



nt
magnetics

nuvotem

The Talema Group

- Talema Group Overview and Capabilities
- Toroidal Transformers
- Power Chokes and Inductors
- SMPS Transformers and Inductors
- Current Sense Inductors and Transformers
- Communications and Data Line Magnetics
- LAN Magnetics
- Common Mode Chokes for Data and Signal Line EMI Suppression



Magnetic Components for Universal Applications

About The Talema Group

Founded in 1975, The Talema International Group has established itself as a world leader in the manufacture of toroidal transformers and related magnetic components. A large portion of our output, approximately 65%, is custom designed although a comprehensive range of standard devices is also available.

We are proud of our strong technical engineering expertise which has contributed to the growth of our current workforce to over 1,200 employees in manufacturing locations in the Czech Republic and India. Outside North America, marketing, sales and after-sales are handled by Talema-Nuvotem, the Irish headquarters as well as Talema's offices located all across Continental Europe, the UK, Scandinavia, Australia, Asia and the Far East. The North American market is serviced by strategic partners AlfaMag LLC and Amveco Magnetics, Inc.

Over the years The Talema Group has succeeded in designing, producing and delivering millions of transformers to its customers. The recent incorporation of xDSL technology into our extensive range of Telecom and LAN magnetics offerings, such as ISDN, 10Base-T, Ethernet transformers for 100/1000Base-T, has broadened our market offering to an even higher level. All facilities maintain very stringent Quality Control and Quality Assurance procedures and are certified to and manufacture in accordance with ISO-9001:2000.



Talema Electronic (India) - Headquarters



NT Magnetics s.r.o. - Talema Group (Czech)



Talema Electronic (India) - Chokes & Inductors - Production Hall



Talema Electronic (India) - Telecom & High Freq. Production

For the last 25 years Talema has been delivering to OEM entities all over the world and has been successful in winning the approval of the electrical/electronic authorities in each of the national markets. With this official support, plus the valuable contributions made by our local distributors and partners, we have experienced successful, steady growth in market share.

The Talema Group has enjoyed similar success in the audio and medical equipment power markets, recording strong increases in European market share of power products every year since its inception. The Talema Group is now the leading supplier to these markets making it a dominant company in this field.

Talema's worldwide reputation rests on excellent product design, a total commitment to quality and reliability, a competitive cost/performance ratio and a highly efficient distribution network.

Capabilities

Highly Competitive Manufacturing Facilities

With state of the art manufacturing facilities, well qualified technical and engineering expertise and a highly skilled workforce, Talema is well positioned to provide optimum trade off between pricing and delivery considerations.

Our manufacturing facilities are structured to offer quick delivery of low volume, highly specialized, custom transformers which are designed and approved for markets such as professional audio, medical, security, instrumentation, etc. Our Czech facility offers cost effective production for high volume orders while our Indian operation specializes in the production of our wide range of magnetic components.



Toroidal Inductor Winding

To facilitate the manufacture and assembly of hybrid modules and other high-spec. components, Talema India has invested in clean room facilities which are certified for Class 100,000 in accordance with FED-Std-209E and can provide Class 10,000 standard upon request.



Clean Room with Ability to Support “High Tech” Hybrid / Module Assembly of Integrated Magnetics and Electronics



Talema Electronic (India) - Telecom & High Freq. Production

The Talema India facility is well equipped to provide custom design and sub-contract services quickly and at extremely competitive pricing and can offer:

- a large, highly skilled and well trained work force
- well qualified technical and engineering expertise
- full winding (both toroidal and linear) and test facilities
- reflow solder capability and equipment
- low cost precision tooling with short lead times
- extensive R & D expertise for custom products
- certified Class 100,000 clean room
- ISO-9001:2000 & TS-16949:2002 certified production and design facility
- All Talema Group manufacturing facilities are RoHS compliant and all chokes, inductors and HF components are produced in an Environment Management System (EMS) facility which is certified to ISO-14001:2004



See page 14 for **Internationally Recognized Quality Systems and Approvals**

Detailed information for all products shown on the following pages can be found on our web site:
<http://www.talema-nuvotem.com>

Power Chokes and Inductors

A wide range of power inductors in many different package sizes and shapes, through hole and surface mount, are available for use in switch mode power supplies, DC/DC converters and EMI filtering applications. From Common Mode toroidal chokes to high capacity linear storage chokes to low cost simple inductors.

If you do not see the inductor, package or mounting configuration needed for your application, our engineering team can quickly design a part to meet your specific requirements.

POWER CHOKES AND INDUCTORS

- Common mode chokes
- High capacity linear storage chokes
- Toroidal filter chokes
- Differential mode toroids
- Power inductors
- High stability storage chokes
- Miniature, high current, surface mount inductors
- Low power, high stability inductors
- Inductors for National's 50kHz, 150kHz and 260kHz Simple Swit

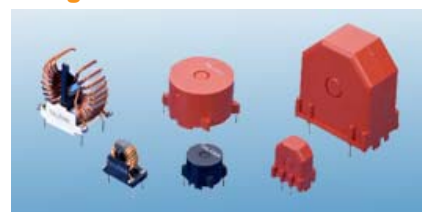


Common Mode Toroidal Chokes - Surface Mount & Through Hole

CA Series - Common Mode Toroidal Chokes with separated windings for filtering supply lines having in-phase signals of equal amplitude. Range: 0.1 to 17 Amps, 0.10 to 100 mH.



CKV Series - Vertical THT, Sector Winding, 0.25 to 0.70 Amps, 4.7 to 47.0 mH.



TVH Series - Toroidal Inductors with separated windings designed to attenuate conductor (EMI) noise in systems. Available in Surface Mount or Through Hole Packaging. 0.5 to 3.6 Amps, 1.0 to 22 mH.



CMP Series - Toroidal Chokes with separated windings designed for DC/DC converters. Available in SMD or TH packaging. 1.22 to 14 Amps, 0.47 to 1.47 mH.

Toroidal Storage Chokes and Power Inductors - Surface Mount & Through Hole



LCP Series - Miniature Surface Mount High Current Toroidal Inductors designed for use in applications where energy storage is required. Excellent for filtering high frequency signals while supporting a substantial DC current as well as for AC ripple, SMPS and for use with DC-DC Converters. 0.15 to 7.4 Amps, 2.2 to 8800 μ H.



LC Series - Miniature Surface Mount Toroidal Inductors for applications requiring energy storage for maintenance of highly stable inductance when a rapid change of load current occurs. 0.15 to 3.0 Amps, 2.2 to 880 μ H.

