlpine	APEM/IDEC/MEC	Amphenol – Piher	Aratas	Bourns	C&K	Honeywell	Littelfuse	Panasonic Industry	Schurter	Standex Meder	TDK Electronics	TE Connectivity	Teledyne
ATEX														
Counters/Hour Meters						■	■							
DIP	■	■		■		■							■	
DIP Coded Rotary				■									■	
Emergency Stop/Safety		■					■							
Encoder	■			■	■		■			■				
Fader/Potentiometer	■		■		■		■			■				
Limit – Heavy Duty							■		■					
Joystick	■	■		■			■							
Keylock/Switchlock		■		■			■	■					■	
Microswitch/Snap Action	■	■		■			■		■				■	
Mil/Aero/Space Grade Level		■					■							■
Miniature Detection	■			■			■							
Navigation Switches	■					■								
Off-Road – Special Purpose		■					■							
Piezo Switch		■									■		■	
Pushbutton	■	■		■			■			■			■	
Pushwheel/Thumbwheel		■		■			■			■			■	
Reed								■			■			
Rocker		■		■			■			■			■	
Rotary	■			■			■			■			■	
Slide	■	■		■			■						■	
Tactile	■	■		■			■		■				■	
Toggle/Paddle		■					■						■	

Passives – Capacitors

Aluminium

	Chemi-Con	Cornell Dubilier	Eaton (Cooper Bussmann)	Kyocera AVX	Lelon	Murata	Nichicon	Panasonic Industry	TDK	Vishay (BC components)	Yageo KEMET
AC Motor Start		■								■	■
Axial Electrolytic		■								■	■
EDLC/Supercapacitor	■		■							■	■
FlatPack Electrolytics		■								■	■
Polymer	■	■		■						■	■
Radial Miniature	■	■								■	■
Screw Terminal	■	■								■	■
Snap-In	■	■		■						■	■
Surface Mount	■	■								■	■
High Rel		■								■	■

Ceramic

	Chemi-Con	Cornell Dubilier	Knowles (Syfer)	Kyocera AVX	Murata	Samsung	Taiyo Yuden	TDK	Tusonix	Vishay	BCcomponents	Ceramite	Vitramon	Yageo KEMET	Yageo YAGEO
Arrays				■	■	■	■	■						■	■
Dip 2-Pin			■	■	■	■	■	■						■	■
Disc		■	■	■	■	■	■	■	■	■	■	■	■	■	■
High Cap	■		■	■	■	■	■	■	■	■	■	■	■	■	■
High Q			■	■	■	■	■	■	■	■	■	■	■	■	■
High Temperature	■		■	■	■	■	■	■	■	■	■	■	■	■	■
High Voltage	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Low Inductance			■	■	■	■	■	■	■	■	■	■	■	■	■
Multi-Layer	■		■	■	■	■	■	■	■	■	■	■	■	■	■
RF/Microwave			■	■	■	■	■	■	■	■	■	■	■	■	■
Safety			■	■	■	■	■	■	■	■	■	■	■	■	■
Single Layer			■	■	■	■	■	■	■	■	■	■	■	■	■
Switch Mode			■	■	■	■	■	■	■	■	■	■	■	■	■
Tip 'n' Ring			■	■	■	■	■	■	■	■	■	■	■	■	■
Trimmer				■	■	■	■	■	■	■	■	■	■	■	■
High Rel			■	■	■	■	■	■	■	■	■	■	■	■	■

Film & Mica

	BCcomponents	Cornell Dubilier	Drabrick	Kyocera AVX	Nichicon	Panasonic Industry	TDK	Vishay	Roederstein	WIMA	Yageo KEMET
High Rel		■		■				■			■
Film											
Motor Run		■				■					■
Polyester		■		■	■	■	■	■	■	■	■
Polypropylene		■		■	■	■	■	■	■	■	■
Power Film		■		■	■	■	■	■	■	■	■
Snubber		■		■	■	■	■	■	■	■	■
Suppression X-Y (Safety Cap)		■	■			■	■	■	■	■	■
Surface Mount		■		■		■					■
Mica											
Metal Clad		■									
Mica		■									
Surface Mount		■									

