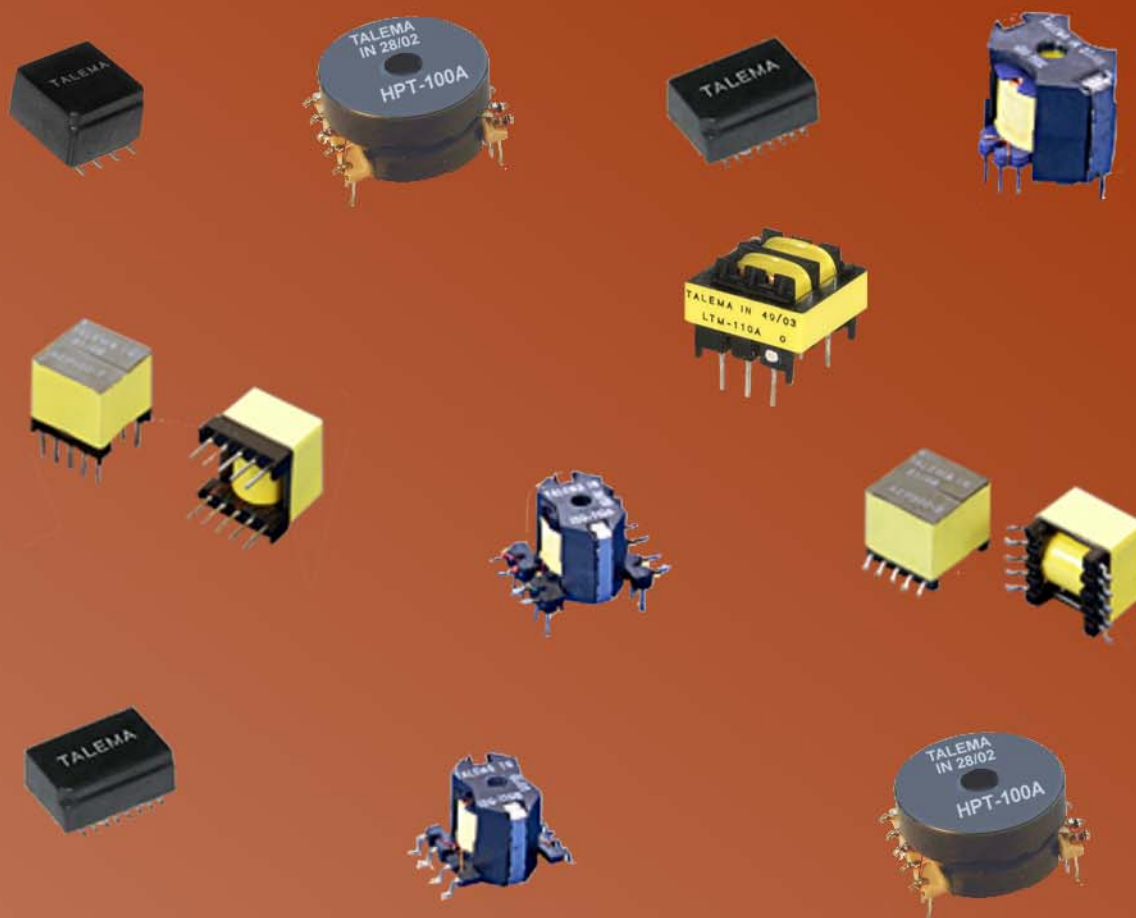


## *Transformers for Broadband Access*



## Transformers for Broadband Access

### TALEMA PROFILE

Founded in 1975, The TALEMA International Group has established itself as a world leader in the Design & Manufacture of toroidal transformers and related magnetic components. Our strong technical engineering expertise has contributed to the growth of our current workforce to over 700 employees in manufacturing locations in the Czech Republic and India.

Over the years The Talema Group has succeeded in designing, producing and delivering in excess of 50 million transformers to its customers. The recent incorporation of xDSL technology into our extensive range of Telecom and LAN magnetics offerings, such as ISDN, Ethernet transformers for 10/100/1000Base-T, has broadened our market offering to an even higher level.