DJ & DJA Series - High Capacity Linear Storage Chokes for use in SMPS where low losses are essential at high frequencies (to 500kHz). The DJA Series utilizes Fe-based amorphous alloy cores providing high flux density and low core loss. 1.5 to 29 Amps, 500 to 5000 μ Joules.



DP Series - Low Cost Power Inductors for EMI filtering and energy storage with operating frequencies to 200 kHz. 0.5 to 15 Amps, 6.8 to 4700 μ H.

Power Chokes and SMPS Transformers & Inductors

SA Series - High Efficiency, High Stability Storage Chokes featuring FE-based amorphous alloy cores which allow high flux density and low core loss. Highly stable inductance over a wide DC bias current range and high "Q" with operating frequencies to 500kHz. 0.63 to 20 Amps, 10 to 8200 μ H.

SD Series - High Efficiency Storage Chokes designed with MPP cores provide excellent efficiency and field modulation when used as loading coils for energy storage. Standard range from 0.63 to 8.0 Amps, 47 to 6000 μ H.



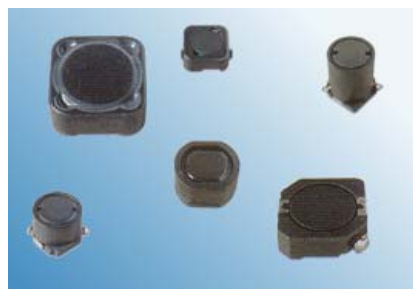
SH50 Series - Toroidal inductors compatible with National Semiconductor's 50kHz Simple Switcher™.

SH150 Series - Low cost toroidal inductors designed for use with National Semiconductor's 150kHz Simple Switcher™.

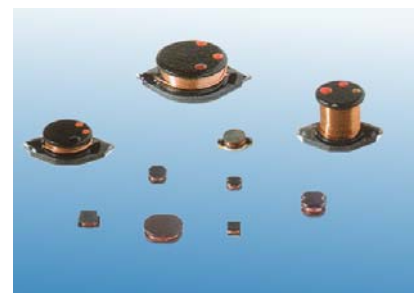
SH260 Series - Low cost toroidal inductors designed for use with National Semiconductor's 260kHz Simple Switcher™.

The SH Series are available in either Surface Mount or Through Hole packages.

SL Series - Toroidal Inductors designed for high energy storage with minimum saturation and high stability from no load to full load at operating frequencies to 1 MHz. Available in both SMD and TH versions. 0.71 to 23.8 Amps, 0.6 to 1295 μ H.



SCB, SC, SMC, SIC & SCD Series - Shielded, Surface Mount Drum Core Inductors - 33 standard sizes. 0.15 to 6.7 A_{DC}, 0.1 to 2200 μ H. High energy storage and low resistance. Industry standard footprints. These miniature, low profile SMD inductors are designed for DC-DC conversion, note book computers, pagers, PDA's, flash memory programmers, step up or step down converters, digital cameras, MP3, etc.



SMT Series - Unshielded, Surface Mount Drum Core Inductors - 15 industry standard sizes. 0.10 to 8.6 A_{DC}, 0.1 to 2200 μ H. High energy storage and low resistance. Industry standard footprints. These miniature, low profile SMD inductors are designed for DC-DC conversion, note book computers, pagers, PDA's, flash memory programmers, step up or step down converters, etc.

SMPS TRANSFORMERS AND INDUCTORS

Talema can supply a complete range of transformers and inductors to meet your specifications for use in SMPS applications. Formats include, but are not limited to: RM, EE/EF, EFD/EVD, EI, EP, ER, ETD, P, PT, PTS, PQ, U, and Toroidal cores. A wide variation in winding construction is employed including Multi-strand Copper, Foil, Litz, Heavy Duty Copper, Triple Insulated Wire and Margin Tapes. Our experienced design and purchasing groups can help with sourcing of cost-effective alternative materials, requirements for safety standards (e.g. EN60065, EN60950, etc.) and in providing design assistance.

- Drive Transformers
- Control Transformers
- Flyback Transformers
- High Current Inductors
- Current Transformers
- Common Mode Chokes
- Output Chokes



Current Sense Transformers and Inductors

CURRENT SENSE INDUCTORS AND TRANSFORMERS

- Current Sense inductors and transformers for frequency ranges from 20kHz to 200kHz with primary ratings to 100Amps.
- Custom design including special housings and core materials in accordance with customer requirements

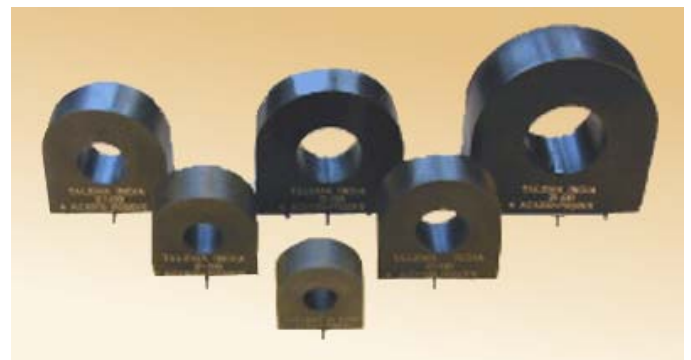
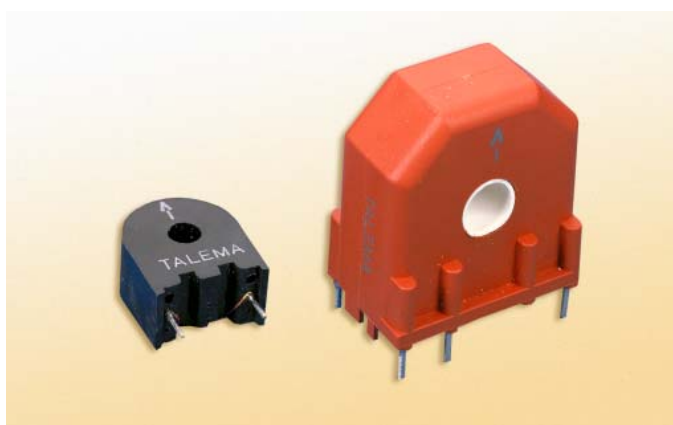
AS Series High Frequency Current Sensors are designed as a low cost method of controlling, monitoring or measuring AC currents. The sensors serve as feedback elements between the output and pulse control circuitry providing accurate regulation of switch mode power supplies. Frequency range from 20kHz to 200kHz, primary current rating to 80 Amps.

