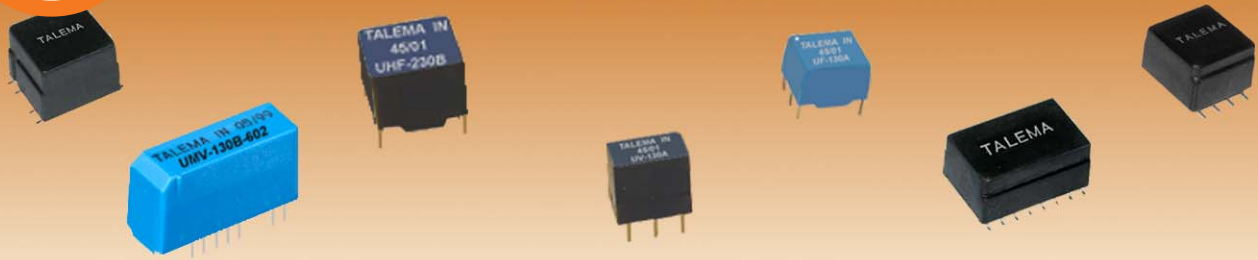




IC Chipsets - U_{PO} Interface Transformer Selection Guide



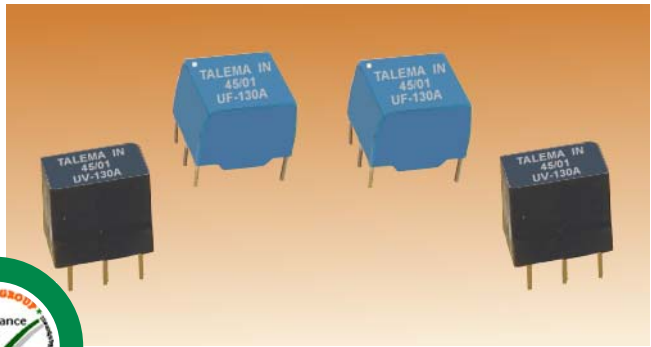
IC Manufacturer	IC Part Number	Talema Part Number	Mounting Style	Transformer						Choke
				Turns Ratio	I _{DC} (mA)	L _P (mH)	L _L (μH)	C _C (pF)	V _{rms}	L _N (mH)
Single TH & SMD Interface Transformers										
AMD	AM2095 & AM20950	UF-130A	THT	1:1:2.5	75	1.7	6	100	2500	--
		UV-130A	THT	1:1:2.5	75	1.7	6	100	2500	--
		UMJ-192S	SMD	1:1:1.25:1.25	75	1.7	10	140	1500	--
		UHF-230B	THT	1:1:2.5	100	1.7	20	20	3000	--
Infineon	PEB2095 IBS	UF-130A	THT	1:1:2.5	75	1.7	6	100	2500	--
		UV-130A	THT	1:1:2.5	75	1.7	6	100	2500	--
		UMJ-192S	SMD	1:1:1.25:1.25	75	1.7	10	140	1500	--
		UHF-230B	THT	1:1:2.5	100	1.7	20	20	3000	--
	PEB20590 & PEB20591	UMJ-190S	SMD	1:1:1:1	75	1.7	10	180	1500	--
		UWJ-185	SMD	1:1:2	140	1.7	10	100	1500	--
	PEB20590VIP/PEB20591VIP-8	UMJ-190S	SMD	1:1:1:1	75	1.7	10	180	1500	--
		UMJ-195S	SMD	1:1:2:2	75	1.7	10	180	1500	--
PSB2196 & PSB2197	UHJ-185	SMD	1:1:2:2	120	1.7	20	20	3000	--	
	National	TP34 & TP3406	UMJ-190S	SMD	1:1:1:1	75	1.7	10	180	1500
UWJ-185			SMD	1:1:2	140	1.7	10	100	1500	--
Dual SMD Interface Transformer										
Infineon	PEB2096, PSB2196 & PSB2197	UAJ-140C	SMD	1:1:2:2	75	1.7	5	150	1500	--
TH & SMD Interface Modules										
AMD	AM2095 & AM20950	UMF-130A-152	THT	1:1:2.5	75	1.0	6	100	1500	2 x 1.5
		UMV-130B-172	THT	1:1:2.5	75	1.7	6	100	2500	2 x 1.7
		UMV-130B-602	THT	1:1:2.5	75	1.7	6	100	2500	2 x 6.0
		UAJ-130A-502	SMD	1:1:2.5	75	1.7	5	100	1500	2 x 5.0
Infineon	PEB2095 IBS	UMF-130A-152	THT	1:1:2.5	75	1.0	6	100	1500	2 x 1.5
		UMV-130B-172	THT	1:1:2.5	75	1.7	6	100	2500	2 x 1.7
		UMV-130B-602	THT	1:1:2.5	75	1.7	6	100	2500	2 x 6.0
		UAJ-130A-502	SMD	1:1:2.5	75	1.7	5	100	1500	2 x 5.0
	PEB20590VIP/PEB20591VIP-8	UAJ-120A-502	SMD	1:1:2	75	1.7	5	100	1500	2 x 5.0
PEB2096, PSB2196 & PSB2197	UAJ-140B-502	SMD	1:1:2:2	75	1.7	10	180	1500	2 x 5.0	
National	TP34 & TP3406	UAJ-120A-502	SMD	1:1:2	75	1.7	5	100	1500	2 x 5.0