### QUALITY

The TALEMA Group has a total commitment to quality and employs Lean Six Sigma training for engineering, production and administrative staff to help achieve a goal of zero defects. All facilities maintain very stringent Quality Control and Quality Assurance procedures and are certified to and manufacture in accordance with ISO 9001:2008, ISO/TS 16949:2009 and meet a broad range of International Standards including UL,

### ENVIRONMENT

All TALEMA International Group manufacturing facilities are RoHS & REACH Compliant and all chokes, inductors and HF Components are produced in an Environment Management System (EMS) facility certified to ISO 14001:2004



### CONTENTS

### Page Nr.

#### Components for Broadband Access

##### SDSL/SHDSL

- EP-13 Transformers matched to Infineon ChipSets - 3-4

##### Modem Transformers

- LTM-110A - Line Interface 56kbps - 5-6

#### Tape & Reel Packing & Dimensions - 7-8

#### Regional Locations - Design, Manufacturing, Sales & Marketing - 9

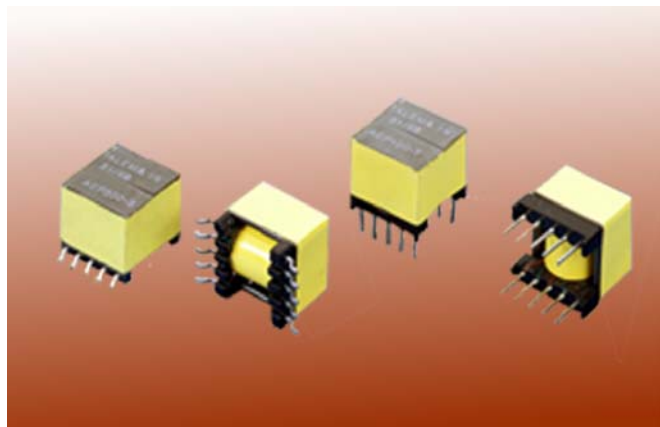
#### TALEMA Product Summary (Total Program) - 10

*Visit our websites for detailed electrical and mechanical specifications for Talema's extensive line of magnetic components for Toroidal Transformers, Power Conversion, Telecom & LAN Applications:*

www.talema.com  
 www.nuvotem.com  
 www.ntmagnetics.cz

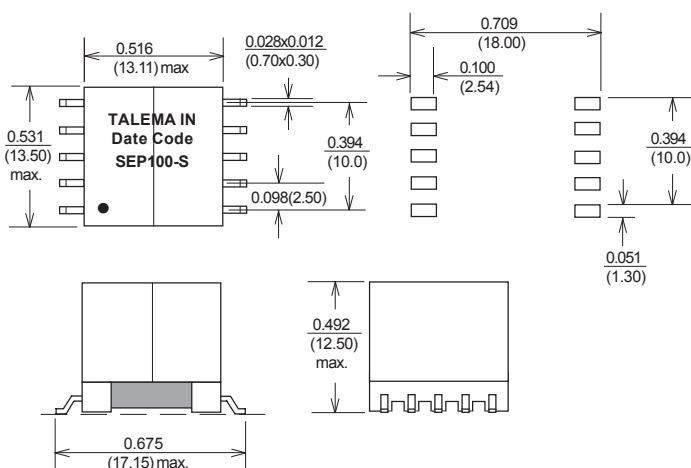
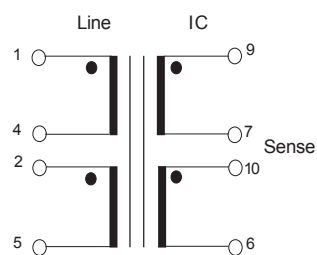
**SEP Series • SDSL / SHDSL Transformers for Infineon Chipsets**
**Features**

- Complies with ANSI and ETSI requirements
- Matched to Infineons PEB22622, PEF22623 & PEF24622 chipsets
- Very low THD
- 2000V minimum isolation
- All materials approved to UL94V-0
- Excellent quality at competitive price due to high volume production
- Manufactured in an ISO 9001:2008, ISO/TS 16949:2009 and ISO 14001:2004 approved Talema facility
- Fully RoHS & REACH Compliant and meets lead free reflow level J-STD-020C for SMD


**Electrical Specifications @ 25°C**

 Turns Ratio: **Bold** = IC side windings

Electrical Specifications @ 25°C • Operating Temperature -40° to +85°C							
Part Number	Package	Turns Ratio ±2% Line : IC:Sense	L <sub>p</sub> (mH) ±10%	L <sub>L</sub> (µH) Max.	DCR (Ohms Max.) Line / IC	DCR (Ohms Max.) Sense Winding	Isolation Voltage (Vrms)
SEP100-T	TH	<b>3.2 : 1 : 1</b>	3.0	25	5.0 / 0.80	3.6	2000
SEP100-S	SMD						