- Standard range of 50/60Hz CT's for sensing current overload.
- Primary current ratings from 1 to 200 Amps.

ASM Series Mains Frequency Current Sensors operate as the sealed secondary of a current transformer while the conductor carrying the current to be measured functions as a one turn primary. Applications include detection of branch circuit overload and load drop or shutdown. Primary current ratings from 1 to 100 Amps.



AC Series 50/60Hz Current Transformers - Typical applications include sensing overload current, ground fault detection, metering and analog to digital circuits. Thirteen sizes ranging from 5 to 200 Amps



TOROIDAL TRANSFORMERS



Universal Application

Ideal construction, small size and low weight (approximately 50% of conventional transformers) together with extremely low noise and low radiated magnetic interference make the toroidal transformer ideal for compact power supplies and provide the design engineer with a very high level of flexibility. Typical applications include:

- Medical Equipment
- Audio Line Matching
- Motor Controls
- Computers and Peripherals
- Low Voltage Lighting
- Office Machines
- Instrumentation
- Industrial Control Equipment

Printed Circuit Applications

A unique line of fully encapsulated, low profile toroidal transformers for PCB mounting. Offering many distinct advantages including inherently low noise, low radiated magnetic interference field, small size and weight, high efficiency, reduced "Standby" current and simplicity of mounting make them ideal for a wide range of applications

including:

- Professional Audio Equipment
- Computers
- Video Monitors
- Compact Power Supplies
- Medical Equipment
- Specialty Lighting

Available from 1.6VA through 160VA

Power Transformers - Standard Distribution Types

STANDARD DISTRIBUTION TYPES

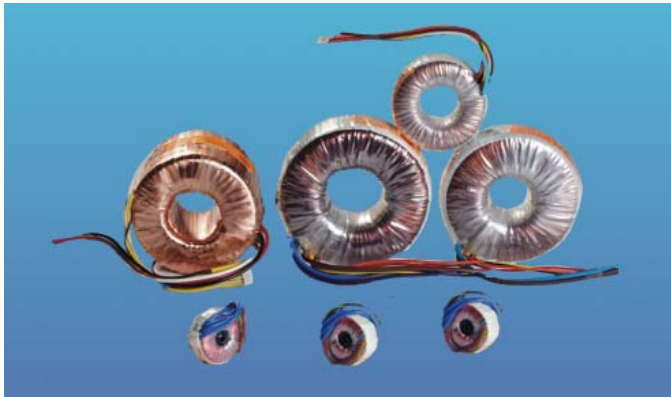
Open Wound Toroidal Transformers

- Single 230V, 50/60Hz primary winding with dual secondary windings which may be connected in series or parallel or used independently. Twelve sizes from 15 to 1000VA.
- Two 115V, 50/60Hz primary windings suitable for connection in series to 230V supply, or parallel to 115V supply. Dual secondary windings may be connected in series or parallel or used independently. Twelve sizes from 15 to 1000VA.

Standard open wound transformers are supplied with dished washers and neoprene protection pads for single hole fixing.

'Mini' Series miniature transformers with two 115V, 50/60Hz primary windings suitable for connection in series to 230V supply, or parallel to 115V supply. Dual secondary windings may be connected in series or parallel or used independently. Nine VA sizes from 1.6VA to 50VA with six different secondary output voltages per size. Each transformer is supplied with a through-hole resin center for single bolt fixing.

Open wound toroidal transformers are UL recognized for insulation Class A (105°C) and meet all requirements of Class E (120°C). Secondary voltage tolerance <1% at nominal input.



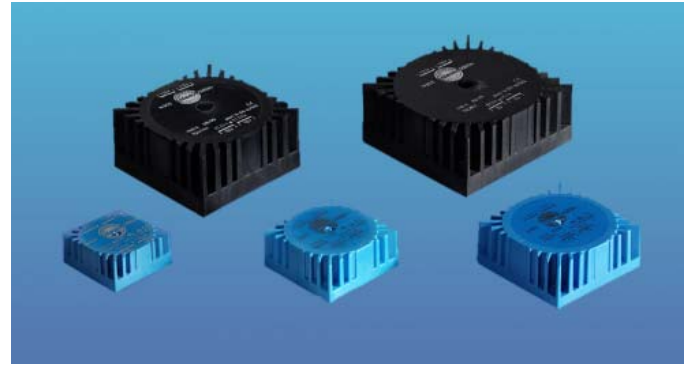
Encapsulated Transformers

Single 230V, 50/60Hz primary winding with dual secondary windings may be connected in series or parallel or used independently. Nine standard sizes from 15 to 500VA. The transformers have a through-hole center for single bolt fixing.



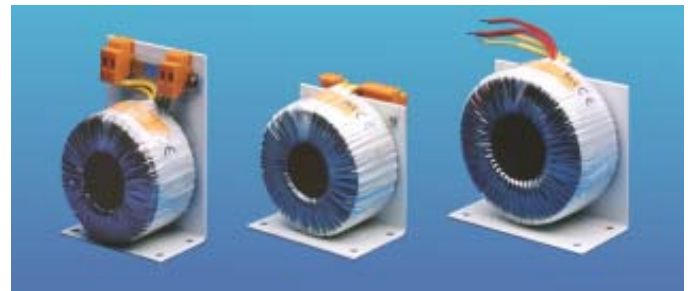
Low Profile PCB Transformers

Available with either 2x115V or 2x120V primary windings and dual secondary windings for series, parallel or independent connection. Nine VA sizes from 1.6 to 50VA with six different secondary output voltages per size. Mounting is with a single center screw.



Control Panel Transformers

High quality transformers with single 230V or 400V primary windings and center-tapped secondary windings. The transformers are mounted on SFB style brackets for vertical mounting and supplied with touchproof screw terminals. Available in four standard VA sizes, the choice of either a 230V or 400V primary and 12V, 24V or 55V secondary.



Low Voltage Lighting Transformers

Open style toroidal transformers with a single 230V, 50/60Hz primary winding and a single 11.8V secondary winding suitable for 12V halogen lamps. The primary incorporates an auto-reset thermal switch rated at 120°C±5°C. Four standard sizes from 50 to 200VA. Transformers supplied with dished washers and Neoprene protection pads for single hole fixing.