Tantalum

	Cornell Dubilier	Kyocera AVX	Panasonic Industry	Vishay	Sprague	Tansitor	Yageo KEMET
Micro-Chip							■
Conformal Coated Chip		■		■	■		■
Dipped Radial	■			■	■		■
Fail Safe/Fused Chip		■		■	■		■
Hermetic Through Hole	■			■	■		■
High Temperature Chip		■		■	■		■
Low ESR Chip		■		■	■		■
Low Profile Chip		■		■	■		■
Molded Chip		■		■	■		■
Molded Through Hole	■			■	■		■
Niobium Chip		■		■	■		■
Polymer Chip			■	■	■		■
Solid Metal Case Through Hole	■			■	■		■
Supertan				■	■		■
Wet Through Hole		■		■	■		■
High Rel		■		■	■		■

Passives – Resistors

Film	Angstrom	BCcomponents	BI Technologies	Bourns	Dale	Electro-Films	Huntington/Milwaukee	IRC	KOA	OHMITE	Panasonic Industry	TE Connectivity	Techno	Thin Film	TT Electronics	Vishay	Vishay Precision Group	Welwyn	Sfernice/ MCB	Yageo YAGEO
Chip Array																				
Discrete Chip																				
Flame Proof																				
Fusible																				
High Temp																				
High Voltage																				
Matched Sets																				
Melf /Cylindrical																				
Metal Film																				
Metal Glaze																				
Metal Oxide																				
Precision																				
Thick Film Chip																				
Thin Film Chip																				
Trimable																				
Voltage Divider																				
High Rel																				

Network	BI Technologies	Bourns	Dale	Electro-Films	Huntington/Milwaukee	IRC	KOA	Panasonic Industry	TE Connectivity	Techno	Thin Film	TT Electronics	Vishay	Vishay Precision Group	Welwyn	Yageo YAGEO
Array																
Conformal Coated																
Custom																
Integrated Passive																
Ladder																
Line Protection																
Molded																
Resistor/Capacitor																
SMT																
Surge																
Thick Film DIP																
Thick Film SIP																
Thin Film DIP																
Thin Film SIP																
High Rel																

Potentiometers/ Trimmers	BCcomponents	Bourns	Dale	Honeywell	Knowles (Syfer)	KOA	Murata	OHMITE	Panasonic Industry	Sfernice/ MCB	Spectrol	TE Connectivity	TT Electronics (BI Tech)	Tusonix	Vishay	Vishay Precision Group
High Rel																
Trimming Potentiometers																
Adjustment Tools																
Carbon																
Cermet																
Counters																
Dials/Knobs																
Multi-Turn																
Open Frame																
Open Frame Slide																
Sealed Frame																
Single-Turn																
Wirewound																
Precision Panel Control																
Carbon																
Cermet																
Conductive Plastic																
Knobs																
Hybrid																
Linear																
Metal Foil																
Modular																
Motor Pot																
Multi-Turn																
Non-Linear																
Rheostat																
Rotary																
Sealed Frame																
Single-Turn																
Wirewound																
Sensor/Encoder																
Attenuator																
Encoders																
Linear Motion																
Rotary																

Power/ Wirewound/ Carbon & Foil	BI Technologies	Bourns	Dale	Huntington/Milwaukee	IRC	KOA	Kyocera AVX	OHMITE	Panasonic Industry	Sfernice/ MCB	TE Connectivity	Thin Film	TT Electronics	Vishay	Vishay Precision Group	Welwyn	Yageo YAGEO
High Rel																	
Power/Wirewound																	
Brackets/Hardware																	
Ceramic Composition																	
Commercial																	
Current Sense/Low Resistance																	
Industrial																	
Precision																	
Rheostat																	
Special Purpose																	
Tubular																	
Vitreous Enamel																	
Carbon																	
Carbon Composition																	
Carbon Film																	
Foil																	
Bulk Metal Foil																	

Circuit Protection & Electromagnetics

Protection Devices

	BC Components	Bourns	Chemi-Con	Dale	EATON	KOA	Kyocera AVX	Littelfuse	Murata	Panasonic Industry	Sensata - Gigavac	Schurter	TDK	Vishay	Yageo YAGEO
Overcurrent															
Axial (PICO) Fuses															
Automotive (Blade) Fuses															
Automotive HV (Passive Active) Fuses															
Cartridge Fuses															
High Voltage Fuses															
NTC Thermistors															
Power (Electrical) Fuses															
PTC Thermistors															
Radial Leaded Resettable Fuses (PPTC)															
Radial Subminiature Fuses															
SMT Resettable Fuses (PPTC)															
Surface Mount (125V+) Fuses															
Telecom Resettable Fuses (PPTC)															
Thermal Cutoffs (TCO)															
Thin Film (Chip) Fuses															
Over Voltage															
Gas Discharge Tube (GDT)															
Line Protection Networks															
Polymer ESD Suppression															
Protection Thyristors															
Surface Mount Varistors (MLV)															
Thermal (MOV)															
Through-Hole Varistors (MOV)															
TVS Diodes															
TVS Diodes Arrays															
Pyro Fuse															
Pyro Fuses															