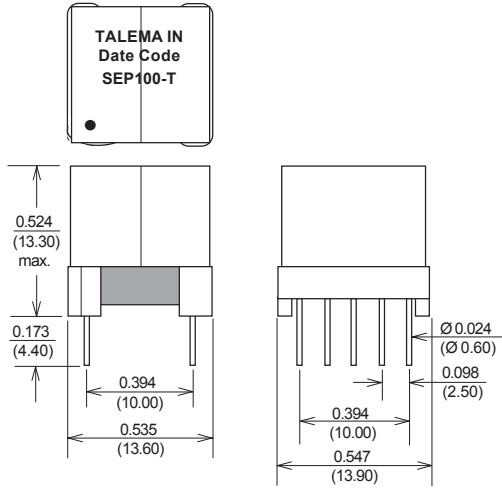
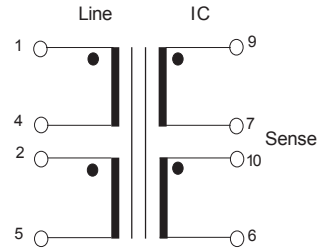
**Package "S"**

**Schematic**


Dimensions: Inches (Millimeters)

Tolerance: ±0.010 (0.25) unless specified otherwise

Surface Coplanarity will be 0.004 (0.10) maximum

**Packing Method:** Tape and Reel; Qty/Reel: 200 Pcs

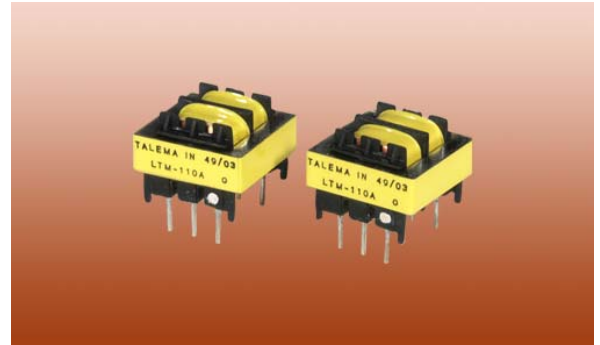
**Package "T"**

**Schematic**


Dimensions: Inches (Millimeters)

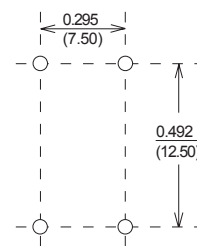
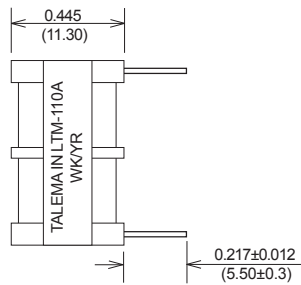
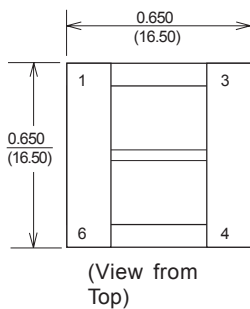
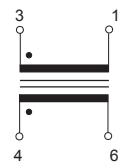
Tolerance:  $\pm 0.010$  (0.25) unless specified otherwise

**LTM-110A • Line Interface 56kbps Modem Transformer**
**Features**

- Designed for V.90 applications (56kbps)
- Very low distortion
- Wide frequency range with flat response
- Meets IEC 60950 Supplementary Insulation levels, 1500V min.
- Excellent quality at competitive price due to high volume production
- Manufactured in an ISO 9001:2008, ISO/TS 16949:2009 and ISO 14001:2004 certified Talema facility
- Fully RoHS & REACH Compliant

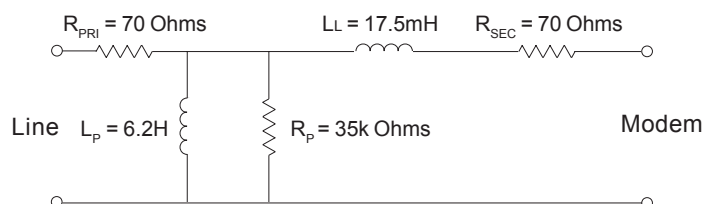

**Electrical Specifications @ 25°C • Operating Temperature -40° to +85°C**

Parameter	Conditions	Typical	Limit	Units
Frequency Response	200 - 4000Hz	±0.5	-	dB
Insertion Loss	2000Hz, RL600 Ohms	1.0	1.5 max	dB
Return Loss	200 - 4000Hz	22	18 min	dB
THD	150Hz, -3dBm	-70	-	dB
THD	200Hz, -10dBm	-85	-	dB
DC Resistance	per winding	70	±10%	Ohms
Inductance	1000Hz, 1V	6.0	-	H
Leakage Inductance	1000Hz, 1V	17	-	mH
Turns Ratio		1:1	±2%	-