ISDN • U_{PO} THT Single Interface Transformer

Features

- matched to Infineon's PEB2095 IBS and AMD's AM2095 & AM20950 chipsets
- excellent and consistent balance between windings
- complies fully with all international standards for U-Interface
- manufactured in an ISO-9001:2000, TSS-16949:2002 and ISO-14001:2004 certified Talema facility
- operating temperature -40° to +85°C
- fully RoHS compliant



Electrical Specifications @ 25°C

Turns Ratio: **Bold** = IC Side Windings

U _{PO} TH Interface Transformers								
Complies with Basic Insulation Level EN60950, UL1950 and UL1459								
Part Number	Turns Ratio ±1%	L _P (mH Min)	I _{DC} (mA)	L _L (µH)	C _C (pF Max)	DCR (Ohms per winding)		V _P (Vrms)
						Pri	Sec	
UF-130A	1:1:2,5	1,7	75	6	100	0,80	2,00	2500
UV-130A	1:1:2,5	1.7	75	6	100	0,80	2,00	2500

Test Conditions:

Inductance: Line side windings in series - measurement @ 10kHz, 100mVrms

Leakage Inductance: Line side windings in series, IC side windings short circuited - measurement @ 100kHz, 100mVrms

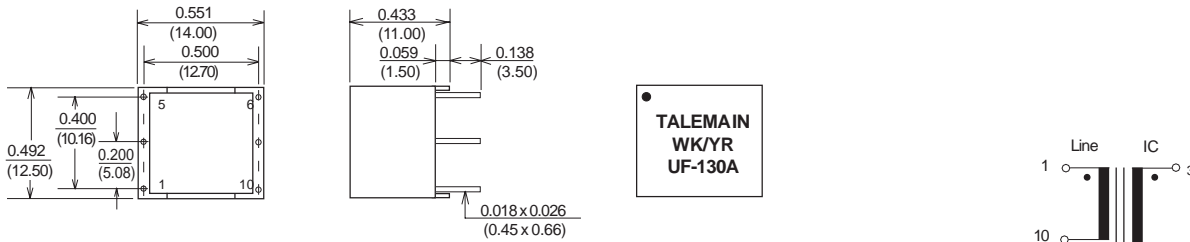
Coupling Capacitance: IC side winding to Line side windings in parallel @ 10kHz, 100mVrms

Test Voltage: 2,5kV for 1 sec. - Line side windings in series to IC winding

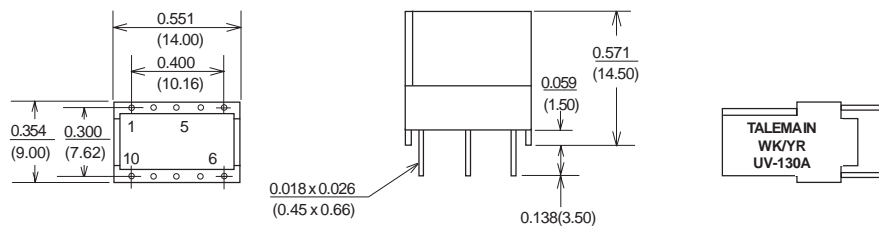
0,5kV for 2 sec. - Line side winding to winding

Dimensions & Schematic

UF



UV



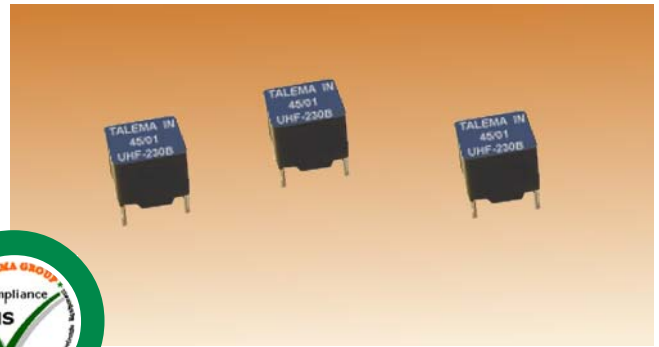
Dimensions: Inches (Millimeters)