EMI/RFI & RF

	Abracon	Amphenol	Kyocera AVX	Molex	Murata	Panasonic Industry	RF 360	Schaffner	Schurter	Taiyo Yuden	Taoglas	TDK	TE Connectivity	Tusonix (CTS)	Yageo KEMET	Yageo PULSE
EMI/RFI Filters																
Feed-Thru Filters																
RF/Microwave Filters																
SAW Filters																
Surface Mount Filters																
RF/Wireless Antennas																

Frequency Control

	Abracon	Kyocera AVX	Murata	Panasonic Industry	RF360	Samsung	TDK	Vishay (Dale)
Crystals								
Oscillators								
Piezo Sound Devices								
Resonators								
Tuning Forks								

Ferrites/ Inductors/ Transformers

	Abracon	Bourns	Chemi-Con	Eaton (Coiltronics)	Gowanda	INRCORE	KOA	Kyocera AVX	Laird	Murata	Panasonic Industry	Samsung	Schaffner	Schurter	Taiyo Yuden	Taoglas	TDK	TT Electronics (BI Tech)	Vishay	Yageo KEMET	Yageo PULSE	Yageo YAGEO
Air Coil Inductors																						
Common Mode Chokes																						
Custom Inductors																						
Ferrite Beads																						
Ferrite Cores/Clamp Filters																						
High Current Inductors																						
Leaded Inductors																						
Military Inductors																						
Multilayer Inductors																						
Power Inductors																						
RF Inductors																						
Thin Film Inductors																						
Toroid Inductors																						
Transformers																						
Wirewound/Coil Inductors																						

Sound Devices

	Kyocera AVX	Murata	Taoglas	TDK
Buzzer				
Microphone				
Receiver				
Ringer				
Sensor				
Sounder				
Speaker				

Diodes & Power Modules

	Bourns	Eaton	Kyocera AVX	Littelfuse	Panjit	TDK	Toshiba	TT Electronics	Vishay	Yageo YAGEO
Protection										
Arrays										
ESD										
HiRel TVS										
TVS										
TVS Diodes Arrays										
Zener										
Standard										
Arrays										
PIN Diodes										
Schottky										
Small Signal										
Switching										
Rectifiers										
Bridge										
Standard										
Fast										
Ultrafast										
Schottky										
Silicon Carbide										
Dice Solutions										
Rectifiers										
High Voltage Diodes										
Schottky Diodes										
TVS Diodes										
Thyristors										
Modules										
Bridge										
Diode										
IGBT										
Thyristor										
MOSFET										
Silicon Carbide										

Transistors and Thyristors

	Bourns	Littelfuse	Panjit	Toshiba	TT Electronics	Vishay	Yageo XSEMI
Standard Transistors							
Bipolar							
Small Signal							
MOSFETs							
Low Voltage							
Medium Voltage							
High Voltage							
JFET							
Automotive Qualified							
Mil Qualified							
Power Transistors							
Silicon Carbide							
IGBTs Discrete							
IEBTs Discrete							
Thyristors							
Protection							
Switching							
Sidac							
SCR							
Triac							

Integrated Circuits

	Bourns	Kingbright	Littelfuse	Panjit	Toshiba	TT Electronics	Vishay
Integrated Circuits							
LED Driver							
Logic Ics							
Low Drop Out Regulators (LDO)							
AC-DC Switching Regulator							
Power Switches							
Signal Chain ICs							
Motor Control ICs							
Automotive Brushless Motor Drive ICs							
Automotive Brushed DC Motor Driver IC							
Automotive Stepping Motor Driver ICs							
Automotive Driver ICs							
Analog Switch							
DC/DC Converter							
Non-Isolated DC-DC Switching Regulators							
Voltage Regulator							
Power Stage Integrated Driver plus MOSFETs							
Smart Load Switches							
Slew Rate Control							
Current Limit							
True Bi-Directional							