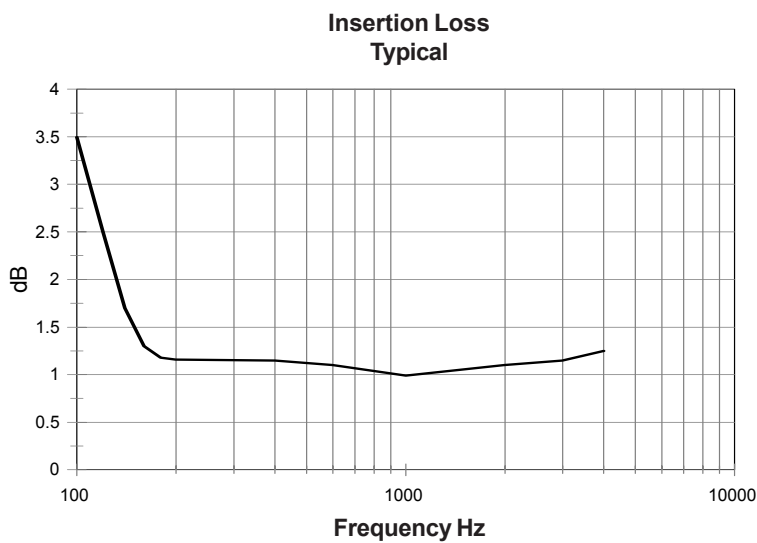
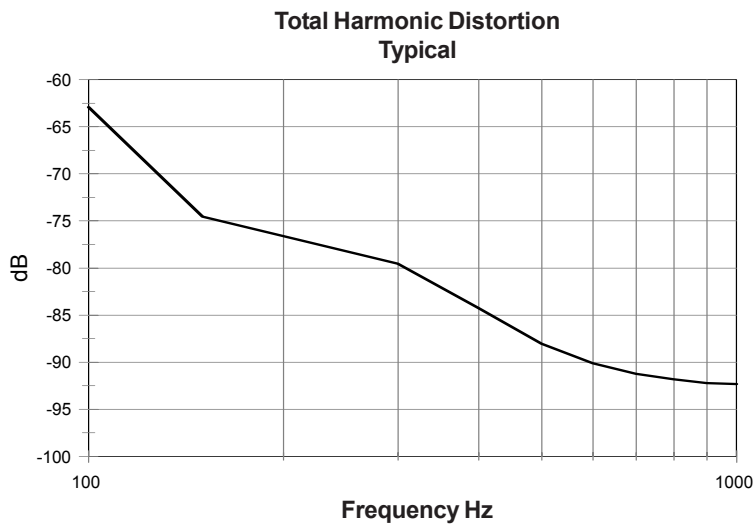
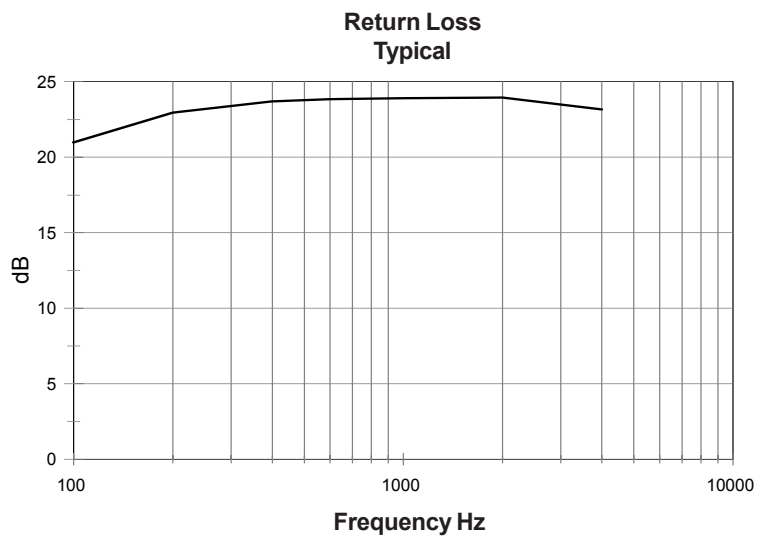
**Mechanical Dimensions & Pinout**

**Schematic**


Dimensions are max. unless otherwise stated:  
Inches(Millimeters)