Tolerance: ±0.010 (0.25) unless specified otherwise

ISDN • U_{PO} THT Single Interface Transformer

Features

- matched to Infineon's PEB2095 IBS and AMD's AM2095 & AM20950 chipsets
- excellent and consistent balance between windings
- complies fully with all international standards for U-Interface
- manufactured in an ISO-9001:2000, TS-16949:2002 and ISO-14001:2004 certified Talema facility
- operating temperature -40° to +85°C
- fully RoHS compliant



Electrical Specifications @ 25°C

Turns Ratio: **Bold** = IC Side Windings

U_{PO} TH Interface Transformers

Complies with Reinforced Insulation Level EN60950 and UL1950

Part Number	Turns Ratio ±2%	L _P (mH Min)	I _{DC} (mA)	L _L (µH)	C _C (pF Max)	DCR (Ohms per winding)		V _P (Vrms)
						Pri	Sec	
UHF-230B	1:1: 2,5	1.7	100	20	20	1.2	2.1	4000

Test Conditions

Inductance: Line side windings in series - measurement @ 10kHz, 100mVrms

Leakage Inductance: Line side windings in series, IC side windings short circuited - measurement @ 100kHz, 100mVrms

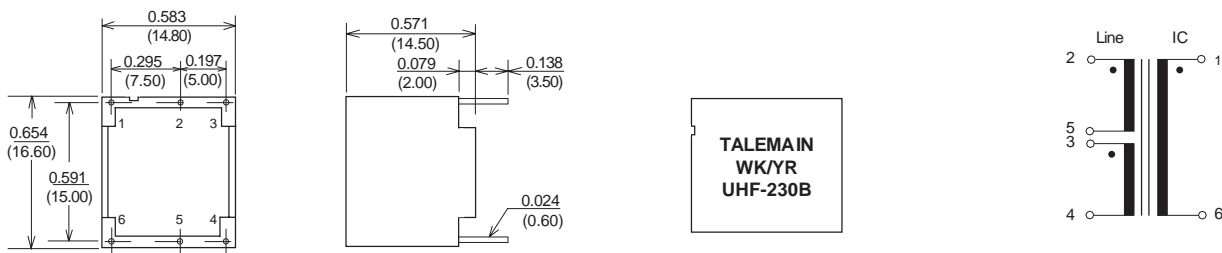
Coupling Capacitance: IC side windings in series to Line side windings in parallel @ 10kHz, 100mVrms

Test Voltage: 4,0kV for 2 sec. - Line side windings in series to IC winding

3,0kV for 1 min. - Line side windings in series to IC winding

Dimensions & Schematic

UHF



Dimensions: Inches (Millimeters)

Tolerance: ±0.010 (0.25) unless specified otherwise

Sales & Marketing, Design and Manufacturing Facilities

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

Eastern Europe & Czech Republic

NTMAGNETICS 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

TALEMA ELEKTRONIK GMBH
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

NUVOTEMTEO.
Crolló
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



ISDN - U_{PO} SMD Single Interface Transformers

Features

- matched to Infineon's PEB20950 & PEB20951 and National's TP34 & TP3406 chipsets
- excellent and consistent balance between windings
- complies fully with all international standards for U-Interface
- manufactured in an ISO-9001:2000, TS-16949:2002 and ISO-14001:2004 certified Talema facility
- operating temperature: -40° to +85°C
- fully RoHS compliant and meets lead free reflow level J-STD-020C



Electrical Specifications @ 25°C

Turns Ratio: **Bold** = IC Side Windings

U_{PO} SMD Interface Transformers

Complies with Basic Insulation Level EN60950, UL1950 and UL1459

Part Number	Turns Ratio ±2%	L _p (mH min)	L _L (μH)	ΔI _{DC} (mA)	C _C (pF Max)	DCR (Ohms)		V _P (Vrms)
						Primary	Secondary	
UWJ-180	1:1:4	1.7	10	140	100	1.5	5.2	1500
UWJ-185	1:1:2	1.7	20	140	90	1.5	3.0	1500

Test Conditions:

Inductance: Line side windings in series - measurement @ 10kHz, 100mVrms

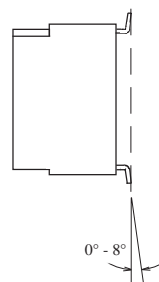
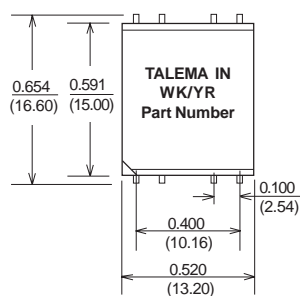
Leakage Inductance: Line side windings in series, IC side winding short circuited - measurement @ 100kHz, 100mVrms