Opto Electronic

	APEM	Cree LED	Dialight	Kingbright	Littelfuse	TT Electronics	Toshiba	Vishay
Visible LEDs								
High Power LEDs								
Standard LEDs – SMD								
Standard LEDs – SideView SMD								
Standard LEDs – Reverse Mount SMD								
Standard LEDs – Through Hole 1.8/3/5mm								
LEDs –Bicolor								
LEDs –RGB								
Visible LED Solutions								
Circuit Board Indicator SMD								
Circuit Board Indicator Through Hole								
Panel Mount Indicators SMD								
Panel Mount Indicators								
Infrared Emitter								
Infrared Emitters								
Infrared Emitters – High Power								
UV Solutions								
UV-A LED								
UV-B LED								
UV-C LED								
Optical Detectors and Sensors								
Ambient Light & Proximity Sensors								
Ambient Light Sensors								
Biometrical Sensor								
Fibre Optic								
Hall Effect								
Infrared/Human Presence Detection								
Photo Diodes								
Photo IC								
Photo Transistors								
Proximity Sensors								
Reflective Sensor								
RGBW Sensors								
Slotted Switches								
Transmissive Sensor								
Infrared Communication								
Infrared Receiver Modules								
IRDC Components								
Dice Solutions								
IR Emitters								
Photo Detectors								
Optocoupler Solution								
Opto Couplers/Isolators								
Non-linear Opto Couplers								
Phototransistor Output								
Photodarlington Output								
Optocoupler with AC Input								
Linear								
Phototriac Output								
High Speed								
IGBT & MOSFET Driver								
Isolated IPM Driver								
Solid State Relays								
Analog Switches								
ICs								
LED Driver								
Light Pipes and Accessories								
LED Holder								
LED Clips								
Light Pipes								
Lenses								
Modules and Displays								
Display Modules								
LCD Displays								
LED Displays								
OLED Displays								
Plasma Displays								
7-Segment Displays								
LED Dot Matrix Displays								
LED Modules								

Sensors	AlpsAlpine	Amphenol / All Sensors	Amphenol / Amphenol Advanced Sensors	Amphenol / I2s	Amphenol / Novasensor	Amphenol / Piher Sensing Systems	Amphenol / SGX Sensortech	Amphenol / SSI Technologies	Amphenol / Telaire	Amphenol / Thermometrics	Amphenol / Wilcoxon	Aratas	Bourns	Eaton	Honeywell (Sensing and Safety Technologies, City Technology)	Kyocera AVX	Littelfuse (Western Automation)	Molex / Contrinex	Murata	Panasonic Industry	Sensata Technologies (Crydom, Cynergy3, Airpax, BEI Sensors, Klixon, Sendyne)	TDK	TE Sensors (MEAS, First Sensor, SMI, Jaquet, AST)	TT Electronics	Vishay	Yageo Nexensos	Yageo Shibaura	Yageo Telemecanique Sensors		
Pressure																														
Board Mount Pressure																														
Disposable Medical Pressure Sensors																														
Dies																														
Altimeter/Barometric																														
Combination MEMS																														
Packaged Pressure																														
Pressure Switches																														
Force																														
Force																														
Load Cell/Load Pin																														
Torque																														
Flow																														
Air Flow																														
Liquid Flow																														
Flow Switch																														
Fluid Property Sensors																														
Turbidity																														
Motion, Speed & Position																														
Accelerometer																														
Gyroscope																														
Inclinometer/Tilt																														
Shock/Vibration																														
Inertial Measurement Unit																														
Encoder/Rotary – Board Mount																														
Encoder/Rotary – Industrial/Transportation																														
Face Recognition Sensors (HVC – Human Vision Component)																														
Proximity – Inductive																														
Proximity – MagnetoResistive/ Hall Effect																														
Proximity – Reed Switches																														
Proximity – Optical																														
Speed Sensor																														
GeoMagnetic Sensors																														
Resolver																														
Ultrasonic																														
Air Quality & Gas Sensing																														
CO2																														
VOC (COV)																														
Industrial Gas – Pellistor, InfraRed, Electro-Chemical, MEMS																														
Dust/Particle																														
Ionizer																														
Medical Gas Sensors (O2)																														
Pulse Oximetry SpO2																														
Temperature & Humidity																														
Combination MEMS, Digital Temperature Sensors																														
Humidity																														
NTC Thermistor – Leadless																														
NTC Thermistor – SMT																														
Probes & Assemblies																														
PTC Thermistors																														
RTD/PTC Thermistors – Customised – Platinum																														
PTC Thermistors – Customised – Ceramic Heating																														
Heaters – Copper Customised																														
Thermocouples																														
Thermopiles/Human Presence Detection – Solutions																														
Thermopiles/Human Presence Detection – Component																														
Thermostats																														