Pinout spacings are nominal. Pins: 0.026 x 0.018  
(0.66x0.45)

**Equivalent Circuit: (Referenced to Primary @ 1V, 1kHz)**


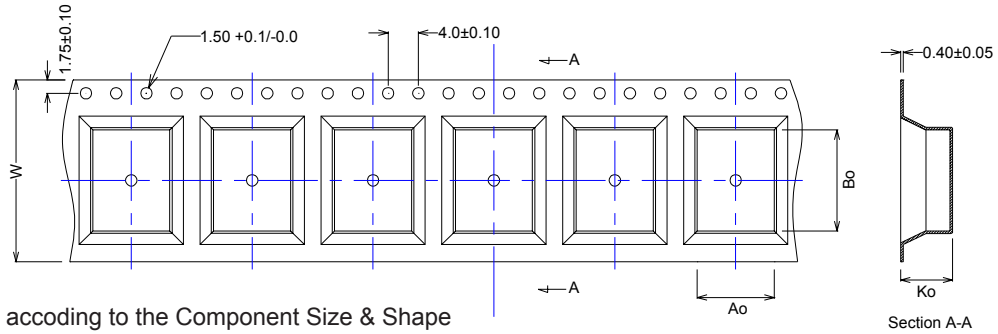
PERFORMANCE DATA



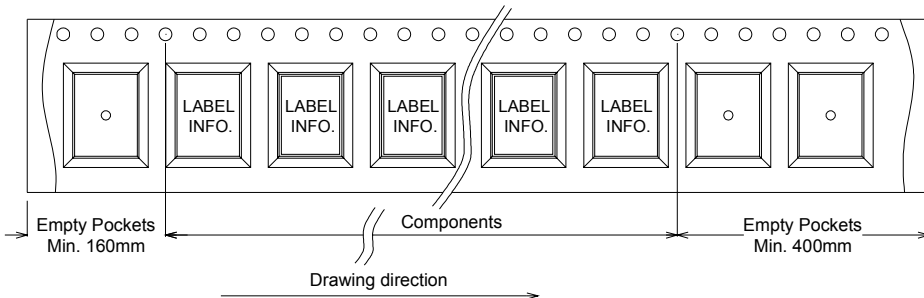
## Tape & Reel Packing and Dimensions

### Carrier Tape - 1

#### Carrier Tape Dimensions (12.00mm, 16.00mm & 24.00mm)



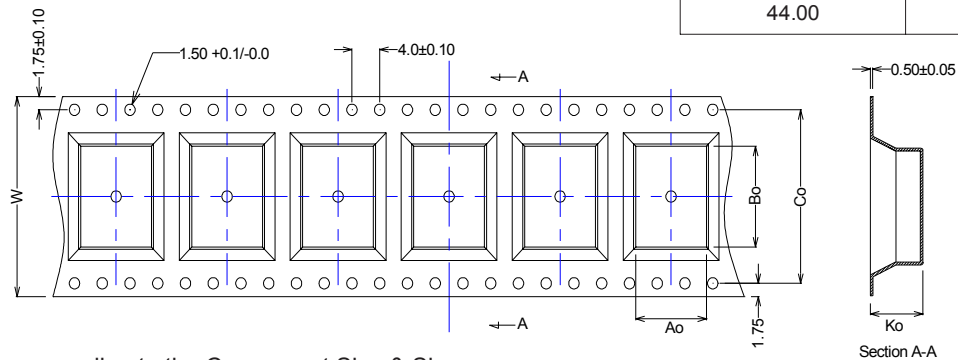
$A_o$ ,  $B_o$  &  $K_o$  - Vary according to the Component Size & Shape