Coupling Capacitance: IC side winding to Line side windings in series @ 10kHz, 100mVrms

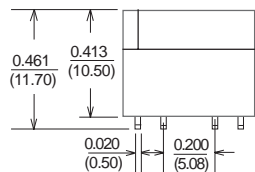
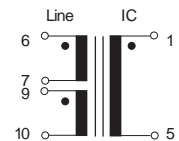
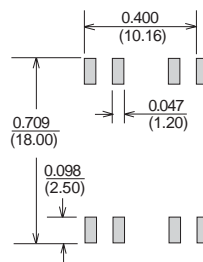
Test Voltage: 1500 V for 2 Sec. Line side windings in series to IC side winding

Dimensions & Schematic

UWJ



Suggested Pad Layout



Surface Coplanarity will be 0.004(0.10)

Dimensions: Inches (Millimeters)

Tolerance: ±0.010 (0.25) unless specified otherwise

ISDN - U_{PO} SMD Single Interface Transformers

Features

- matched to Infineon's PSB2196 & PSB2197 chipsets
- excellent and consistent balance between windings
- complies fully with all international standards for U-Interface
- manufactured in an ISO-9001:2000, TS-16949:2002 and ISO-14001:2004 certified Talema facility
- operating temperature: -40° to +85°C
- fully RoHS compliant and meets lead free reflow level J-STD-020C



Electrical Specifications @ 25°C

Turns Ratio: **Bold** = IC Side Windings

Surface Mount U_{PO} Interface Transformers

Complies with Reinforced Insulation Level EN60950, UL1950 and UL1459

Part Number	Turns Ratio ±2%	L _P (mH min)	L _L (µH)	I _{DC} ¹ (mA)	C _C (pF Max)	DCR (Ohms)		V _P (Vrms)
						Primary	Secondary	
UHJ-185	1:1:2:2	1.7	20	120	20	1.3	1.3	3000

Test Conditions:

Inductance: Line side windings in series - measurement @ 10kHz, 100mVrms

Leakage Inductance: Line side windings in series, IC side winding short circuited - measurement @ 100kHz, 100mVrms

Coupling Capacitance: IC side winding in series to Line side windings in series @ 10kHz, 100mVrms

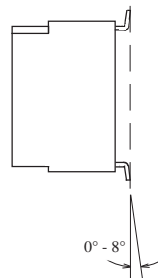
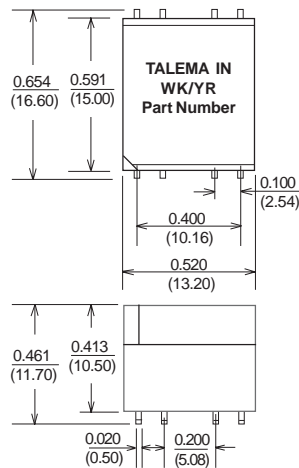
Test Voltage: 3kV for 2 sec. Line side windings to IC side windings

Reinforced Insulation: Line Side in series to IC side in series

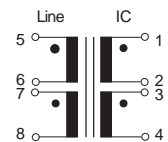
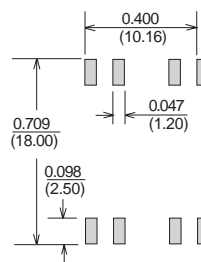
Working Voltage: 250Vrms

Dimensions & Schematic

UHJ



Suggested Pad Layout



Surface Coplanarity will be 0.004(0.10) maximum

Dimensions: Inches (Millimeters)

Tolerance: ±0.010 (0.25) unless specified otherwise

Sales & Marketing, Design and Manufacturing Facilities

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

Eastern Europe & Czech Republic

NTMAGNETICS 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

TALEMAELEKTRONIK GMBH
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

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

India

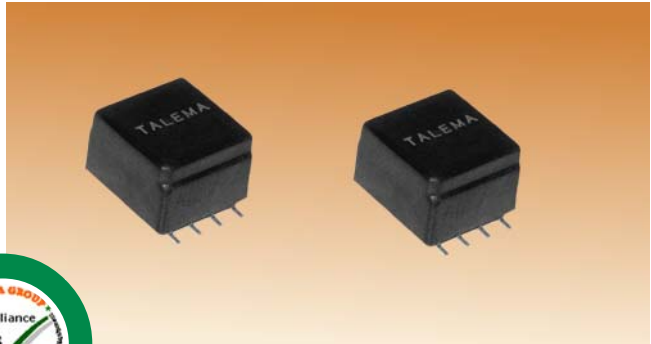
TALEMA ELECTRONIC PVT. LTD.
Opposite the SIDCO Industrial Estate
Gins Towers
4/5S.H/1, Omalur Main Road
Salem - 636 004, Tamil Nadu
Tel: Int. + 91 427 - 244 1325
Fax: Int. + 91 427 - 243 0034
E-mail: talema@talemaindia.com
Web Site: www.talemaindia.com