Sensors, RF/Wireless Modules and Antennas

Sensors

Sensors																															
	AlpsAlpine	Amphenol / All Sensors	Amphenol / Amphenol Advanced Sensors	Amphenol / i2s	Amphenol / Novasensor	Amphenol / Piher Sensing Systems	Amphenol / SGX Sensortech	Amphenol / SSI Technologies	Amphenol / Telaire	Amphenol / Thermometrics	Amphenol / Wilcoxon	Aratas	Bourns	Eaton	Honeywell (Sensing and Safety Technologies, City Technology)	Kyocera AVX	Littelfuse	Molex / Contrinex	Murata	Panasonic Industry	Sensata Technologies (Crydom, Cynergy3, Alrax, BEI Sensors, Klaxon, Sendyne)	TDK	TE Sensors (Measurement Specialties, First Sensor, SMI, Jaquet, AST)	TT Electronics	Vishay	Yageo KEMET	Yageo Nexensos	Yageo Shibaura	Yageo Telemecanique Sensors		
Optical																															
Ambient Light																															
Fibre Optic																															
PIR /Infrared																															
Matrix Sensors																															
Laser																															
Proximity – Optical																															
Solar																															
Time Of Flight (TOF)																															
Ultra Violet																															
Colour Sensors																															
Level Sensors																															
Liquid Level																															
Urea, Water (WIF/ WIF+WDS/WS), Diesel																															
Powder Level Sensors																															
Hydra-static Pressure Cells																															
Other																															
Sensor Modules																															
Current Sensors																															
Capacitive Touch																															
Inductive Sensors – Factory Automation/Transportation																															
Insulation Monitoring																															
Light Curtain Safety – Factory Automation																															
Magnets																															
Medical Sensor Cable Assemblies/Pulse Oximetry																															
Sensor Development Boards																															
Voltage Sensors																															

Wireless Modules

	Murata	Taoglas	TE (Linx Technology, Laird Connectivity)
Wireless Modules			
Bluetooth			
Cellular			
GNSS			
LoRa			
Sub-GHz Transceivers			
UWB			
Wi-Fi			
Zigbee/Thread/Matter			

Antennas

	Abracon	Amphenol MCP	JAE	Kyocera AVX	Molex	Panasonic Industry	Radiall	Taoglas	TE (Linx Technology, Laird Connectivity)	Yageo PULSE
Embedded (ceramic/helix/stamp metal)										
NFC										
169 MHz										
433 MHz										
LoRa, Sigfox, ISM (868/915 MHz)										
NB-IoT										
GPS/GNSS										
2G/3G/4G/5G										
WiFi/BT/Zigbee (2.4/5 GHz)										
V2V/V2X/DSRC										
UWB										
Internal (Cabled PCB/Flex)										
NFC										
433 MHz										
LoRa, Sigfox, ISM (868/915 MHz)										
NB-IoT										
GPS/GNSS										
2G/3G/4G/5G										
WiFi/BT/Zigbee (2.4/5 GHz)										
V2V/V2X/DSRC										
UWB										
External										
AM/FM/DAB										
169 MHz										
TETRA										
433 MHz										
LoRa, Sigfox, ISM (868/915 MHz)										
NB-IoT										
GPS/GNSS										
2G/3G/4G/5G										
WiFi/BT/Zigbee (2.4/5 GHz)										
V2V/V2X/DSRC										
Combination antenna										