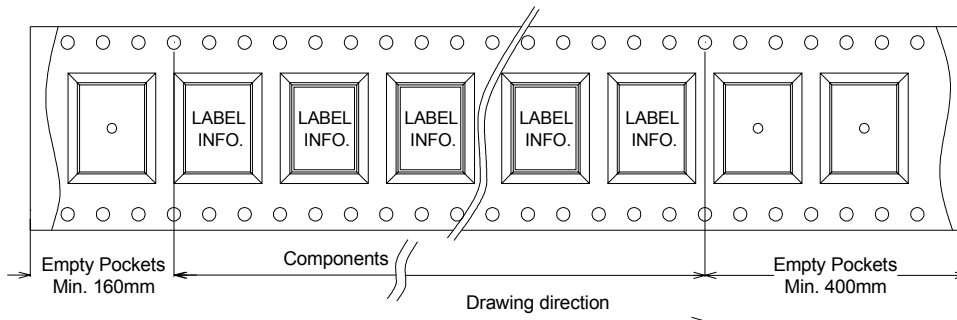
### Carrier Tape - 2

#### Carrier Tape Dimensions (32.00mm & 44.00mm)

Carrier Tape Dimensions in "mm"	
Width	Pitch (Co)
32.00	28.50
44.00	40.50

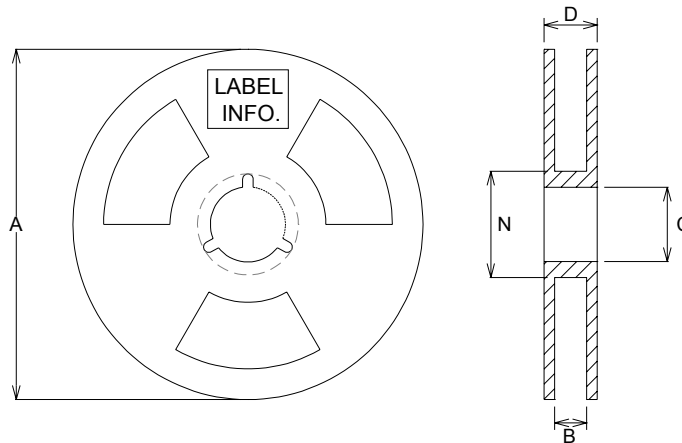


$A_o$ ,  $B_o$ ,  $C_o$  &  $K_o$  - Vary according to the Component Size & Shape



## Tape & Reel Packing and Dimensions

### Reel Drawing



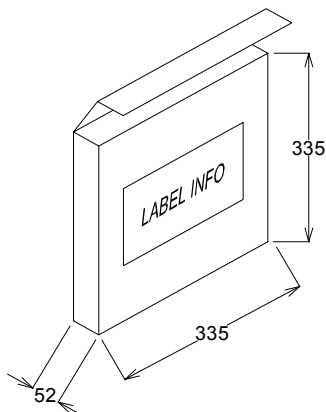
**Reel Dimensions in "mm"**

Type	A	B	C	D	N
13.00mm	Ø330	13	Ø20.2	17	Ø100
16.00mm	Ø330	16	Ø20.2	20	Ø100
24.00mm	Ø330	24	Ø20.2	28	Ø100
32.00mm	Ø330	32	Ø20.2	36	Ø100
44.00mm	Ø330	44	Ø20.2	48	Ø100

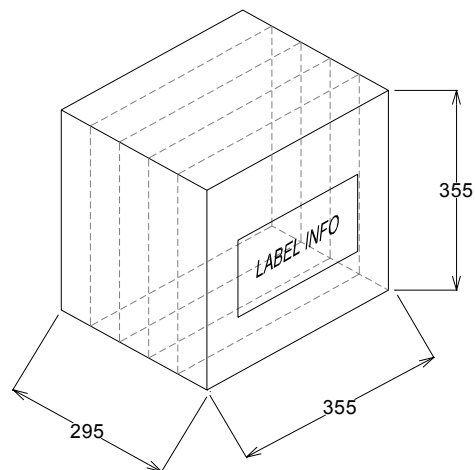
**Tape & Reel Packing Details**

Name of the Series	Reel Type	No. of Inside Carton	Quantity (Pcs/Reel)	Quantity (Reel/Cased)
SEP	32.00mm	5	200	5/200

**Inside Carton**



**Outer Carton**





**Regional Locations - Design, Manufacturing, Sales & Marketing**
**Talema Group Regional Offices**
**North America**
**United States  
(Sales & Marketing)**

**Talema Group, LLC**  
 PO Box 935  
 900 Innovation Drive  
 Suite 120, Rolla  
 Missouri 65402  
 Tel: +1 573-303-3675  
 E-Mail:  
 sales@talemagroup.com  
 Web: www.talema.com

**Asia**
**India  
(Design, Manufacturing, Sales & Marketing)**

**Administrative Office**  
**Talema Electronic India Private Limited**  
 Door No. 221, 1st and 2nd Floor  
 KJ Plaza, Opp.to Vidya Mandir School  
 Meyanur Main Road  
 Salem - 636 004 Tamil Nadu INDIA.  
 Tel: +91 427 - 243 3100  
 Fax: +91 427 - 243 3109  
 E-Mail: talema@talemaindia.net  
 Web: www.talema.com