Power Transformers - Custom Designed

CUSTOM DESIGNED POWER TRANSFORMERS

The Talema Group offers a custom-design service where our engineers design the most suitable power transformer for your application. Our engineers work closely with customers, providing the technical support needed to achieve effective solutions to power conversion requirements. Working from the required DC output figures, and considering the capacitor types, rectification and regulators involved, our design engineers use their comprehensive experience to design and build optimum product for the application.

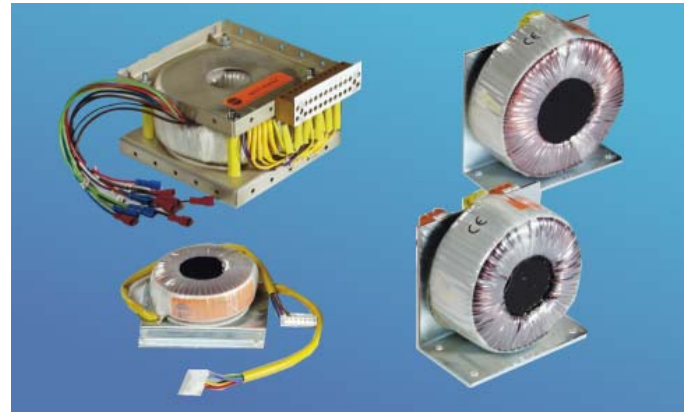


Generally the equipment designer is faced with the problem of 'squeezing' the power transformer into a confined space, and we, the Talema Group, have accumulated over 30 years of experience in designing toroidal transformers which fit into these confined spaces and yet electrically and thermally out-perform the competition. Because we manufacture our own cores from the highest grades of steel available, we can offer an infinitely variable choice of sizes.

With the Talema Groups' ability to provide instant **EN61558 approval** on custom designed transformers, the equipment designer does not need to adjust his design to suit a "standard" transformer just to get an approved part.

Advantages of Talema Toroidal Transformers

- Small size and low weight compared with traditional stacked laminated types
- Extremely low level of radiated magnetic field
- Very low induced noise (hum)
- Very low iron loss
- Double insulated primary leads
- 100% electrical and flash tested
- High quality manufacturing and testing in accordance to EN61558, EN60742, EN60950, EN60065, VDE0551, VDE0550 and BS415
- Tested and Approved by KEMA to EN61558
- UL Recognized to UL506, under family approval file E215495
- ISO-9001 certified Talema production and design facility
- Encapsulated models are fully potted to UL94V-0
- Nylon 66 case material meets UL94V-0
- Available from 1.6VA through 7.5kVA



Encapsulation

If a suitable encapsulation is not available from Talema's extensive range of housings, we can develop a housing quickly and inexpensively specifically for your application.

Mounting

We have a wide variety of mounting methods to meet the most stringent customer requirements, including:

- standard mounting kits consisting of dished washers with neoprene pads (15VA - 1,5kVA)
- resin center fill with brass inserts or a through hole
- PCB mounting
- pressureless mounting plates (750VA - 7.5kVA)
- fully encapsulated in plastic or metal housings



Telecommunications and Data Line Technology

COMMUNICATION AND DATA LINE TECHNOLOGY

Talema produces a broad range of magnetic components for Communication and Data Line Technology applications including, but not limited to:

- ISDN "S" Interface Transformers and Modules
- ISDN "U" Interface Transformers
- Broadband Access xDSL Transformers
- Primary Rate T1/E1/CEPT-Pri., single as well as dual, quad and octal modules
- T3/E3/D3/STS-1 Interface Transformers
- Current compensated data line chokes for EMI suppression

So Single SMD Interface Transformers							
Part Number	LP (mH Min.)	Turns Ratio	Δ IDC (mA)	VP (Vrms)	Mounting Style	Nr. Contacts & Pitch	Max. Board Area L x W x H
ISJ-100B ISJ-140B	25	1:1 1:2	1	1500	"J" Lead	8 x 1.27	5.8 x 9.0 x 4.8
SMJ-100B SMJ-120A SMJ-130B SMJ-140B	30	1:1 1:1.4 1:2.5 1:2	3	1500	"J" Lead	8 x 2.54	11.0 x 14.0 x 8.6
SWJ-100B or C SWJ-130B SWJ-140B or C	30	1:1 1:2.5 1:2	5	1500	"J" Lead	8 x 2.54	13.2 x 16.6 x 11.7
SHJ Series Interface Transformers comply with Reinforced Insulation Level EN60950							
SHJ-200B or C SHJ-220A SHJ-230B or D SHJ-240B or C	30	1:1 1:1.4 1:2.5 1:2	5	3000	"J" Lead	8 x 2.54	13.2 x 16.6 x 11.7
So THT Interface Single Transformers							
ISF/ ISV-100B1 ISF/ ISV-120A1 ISF/ ISV-130B1 ISF/ ISV-140B1	30	1:1 1:1.4 1:2.5 1:2	5	1500	ISF - Flat ISV - Vertical	10 x 2.54	12.5 x 14.0 x 11.0 9.0 x 14.0 x 14.5
ISHF Series Interface Transformers comply with reinforced Insulation Level EN60950							
ISHF-200B1 ISHF-220A1 ISHF-230B1 ISHF-240B1	30	1:1 1:1.4 1:2.5 1:2	5	3000	Flat	6 x 2.5	14.8 x 16.6 x 14.5
So SMD Interface Transformer Modules with optional EMI Noise Suppression Quad Choke							
MUJ-100A or B MUJ-103A or B MUJ-105A or B	25	1:1 1:2 1:2.5	1	1500	"J" Lead	16 x 1.27	12.8 x 16.6 x 14.5
MAJ-400A MAJ-403A MAJ-405A	30	1:1 1:2 1:2.5	3 - 4	1500	"J" Lead	16 x 2.54	20.0 x 14.0 x 9.0
MSJ-400A MSJ-403A MSJ-405A	30	1:1 1:2 1:2.5	4	1500	"J" Lead	16 x 2.54	24.0 x 15.0 x 9.0
MHJ Series SMD Interface Transformer Modules comply with Reinforced Insulation Level EN60950							
MHJ-200B1 MHJ-230B1 MHJ-240B1	30	1:1 1:2.5 1:2	4	3000	"J" Lead	16 x 2.54	24.0 x 18.2 x 10.0
So THT Interface Modules with optional EMI Noise Suppression Quad Choke							
ISM/ HVM-100C1 ISM/ HVM-120A1 ISM/ HVM-130C1 ISM/ HVM-140C1	30	1:1 1:1.4 1:2.5 1:2	5	1500	Vertical	18 x 2.54	10.5 x 29.0 x 15.1