Power Supplies

Power Supplies	Advanced Energy (Artesyn, Excelsys, SL Power, Ultravolt)	APEM / IDEC	Aratas	Flex Power Modules	MEAN WELL	Murata	OmniOn Power	Phoenix Contact	TDK	Vishay	Yageo PULSE
Internal/Embedded – AC/DC											
Low to Mid Power (1W – 500W)	■				■	■	■				
High Power (500W – 4kW)	■				■	■	■				
Very High Power (>4kW)					■	■		■			
Single Output	■				■	■	■				
Multi-Output (Dual, Triple, Quad)	■				■	■	■				
PCB Mount	■				■	■	■				
Open Frame	■				■	■	■				
U-Channel/Enclosed	■	■	■		■	■	■				
Modular/Configurable	■				■						
ATX											
Front End, Bulk Power	■				■	■	■				
Medical Rated	■				■	■	■				
Conduction Cooled	■				■	■	■				
Industrial Temperature	■				■	■	■				
Extended Temperature	■				■	■	■				
Digital interface	■				■	■	■				
Power Over Ethernet (PoE)	■					■	■				
AC/DC Military											
External - AC/DC											
Wall Mount Adapters	■				■						
Wall Mount USB-PD	■				■						
Desktop	■				■						
Medical Rated	■				■						
DIN Rail	■	■	■		■			■			
DIN Rail Redundancy Modules			■		■			■			
DIN Rail Buffer Modules					■			■			
High Power (>1kW)	■				■	■	■				
LED Drivers											
KNX products					■						
Laboratory Power Supplies Programmable	■										
Specific Purpose											
Uninterruptible Power Supply (UPS)			■		■			■			
Battery Charging	■				■	■	■	■			
Bi-Directional					■	■					
Inverter (DC/AC)					■						
Inrush Current Limiters											
Security					■						
PFC Modules	■										
DC/DC											
Isolated DC/DC Converters											
Fractional Brick	■				■	■	■				
Digital Control	■				■	■	■				
Industrial Pin-Out	■				■	■	■				■
DIN Rail		■			■	■	■	■			
Intermediate Bus Converter	■				■	■	■				
Low Power Unregulated					■	■	■				■
Wide Input Range 4:1	■				■	■	■				
Surface Mount	■				■	■	■				■
DC/DC Military											
DC/DC Railway	■				■	■	■				
DC/DC Filters and Filter Modules							■				
Non Isolated POL Converters											
Digital Control	■				■	■	■				
Through Hole	■				■	■	■				■
Single In Line	■				■	■	■				
Surface Mount	■				■	■	■			■	
Auxiliary DC Power Products											
ATCA PIM Modules					■		■				
RF / Power Amplifier	■				■	■	■				
High Voltage	■					■	■				
Embedded DC/DC											
Open Frame/Enclosed					■		■				
Front End Bulk Power	■					■	■				
Bi-Directional DC/DC into Aux DC Power products											

Accessories

Accessories	3M	Aratas	Laird	MEAN WELL	Ohmite	Panasonic Industry	Schurter	TDK	TE Connectivity (Corcom, Schaffner)	Yageo KEMET
Power Line EMI/RFI Filters										
Single-Phase Filters							■	■	■	■
3-Phase Filters							■	■	■	■
Thermal Management										
DC Fans										
AC Fans		■								
Heatsinks					■					
Thermal Materials	■		■			■				
Thermal Adhesive/Compounds	■		■							
Wire/Cable										
Power Cord			■				■		■	
Smart Connector							■			



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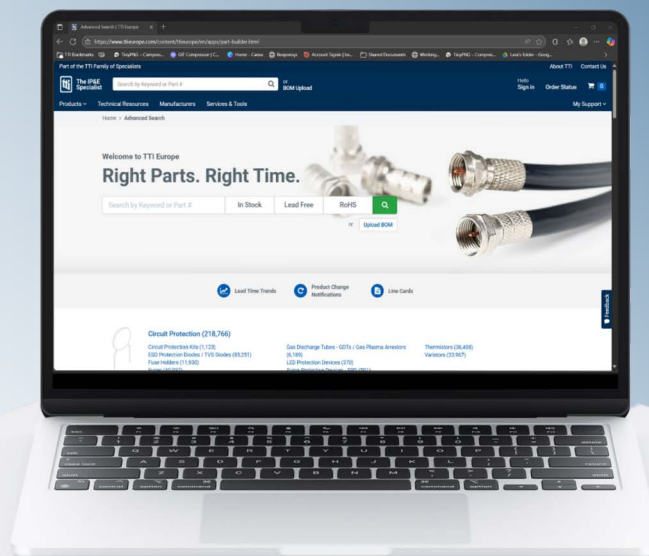
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