ISDN • U_{PO} SMD Single Interface Transformers

Features

- designed for optimum compatability with all established interface IC's
- excellent and consistent balance between windings
- compact size in surface mount package
- complies fully with all international standards for U-Interface
- manufactured in an ISO-9001:2000, TS-16949:2002 and ISO-14001:2004 certified Talema facility
- operating temperature -40° to +85°C
- fully RoHS compliant and meets lead free reflow level J-STD-020C



Electrical Specifications @ 25°C

Turns Ratio: **Bold** = IC Side Windings

U _{PO} Interface Transformer								
Complies with Basic Insulation Level EN6-950, UL1950 and UL1459								
Part Number	Turns Ratio ±2%	L _p (mH Min)	I _{DC} (mA)	L _L (µH)	C _c (pF Max)	DCR (Ohms per winding)		V _P (Vrms)
						Pri	Sec	
UMJ-190S	1:1:1:1	1.7	75	10	180	0.8	0.8	1500
UMJ-192S	1:1:1, 25:1,25	1.7	75	5	140	0.5	1.0	1500
UMJ-195S	1:1: 2:2	1.7	75	10	180	0.8	1.6	1500

Test Conditions:

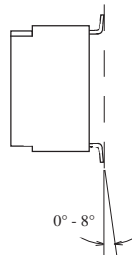
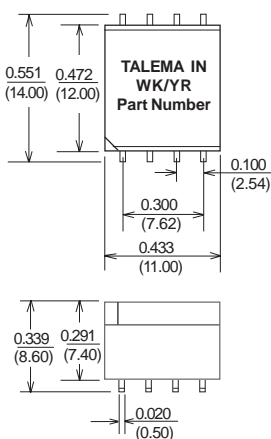
Inductance: Line side windings in series - measurement @ 10kHz, 100mVrms

Leakage Inductance: Line side windings in series, IC side windings short circuited - measurement @ 100kHz, 100mVrms

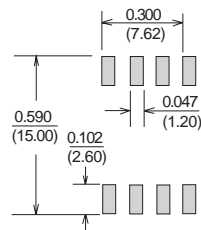
Coupling Capacitance: IC side windings in series to Line side windings in series @ 10kHz, 100mVrms

Test Voltage: 1,5kV - Line side winding in series to IC side winding in series

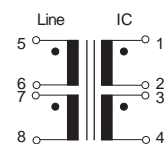
Dimensions & Schematic



Suggested Pad Layout



Schematic



Surface Coplanarity will be 0.004(0.10) maximum

Dimensions: Inches (Millimeters)

Tolerance: ±0.010 (0.25) unless specified otherwise

Sales & Marketing, Design and Manufacturing Facilities

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

Eastern Europe & Czech Republic

NTMAGNETICS 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

TALEMA ELEKTRONIK GMBH
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

NUVOTEMTEO.
Crollý
Co. Donegal
Tel: Int. + 353 74 - 954 8666
Fax: Int. + 353 74 - 954 8139
Email: info@nuvotem.com

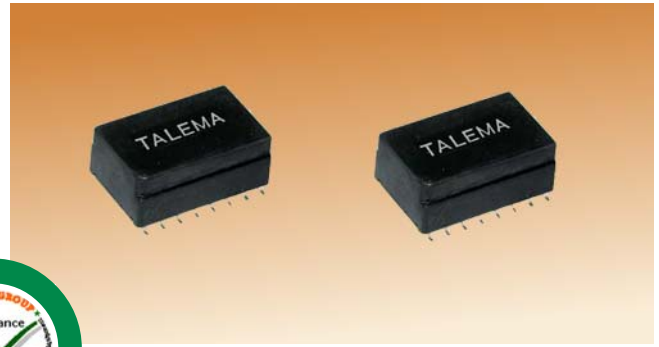
India

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E-mail: talema@talemaindia.com
Web Site: www.talemaindia.com

ISDN • U_{PO} SMD Interface Transformer Modules

Features

- matched to Infineon's PEB2096, PSB2196 & PSB2197 chipsets
- excellent and consistent balance between windings
- compact size in surface mount package
- complies fully with all international standards for U-Interface
- manufactured in an ISO-9001:2001, TS-16949:2002 and ISO-14001:2004 certified Talema facility
- operating temperature -40° to +85°C
- fully RoHS compliant and meets lead free reflow level J-STD-020C



Electrical Specifications @ 25°C

Turns Ratio: **Bold** = IC Side Windings

Surface Mount U_{PO} Interface Transformer Modules Complies with Basic Insulation Level EN60950, UL1950 and UL1459