Note: HVM Series is approved to IEC950 - Supplementary Insulation Level

THE TALEMA GROUP • Magnetic Components for ISDN / xDSL / LAN Data Communications

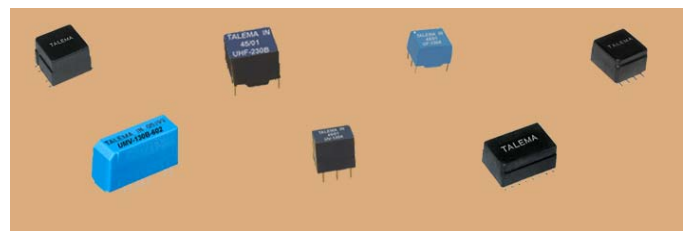
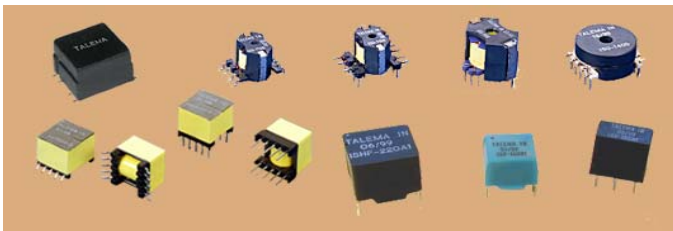
Communications & Data Line Magnetics

U (U_{KO} & U_{PO}) INTERFACE TRANSFORMERS

Talema offers a cost effective range of surface mount and TH transformers for 2B1Q and 4B3T applications for equipment transmission between customer premises and exchanges. These transformers meet all the requirements of recognized U interface IC's and ANSI standard T1.601 with a highly reliable pulse shape and return loss performance.

EPU, ISU, UKF, UKV, UKH & UKJ Series - U_{KO} SMD and TH interface transformers in bobbin and toroidal configuration. Compatible with all common transceiver IC's.

UF, UV, UHF, UWJ, UHJ, UMJ, UAJ, UMF & UMV Series - SMD and TH interface transformers for U_{PO} in toroidal configuration. Available in single and modular form. Compatible with all common transceiver IC's.



xDSL TRANSFORMERS For BROADBAND ACCESS

Transformers and inductors for ADSL/HDSL/HDSL2/SDSL/MDSL/SHDSL and VDSL applications are available in the most popular small footprints in both through hole and surface mount configurations. The transformers are matched to all leading chip sets and meet the requirements of ANSI and ETSI standards while offering very low THD, permitting maximum loop length. Talema can manufacture transformers to cover all common configurations.

ADSL

AEP Series - EP-13 SMD and TH interface transformers.

APT200 - PT-23 TH interface transformers.

HDSL

HPT Series - PT-23 - TH interface transformers.

SDSL/SHDSL

SEP Series - EP-13 SMD & TH interface transformers.

VDSL

SMD filter for conversion of 2 wire circuit to a 4 wire circuit.

Fibre Channel Transformers

FCJ Series - Dual Fibre Channel Transformers for 75 ohm coaxial & 150 ohm STP Cable.

TCJ Series - 150 ohm Twinax Cable Dual Gigabit Transformers.

Modem Transformers

LTM-110A - Line Interface Transformer - 56kbps.



T1/E1/PRI/CEPT/S_{2M} TRANSFORMERS

A wide range of packaging options for 1.544 and 2.048Mbps applications with single, dual, quad and octal transformers which are matched to the leading LIU Transceiver IC's. Most transformers are produced to operate over the extended temperature range of -40° to +85°C.

MJM Series - Miniature SOIC 16 terminal dual interface transformers

MJS-A Series - SMD dual transformers with common mode choke for optimum EMI performance. 12 terminals, 2.54mm pitch.

MJS Series - SMD dual transformers - 12 terminals, 2.54mm pitch.

IS2M Series - THT single interface transformers.

MJE Series - SMD single interface transformers, 2.54 pitch.

MGJ Series - Dual port SMD Transformer Modules with CM choke on Tx and RX Channels. 24 terminals, 1.27 pitch.

MQJ Series - Octal SMD Transformer Modules for Quad Ports. 40 terminals, 1.27 pitch.

20362 - Octal 75/120 Ohm Matching SMD Transformer Module for Quad Ports. 48 terminals, 1.27 pitch.



T3/DS3/E3/STS-1 INTERFACE TRANSFORMERS

Miniature surface mount transformers suitable for 75 ohm bandwidth applications using very fast rise times. Transmit and receive transformers for T3/DS3 applications using bit rates of 4.736Mbps, E3 interfaces at 34.468Mbps and STS-1 applications at 51.84Mbps. The transformers are compatible with all common IC's. Transformers are produced to operate over the extended temperature range of -40° to +85°C.

DJE Series - SMD Interface Transformers for 75 ohm Bandwidth applications - 6 terminals, 2.54mm pitch

DJM Series - SMD Dual Wideband Interface Transformers - Miniature SOIC 16 terminal package.

DTM Series - Six Transformer Module for Tri-Port applications - 20 terminals, 1.02mm pitch.



LAN MAGNETICS

A broad range of Isolation Transformer Modules for 10Base-T, 100Base-T, 1000Base-T, AUI and ATM are available from Talema. Many of the modules include a common mode choke for noise attenuation matched to the specific transceiver and are designed for extended temperature operation. These surface mount modules are compatible with all common IC's.

LAN Interface magnetic components for Ethernet applications including:

- 10Base-T for Single and Quad Ports
- AUI Ethernet
- Fast Ethernet 100Base-T; Single, Dual and Quad Port Interface Transformers
- Gigabit Ethernet 1000Base-T
- ATM 25.6 and 155 MBPS Pulse Transformers
- Auto MDIX Dual & Quad Port Interface Isolation Transformers
- Fibre Channel Transformers
- 10/100Base-TX for VoIP Magnetics

10Base-T ISOLATION TRANSFORMER MODULES

TMM Series - Miniature SOIC single port dual transformer modules.

TMCM Series - Miniature SOIC single port dual transformer modules with common mode EMI noise suppression choke

TMS Series - Compact surface mount single port, dual transformer modules, 16 terminals, 2.54mm pitch

TMCS Series - Compact surface mount, dual transformer modules with common mode EMI noise suppression choke.

TMQ Series - Quad port octal SMD transformer modules with common mode EMI noise suppression chokes. 40 terminals, 1.27mm pitch

AUI Ethernet Isolation Transformers

TAM Series - Miniature SOIC surface mount modules with three, 1:1 turns ratio, transformers.