**Factory Premises**  
**Talema Electronic India Private Limited**  
 No. 31 & 31, Electronic Industrial Estate  
 Suramangalam Post  
 Salem - 636 005 Tamil Nadu INDIA  
 Tel: +91 427 - 243 3000  
 E-Mail: talema@talemaindia.net  
 Web: www.talema.com

**Europe**
**Germany  
(Design, Sales & Marketing)**

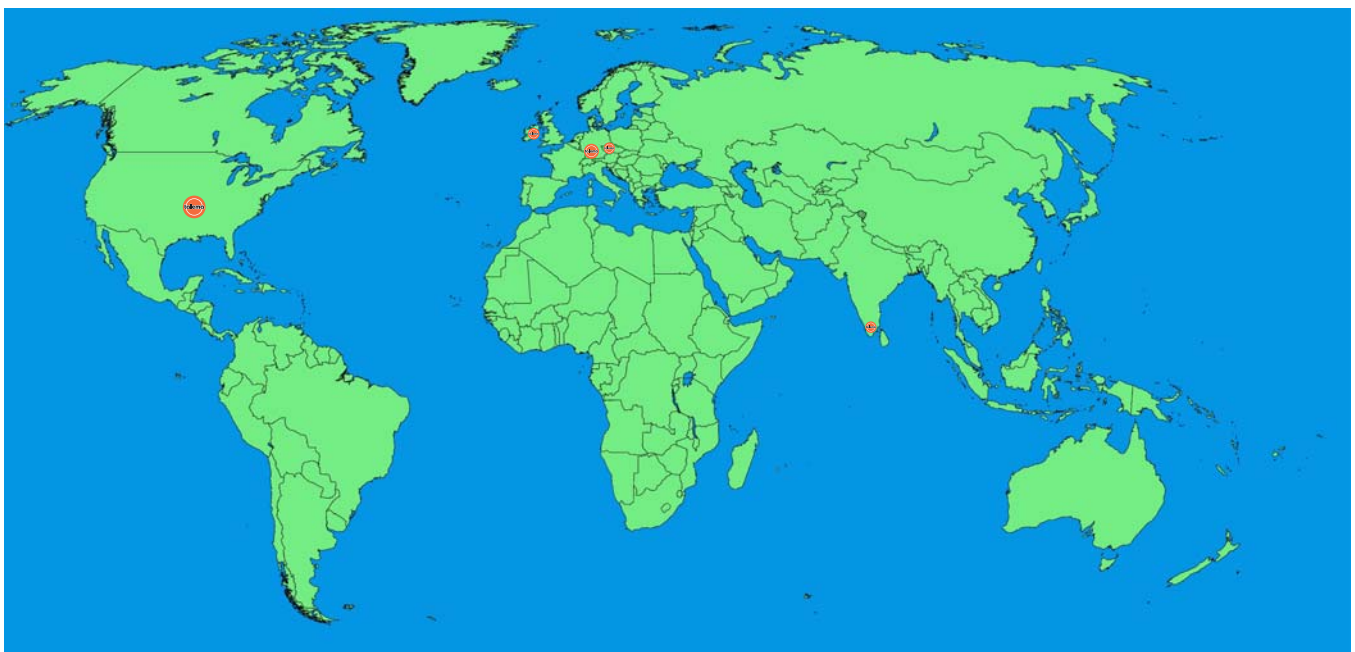
**Talema Elektronik GmbH**  
 Sembdnerstr. 5  
 82110 Germering  
 Tel: +49 89 - 841 00 - 0  
 Fax: +49 89 - 841 00 25  
 E-Mail: info@talema.de  
 Web: www.talema.com

**Ireland  
(Design, Sales & Marketing)**

**Nuvotem TEO**  
 Units W & X, Gweedore Business Park  
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 Fax: +353 (0) 74 95 48139  
 E-Mail: info@nuvotem.com  
 Web: www.nuvotem.com

**Czech Republic  
(Design, Manufacturing, Sales & Marketing)**

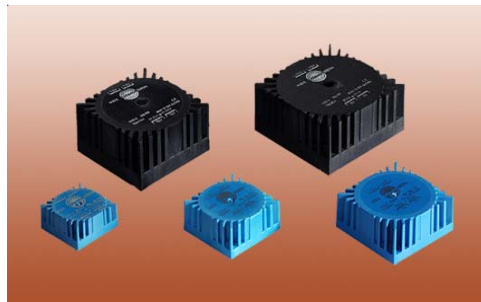
**NT Magnetics s.r.o.**  
 Chebská 27  
 322 00 Plzeň  
 Tel: +420 377 - 338 351  
 Fax: +420 377 - 338 350  
 E-Mail: talema@talema.cz  
 Web: www.ntmagnetics.cz