Part Number	Turns Ratio ±2%	L _P (mH min)	I _{DC} (mA)	L _L (µH)	C _C (pF Max)	DCR (Ohms per winding)		V _P (Vrms)	Schematic
						Pri	Sec		
UAJ-140C	1:1:2:2	1.7	75	5	150	0.8	1.6	1500	C

Test Conditions:

Inductance: Line side windings in series - measurement @ 10kHz, 100mVrms

Leakage Inductance: Line side windings in series, IC side winding/s short circuited - measurement @ 100kHz, 100mVrms

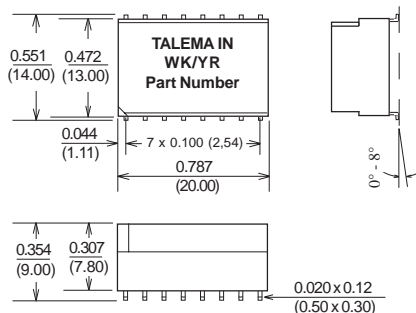
Coupling Capacitance: IC side winding (windings in series) to Line side windings in series @ 10kHz, 100mVrms

Test Voltage: 1.5kV for 2 sec. - w1+w2 to w3+w4

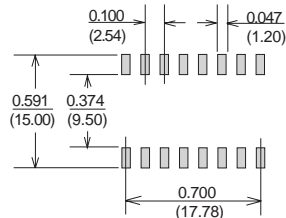
0.5kV for 2 sec. - w1+w3 to w2+w4

High Voltage Test: U_{PULSE}(w1+w2 to w3+w4); 2kV_{OP} for 10µs/700µs wave form, 10 pulses in 10 second cycle with changing polarity.

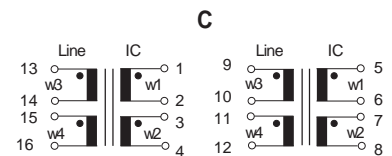
Dimensions



Suggested Pad Layout



Schematic



Surface Coplanarity will be 0.004(0.10)

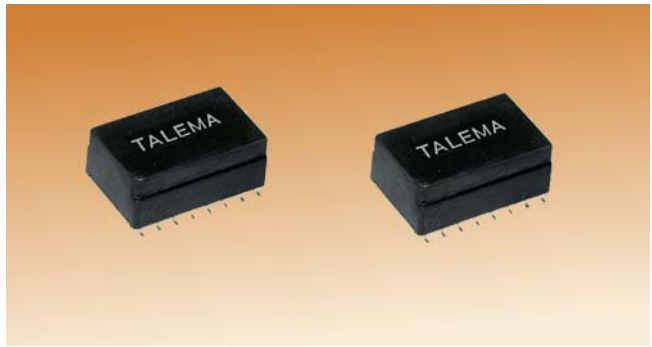
Dimensions: Inches (Millimeters)

Tolerance: ±0.010 (0.25) unless specified otherwise



Features

- designed for optimum compatability with all established interface IC's
- excellent and consistent balance between windings
- compact size in surface mount package
- complies fully with all international standards for U-Interface
- manufactured in an ISO-9001:2000, TS-16949 and ISO-14001:2004 certified Talema facility
- operating temberature -40° to +85°C
- fully RoHS compliant and meets lead free reflow level J-STD-020C



Electrical Specifications @ 25°C

Turns Ratio: **Bold** = IC Side Windings

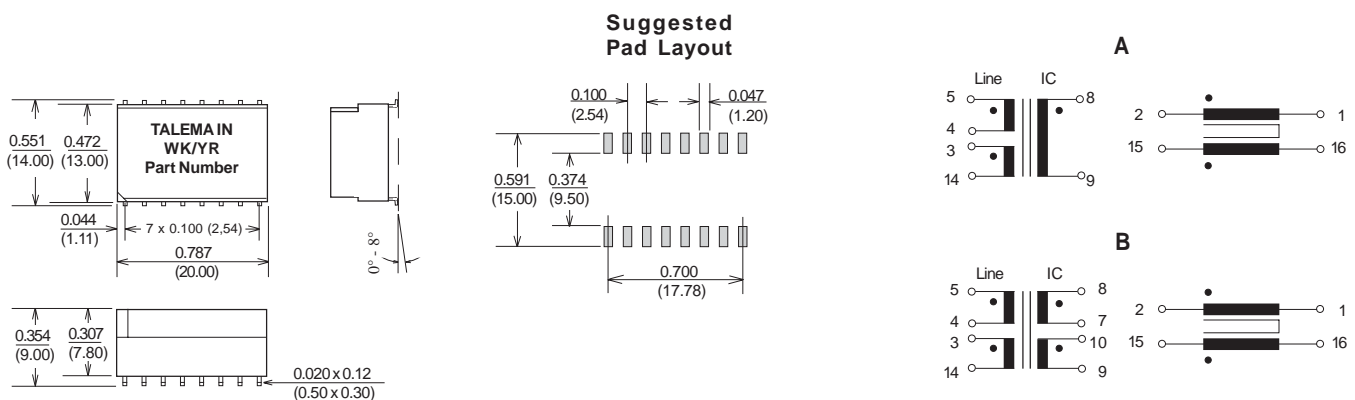
Surface Mount U_{PO} Interface Transformer Modules
Complies with Basic Insulation Level EN60950, UL1950 and UL1459