100Base-T ISOLATION TRANSFORMER MODULES

TEM Series - Miniature SOIC surface mount single port dual transformer modules with common mode EMI noise suppression choke

TES Series - Single port dual SMD transformer modules with common mode EMI noise suppression chokes - 16 terminals, 2.54mm pitch

PCL Series - Single port interface transformer modules for PC Cards

TED Series - Dual port quad SMD transformer modules with common mode EMI noise suppression chokes - 24 and 40 pins, 1.27mm pitch

TEQ Series - Quad port octal SMD transformer modules with common mode EMI noise suppression chokes - 40 pins, 1.27mm pitch

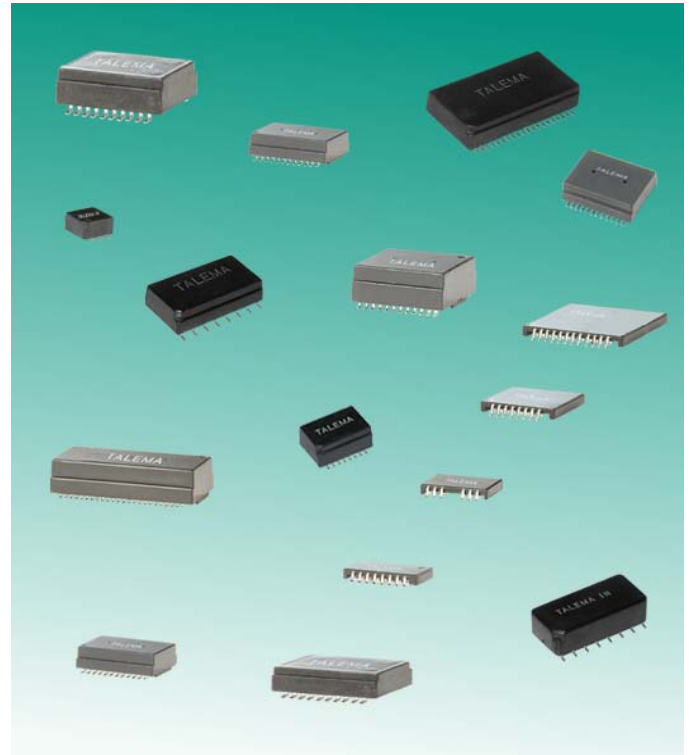
TFG Series - Single port SMD transformer modules with Gigabit Ethernet layout - 24 pins, 1.27mm pitch

Auto MDI/MDIX 10/100Base-T Isolation Transformer Modules

TEXD Series - Dual port quad SMD transformer modules with common mode EMI noise suppression chokes - 24 pins, 1.27mm pitch.

TEXQ Series - Quad port octal SMD transformer modules with common mode EMI noise suppression chokes - 40 pins, 1.27mm pitch.

VO Series 10/100Base-T VoIP Magnetics - Five different package sizes with single interface transformers through quad port octal SMD transformer modules.



GIGABIT ETHERNET 1000Base-T

TGS Series - Single port 24 terminal SOIC surface mount module supporting 4 pairs category 5 UTP cable for long haul Gigabit applications. 24 and 48 terminal packages.

TGL Series - Supports 1:1 turns ratio transceivers for long haul Gigabit Ethernet 10/100/1000Base-T. Modules support 4 pairs of category 5 UTP cable. 24 terminals, 1.27mm pitch

FIBRE CHANNEL TRANSFORMERS

FCJ Series - Dual Fibre Channel Transformers for 75 ohm coaxial & 150 ohm STP Cable.

TCJ Series - Miniature SOIC dual gigabit 150 ohm Twinax Cable Transformers.

ATM 25MBPS PULSE TRANSFORMERS

UTM-3000 - Miniature SOIC impedance matching pulse transformer for 100 ohm UTP applications

GENERAL PURPOSE COUPLING AND PULSE TRANSFORMERS

TGJ Series - SMD Coupling Transformers - 6 pins, 2.54mm pitch

TRJ Series - SMD Pulse Transformers for RF applications - 6 pins, 2.54mm pitch

TDJ Series - SMD General Purpose Interface Transformers - 16 pins, 2.54 pitch

Common Mode Chokes for LAN and Telecom

COMMON MODE CHOKES FOR DATA AND SIGNAL LINE EMI SUPPRESSION

Talema manufactures a comprehensive range of common mode noise suppression chokes designed for interfacing and reduction of electromagnetic interference (EMI). These chokes provide both differential and common mode noise attenuation while allowing the signal to pass through virtually undistorted. The chokes are available in sizes ranging from standard to ultra miniature in both DIL and SMD styles and offer compatibility with all common footprints. The quick reference chart shown below provides a quick overview of choices available from the broad selection being offered by Talema.



DIL and SMD Common Mode Interface Chokes

Series	Inductance Range	Number of Lines	Mounting Style	No. Contacts & Pitch	Max. Board Area W x L x Ht (mm)
CTJ-2-XXX Data Line	11µH - 4.7mH	2	"J" Lead SMD	4 x 1.27	5.0 x 3.3 x 3.3
CTJ-2-XXX-S Power Line	11µH - 51µH	2			
CLJ-2-XXX Data Line	5µH - 47mH	2	"J" Lead SMD	4 x 2.54	8.9 x 5.4 x 4.8
CLJ-2-XXX-S Power Line	6µH - 51µH	2			
CLJ-4-XXX	11µH - 12mH	4	"J" Lead SMD	8 x 1.27	9.0 x 5.8 x 5.3
CMJ-2-XXX	5µH - 47mH	2			
CMJ-4-XXX	5µH - 12mH	4	"J" Lead SMD	8 x 1.27	8.0 x 6.6 x 4.5
CSJ-2-XXX	11µH - 47mH	2			
CSJ-3-XXX	11µH - 12mH	3	"J" Lead SMD	6 x 2.54	8.0 x 9.14 x 4.5
CSJ-4-XXX	11µH - 12mH	4			
CCJ-2-XXX	26µH - 70mH	2	"J" Lead SMD	4 x 7.62	14.0 x 11.0 x 9.0
CCJ-4-XXX	26µH - 58mH	4			
CFJ-3-XXX	24µH - 4.7mH	3	"J" Lead SMD	6 x 2.54	11.5 x 7.8 x 7.2
CFJ-4-XXX	33µH - 4.7mH	4			
CDJ-XXX	1.0mH - 70mH	2	"J" Lead SMD	4 x 10.16	16.6 x 13.2 x 11.7
CQJ-XXX	1.0mH - 90mH	4			
CDF-XXX	1.0mH - 70mH	2	Flat - THT	4 x 10.16	14.0 x 12.5 x 11.0
CDV-XXX	1.0mH - 70mH	2	Vertical - THT	4 x 10.16	9.0 x 14.0 x 14.5
CQF-XXX	1.0mH - 90mH	4	Flat - THT	8 x 2.54	14.0 x 12.5 x 11.0
CQV-XXX		4	Vertical - THT		
CKV-XXX Data Line	120µH - 68mH	2	Vertical - THT	4 x 2.54/5.08	7.4 x 15.2 x 17.6
CKV-XXX-S Power Line	4.7mH - 47mH	2			
CUJ-XXX-16E	24µH - 4.7mH	4	"J" Lead SMD	16 x 1.27	9.6 x 12.8 x 6.0
CUJ-XXX-16C		6			
CUJ-XXX-16D		6			
CUJ-XXX-16A		8			
CUJ-XXX-16B		8			
COJ-16-XXX	24µH - 5.0mH	16	"J" Lead SMD	40 x 1.27	16.2 x 28.0 x 6.0
Data Line Filters		2 to 16	"J" Lead SMD	Various	