**Locations of Talema Group Regional Offices**


## Summary TOTAL PROGRAM

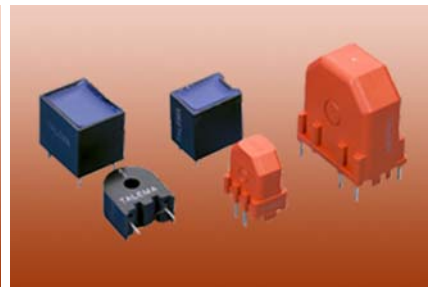
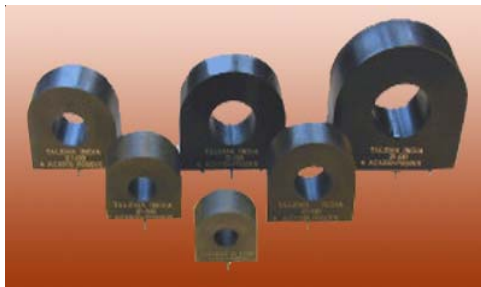
### SECTION 1

- TOROIDAL 50/60Hz TRANSFORMERS,  
TOROIDAL PCB TRANSFORMERS &  
MEDICAL GRADE ISOLATION TRANSFORMERS



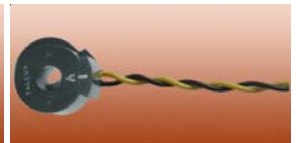
### SECTION 2

- CURRENT SENSE TRANSFORMERS &  
INDUCTORS



### SECTION 3

- CHOKES, INDUCTORS AND TRANSFORMERS  
FOR POWER APPLICATIONS

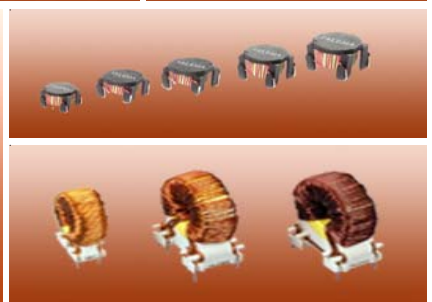


### SECTION 4

- Transformers & Inductors FOR  
SMPS MAGNETICS REQUIREMENTS

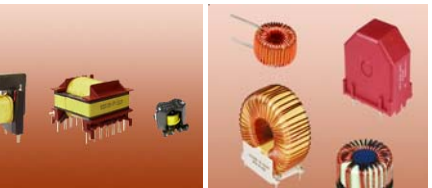
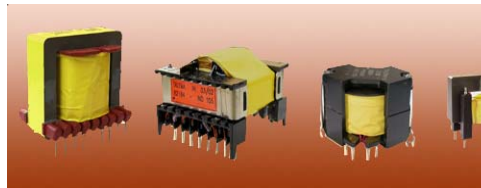
### SECTION 5

- COMPONENTS FOR TELECOMMUNICATIONS  
AND DATA LINE TECHNOLOGY



### SECTION 6

- CURRENT COMPENSATED EMI NOISE  
SUPPRESSION CHOKES

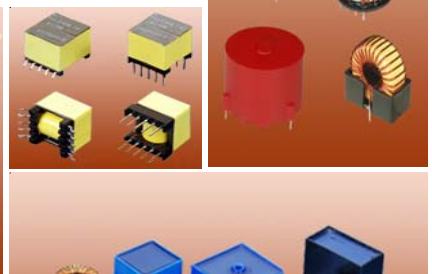
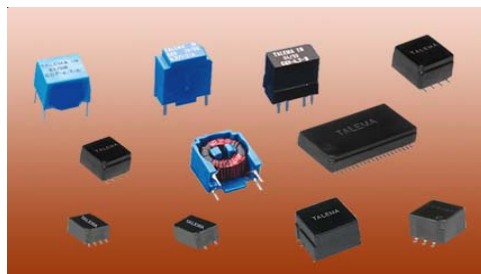


### SECTION 7

- LAN MAGNETIC COMPONENTS FOR  
ETHERNET APPLICATIONS

### SECTION 8

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



### SECTION 9

- TRANSFORMERS FOR BROADBAND ACCESS  
AND FIBRE CHANNEL INTERFACE

### SECTION 10

- THE TALEMA GROUP BROCHURE  
OVERALL PRODUCTS - AN OVERVIEW