Part Number	Turns Ratio ±2%	L _P (mH min)	I _{DC} (mA)	L _L (µH)	C _C (pF Max)	DCR (Ohms per winding)		V _P (Vrms)	Schematic	Double Choke	
						Pri	Sec			L _N (mH)	DCR (Ohms)
UAJ-120A-502	1:1: 2	1.7	75	5	100	0.8	1.6	1500	A	5	0.4
UAJ-130A-502	1:1: 2,5	1.7	75	5	100	0.5	1.0	1500	A	5	0.4
UAJ-140B-502	1:1: 2:2	1.7	75	5	180	0.8	1.6	1500	B	5	0.4

Test Conditions:

- Inductance: Line side windings in series - measurement @ 10kHz, 100mVrms
- Leakage Inductance: Line side windings in series, IC side winding/s short circuited - measurement @ 100kHz, 100mVrms
- Coupling Capacitance: IC side winding (windings in series) to Line side windings in series @ 10kHz, 100mVrms
- Test Voltage: 1.5kV for 2 Sec. - Line side windings in series to IC side winding (IC windings in series)
- Inductance CM Choke: Measured @ 10kHz, 100mVrms

Dimensions & Schematic



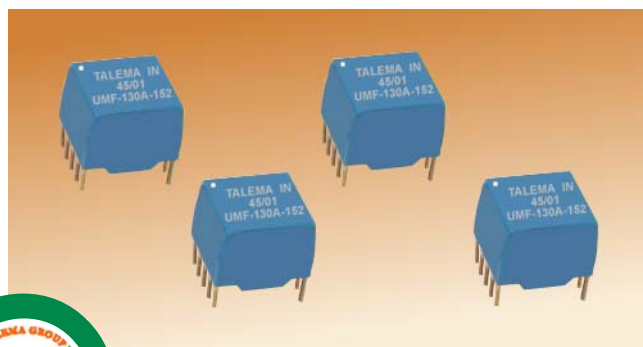
Surface Coplanarity will be 0.004(0.10) maximum

Dimensions: Inches (Millimeters)
Tolerance: ±0.010 (0.25) unless specified otherwise

ISDN • U_{PO} THT Interface Transformer Module

Features

- matched to Infineon's PEB2095 IBS and AMD's AM2095 & AM20950 chipsets
- excellent and consistent balance between windings
- compact size in through-hole package
- complies fully with all international standards for U-Interface
- manufactured in an ISO-9001:2000, TS-16949:2002 and ISO-14001:2004 certified Talema facility
- operating temperature -40° to +85°C
- fully RoHS compliant and meets lead free reflow level J-STD-020C



Electrical Specifications @ 25°C

Turns Ratio: **Bold** = IC Side Windings

U_{PO} TH Interface Transformer Module Complies with Basic Insulation Level EN60950, UL1950 and UL1459

Part Number	Turns Ratio ±1%	L _P (mH Min)	I _{DC} (mA)	L _L (µH)	C _C (pF Max)	DCR (Ohms per winding)		V _P (Vrms)	Schematic	Double Choke	
						Pri	Sec			LN (mH)	DCR (Ohms)
UMF-130A-152	1:1: 2,5	1,0	75	6	100	0,31	0,65	1500	A	1,5	0,36

Test Conditions:

Inductance: Line side windings in series - measurement @ 10kHz, 100mVrms

Leakage Inductance: Line side windings in series, IC side windings short circuited - measurement @ 100kHz, 100mVrms

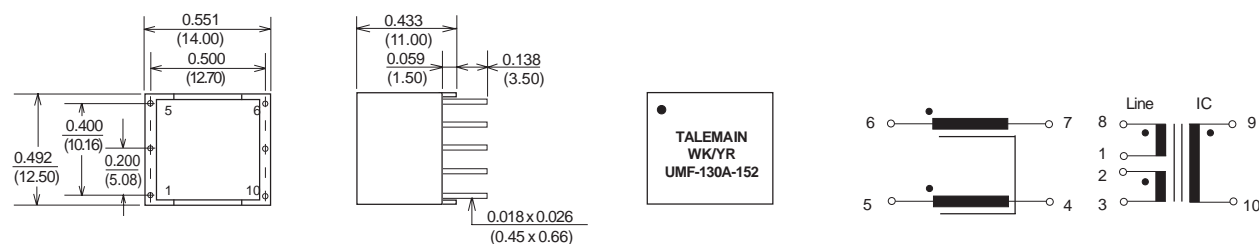
Coupling Capacitance: IC side winding to Line side windings in parallel @ 10kHz, 100mVrms