If you do not see the transformer, inductor, package or mounting configuration needed for your application, our engineering team can quickly design a part to meet your specific requirements.

Internationally Recognized Quality Systems and Approvals

FACTORY/PROCESS APPROVALS

ISO-9000 approved quality systems ensure all internal processes run smoothly and efficiently, from incoming purchase orders through Resource Planning, Scheduling and Production, to the delivery of the finished products.

- NT Magnetics s.r.o., ISO-9001:2000, Certificate No. 12 100 24333
- Talema Electronic (India) Pvt. Ltd.,
ISO-9001:2000, Certification No. 99 100 01047
ISO/TS 16949:2002, Certification No. 12 111 27793/01 TMS
ISO 14001:2004, Certification No. 12 104 27793 TMS

Product Approvals



Talema-Nuvotem has numerous approvals covering a wide variety of international standards and including both standard products and custom designed parts. By working closely with equipment designers and international test houses, the Talema Groups' engineering teams can assist in ensuring swift and smooth approval of equipment using its transformers and inductors.

Family Recognitions

The Talema Group have invested considerable time and effort to obtain "Family approvals" enabling automatic recognition of custom transformers without having to send each new design to a certified test facility for approval, saving the customer both time and money.

UL Approvals



- **UL506**, General Application Transformers
Family approval to 3000VA for classes A, B & F
UL-File No. E215495
- **UL544**, Medical and Dental Equipment
Family approval to 3000VA for classes A, B & F
(UL-File No. E218027)
- **Insulation Systems with Temperature Classes B, B1 & F**
applicable to transformers for UL506, UL544 & UL60601
(UL-File No. E217412)
- **UL1950**, Information Technology Equipment, including
Electrical Business Equipment - 70000K series PCB
transformers (UL-File No. E218027, Vol. 2)
- **UL6500**, Audio/Video and Musical apparatus - 70000K
series PCB transformers (UL File No. E218027, Vol. 2)
- **UL60601**, Medical Equipment - Family approval to 3000VA
for classes A, B & F (UL File No. E251176)

EN Approvals



Talema-Nuvotem has the **distinction of being one of the very few toroidal transformer manufacturers to have a "General Approval" of custom designed power transformers to EN61558.**

- **EN61558 / VDE0570** - Isolation Transformers (Voltage - Pri. 440V max./ Sec. 50 - 250V) "Non Short-circuit proof" - Family approval and Custom Designs to 3000VA (Kema No. 2060938.02)



- **EN61558 / VDE0570** - Safety Isolation Transformers (Voltage - Pri. 440V max./ Sec. 50V max.) "Non Short-circuit proof" - Family approval and Custom Designs to 3000VA (Kema No. 2060938.03)
- **EN61558 / VDE0570** - Safety Isolation Transformers (Voltage - Pri. 110 - 240V / Sec. 50V max.) "Non-Inherently Short-circuit proof"- Family approval and Custom Designs to 300VA (Kema No. 2060938.01)
- **VDE0805 / IEC950 / EN60950 / UL506/UL1950**
Family approval for 70000K Series Printed Circuit Transformers (VDE File No. 5803 / UL File No. E218027)

Talema toroidal transformers can also be designed to meet the following International Regulations

- **VDE 0750 (EN60601, IEC601)**
Medical and Dental Equipment
- **VDE 0805 (EN60950, IEC950)**
IT installations including office equipment
- **VDE 0860 (EN60065, IEC65)**
Electrical equipment for domestic use

Authorized Talema Sales Representatives and Distributors

Sales Representatives

Germany

PLZ 1, 4,5, 6, 8 & 9

TALEMAELEKTRONIKGMBH
Sembdnerstr. 5, Postfach 2523
82110 Germering
Tel: Int. + 49 89 841 00 - 0
Fax: Int. + 49 89 841 00 25
E-mail: info@talema.de

PLZ 2 & 3 (less 35 & 36)

H. J. MERCK & Co. GmbH
Hasenhöhe 128
22587 Hamburg
Tel: Int. + 49 40 87 08 63-0
Fax: Int. + 49 40 87 08 63-33
E-mail: info@hj-merck.de

PLZ 7

BERNDBIELER
Industrievertretung
Max-Eyth-Strasse 1
72379 Hechingen
Tel: Int. + 49 7471 1804-0
Fax: Int. + 49 7471 1804-10
E-mail: bieler@bernd-bieler.de

Austria

TALEMAELEKTRONIKGMBH
Sembdnerstr. 5, Postfach 2523
82110 Germering
Tel: Int. + 49 89 841 00 - 0
Fax: Int. + 49 89 841 00 25
Email: info@talema.de

Australia

TORTECHPTY.LTD.
POB 194
North Strathfield,
Sydney, N.S.W. 2137
Tel: Int. + 61 2 9642 6003
Fax: Int. + 61 2 9642 6127
E-Mail: tortech@ozemail.com.au
Web Site: www.tortech.com.au

Benelux

ISATRONICK.B.V.B.A.
Doolhoflaan 17
B-2640 Mortsel
Tel: Int. + 32 3 448 1976
Fax: Int. + 32 3 448 1195
E-Mail: info@isatronick.be
Web Site: www.isatronick.be

Denmark & Sweden

NORDTEK DANMARK
Horsensvej 134
DK-8300 Odder
Tel: Int. + 45 86 554 344
Fax: Int. + 45 86 554 644
E-Mail: post@nordtek.dk
Web Site: www.nordtek.dk

Italy

TECHNOLASAELETTRONICA
Via Macello, 65/B
I-39100 Bolzano
Tel: Int. + 39 0471 305 400
Fax: Int. + 39 0471 305 444
E-Mail: sales@technolasa.com

France

E.S.I.A
5-7 Place Marcel Rebuffat
Courtaboeuf 7 Villejust
91971 Courtaboeuf Cedex
Tel: Int. + 33 1 6931 4410
Fax: Int. + 33 1 6931 4425
E-Mail: esia@wanadoo.fr
Web Site: www.esia.fr

Spain

OTTORATING S.A.
Castellnou, 31-33
08017 Barcelona
Tel: Int.+34 93 252 2708
Fax: Int.+34 93 205 6264
E-mail: Info@rating.es
Web Site: www.rating.es

Switzerland

BTB COMPONENTS AG
Im Chlösterli 4
CH-8902 Urdorf
Tel: Int. + 41 44 734 4888
Fax: Int. + 41 44 734 4892
E-mail: info@btbcomponents.ch

UK

DELTA COMPONENTS LTD.
The Courtyard
Seven Acres, Smallfield Road
Horne, Surrey RH6 9JP
Tel: Int. + 44 1342 844 555
Fax: Int. + 44 1342 844 552
sales@deltacomponents.com
www.deltacomponents.com

USA

H. F. Transformers, Chokes & Inductors
ALFAMAG ELECTRONICS LLC
945 Parkwood
PO Box 668
Rolla, Missouri 65402
Tel: Int.+573 364 2422
Fax: Int.+573 364 5390
E-Mail: sales@alfamag.com
Web Site: www.alfamag.com

50/60 Hz Toroidal Transformers
AMVECO MAGNETICS, INC.
11222 Richmond Ave., Suite 120
Houston, TX 77042
E-Mail: sales@amveco.com
Web Site: www.amveco.com

Distributors

Germany

BÜRKLIN OHG MÜNCHEN

Schillerstr. 41
80336 München
Tel: Int.+49 89 558 75-0
Fax: Int.+49 89 558 75-421
E-Mail: info@buerklin.de
Web: www.buerklin.com

BÜRKLIN OHG DÜSSELDORF

Hoherweg 245
40231 Düsseldorf
Tel: Int.+49 211 9067-0
Fax: Int.+49 211 9067-125
E-Mail: info@buerklin.de
Web: www.buerklin.com

SCHUKATELECTRONIC

VERTRIEBSGMBH
Daimlerstraße 26
40789 Monheim
Tel: Int.+49 2173 9505
Fax: Int.+49 2173 950999
Web: www.schukat.com

RUTRONIK ELEKTRONISCHE

BAUELEMENTE GMBH
Industriestraße 2
75228 Ispringen/Pforzheim
Tel: Int.+49 7231 801-0
Fax: Int.+49 7231 82282
E-Mail: rutronik@rutronik.com
Web: www.rutronik.com

Italy

RUTRONIK ITALIA S.r.l

21, Via Caldera
Centro Direzionale S.Siro
20153 Milano
Tel: Int.+39 02 40951 1
Fax: Int.+39 02 40951 224
E-Mail: MI@rutronik.com
Web: www.rutronik.com

Switzerland

RUTRONIK ELEKTRONISCHE
BAUELEMENTE AG
Hölzliwisenstrasse 5
CH-8604 Volketswil
Tel: Int.+41 44 947 3737
Fax: Int.+41 44 947 3747
E-Mail: rutronik_ch@rutronik.com

UK

RS COMPONENTS LTD.

Birchington Road
Corby
Northants, NN17 9RS
Tel: Int.+44 8457 201201
Fax: Int.+44 845 850 9911
www.rs-components.com

Sales & Marketing, Design and Manufacturing Facilities

<http://www.talema-nuvotem.com>

Eastern Europe & Czech Republic

NT MAGNETICS s.r.o.
Chebská 27
322 00 Plzeň
Tel: Int. + 420 377 - 338 351
Fax: Int. + 420 377 - 338 350
Email: talema@talema.cz
Web Site: www.ntmagnetics.cz

Germany

TALEMAELEKTRONIKGMBH
Sembdnerstr. 5, Postfach 2523
82110 Germering
Tel: Int. + 49 89 - 841 00 - 0
Fax: Int. + 49 89 - 841 00 25
Email: info@talema.de

Ireland

NUVOTEM TEO.
Crolly
Co. Donegal
Tel: Int. + 353 74 - 954 8666
Fax: Int. + 353 74 - 954 8139
Email: info@nuvotem.com

India

TALEMA ELECTRONIC PVT. LTD.
Opposite the SIDCO Industrial Estate
Gins Towers
4/5S.H/1, Omalur Main Road
Salem - 636 004, Tamil Nadu
Tel: Int. + 91 427 - 244 1325
Fax: Int. + 91 427 - 243 0034
E-mail: talema@talemaindia.com
Web Site: www.talemaindia.com



nt
magnetics

nuvotem

Summary
TOTAL PROGRAM

SECTION 1

- TOROIDAL 50/60HZ TRANSFORMERS

SECTION 2

- TOROIDAL PCB TRANSFORMERS

SECTION 3

- ELEVEN GOOD REASONS TO SELECT TALEMA TOROIDAL TRANSFORMERS

SECTION 4

- CHOKES, INDUCTORS AND TRANSFORMERS FOR POWER APPLICATIONS

SECTION 5

- COMPONENTS FOR TELECOMMUNICATIONS AND DATA LINE TECHNOLOGY

SECTION 6

- CURRENT COMPENSATED EMI NOISE SUPPRESSION CHOKES

SECTION 7

- CURRENT SENSE TRANSFORMERS AND INDUCTORS

SECTION 8

- LAN MAGNETIC COMPONENTS FOR ETHERNET APPLICATIONS

SECTION 9

- T1/E1/CEPT-PR1 - T3/DS3/E3/STS-1 FOR TELECOMMUNICATION PRODUCTS

SECTION 10

- U INTERFACE TRANSFORMERS FOR COMMUNICATIONS AND DATA LINE TECHNOLOGY

SECTION 11

- TRANSFORMERS FOR BROADBAND ACCESS AND FIBRE CHANNEL INTERFACE