Test Voltage: Transformer - 1,5kV for 1 sec. - Line side windings in series to IC winding

Choke - 0,5kV for 1 sec. - winding to winding

Dimensions & Schematic

UMF



Dimensions: Inches (Millimeters)

Tolerance: ±0.010 (0.25) unless specified otherwise

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

TALEMA ELEKTRONIK GMBH
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

NUVOTEMTEO.
Crollý
Co. Donegal
Tel: Int. + 353 74 - 954 8666
Fax: Int. + 353 74 - 954 8139
Email: info@nuvotem.com

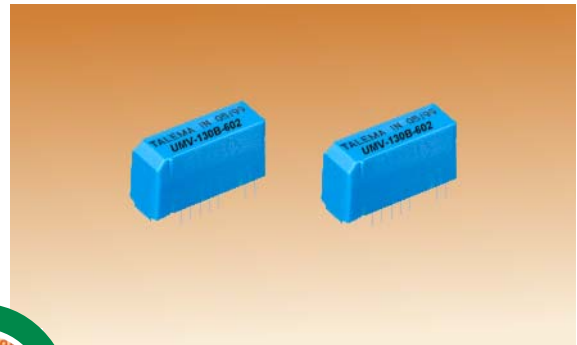
India

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



Features

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Electrical Specifications @ 25°C

Turns Ratio: **Bold** = IC Side Windings

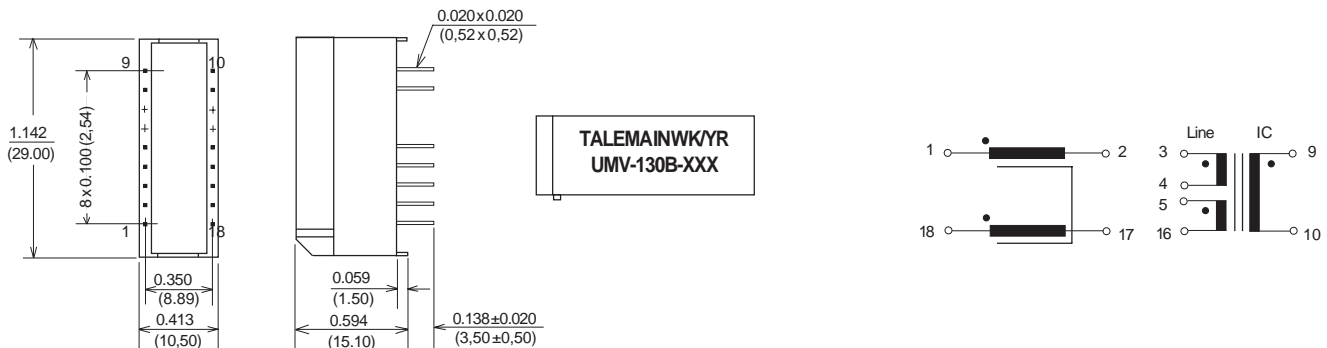
U _{PO} TH Interface Transformer Modules											
Complies with Basic Insulation Level EN60950, UL1950 and UL1459											
Part Number	Turns Ratio ±1%	L _P (mH Min)	I _{DC} (mA)	L _L (µH)	C _C (pF Max)	DCR (Ohms per winding)		V _P (Vrms)	Schematic	Double Choke	
						Pri	Sec			LN (mH)	DCR (Ohms)
UMV-130B-172	1:1: 2,5	1,7	75	6	100	0,80	2,00	2500	B	1,7	0,25
UMV-130B-602	1:1: 2,5	1.7	75	6	100	0,80	2,00	2500	B	6,0	0,80

Test Conditions:

- Inductance: Line side windings in series - measurement @ 10kHz, 100mVrms
- Leakage Inductance: Line side windings in series, IC side windings short circuited - measurement @ 100kHz, 100mVrms
- Coupling Capacitance: IC side winding to Line side windings in parallel @ 10kHz, 100mVrms
- Test Voltage:
 - Transformer - 2,5kV for 1 sec. - Line side windings in series to IC winding
 - 0,5kV for 1 sec. - Primary winding to Primary winding
 - Choke - 0,5kV for 1 sec. - winding to winding

Dimensions & Schematic

UVM



Dimensions: Inches (Millimeters)
Tolerance: ±0.010 (0.25) unless specified otherwise