

ISDN S₀-INTERFACE TRANSFORMER/MODULE

- The S₀-interface is used to connect the network termination devices(NT'S) and consumer terminal equipments(TE'S).
- The transmission pulse mask and impedance according to CCITT(ITU-T)I.430.

ISDN-IC/S₀ Interface Transformer Selection

chip manufacturer	chip designation	flat design	upright design	SMT design	IEC 950 design
Infineon (Siemens)	PEB/PSB2080	UT21113	UT21521	UT21113-TS	UT21711
	PEB/PSB2081	UT21166	UT21595	UT21166-TS	UT21729
	PEB/PSB2084				
	PEB/PSB2085				
	PEB/PSB2086				
	PEB/PSB2080				
	PEB/PSB2186				
AMD	AM79C30A	UT21113	UT21521	UT21113-TS	UT21711
	AM79C32A	UT21166	UT21595	UT21166-TS	UT21729
AT&T	T7250	UT21169	UT21598	UT21169-TS	UT21731
	T7252				
	T7256				
	T7259				
Intel	29C53AA	UT21168	UT21597	UT21168-TS	UT21731
		UT21169	UT21598	UT21169-TS	UT21732
Mietec	MTC-2072	UT21113	UT21521	UT21113-TS	UT21711
		UT21166	UT21595	UT21166-TS	UT21729
Mitel	MT8930 MT8931	UT21113	UT21521	UT21113-TS	UT21711
		UT21166	UT21595	UT21166-TS	UT21728 UT21729
Motorola	MC145474	UT21167	UT21596	UT21167-TS	
	MC145475				
	MC145574	UT21169	UT21598	UT21169-TS	UT21731
National	TP3420 TP3421	UT21113	UT21521	UT21113-TS	UT21711
		UT21166	UT21595	UT21166-TS	UT21729
SGS Thomson	ST5420 ST5421	UT21113	UT21521	UT21113-TS	UT21711
		UT21166	UT21595	UT21166-TS	UT21729

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UNIVERSAL MICROELECTRONICS CO.,LTD.
TEL:886-4-23590096 FAX:886-4-23590129

3,27TH RD.,TAICHUNG INDUSTRIAL PARK,
TAICHUNG,TAIWAN,R.O.C

ISDN S₀-INTERFACE TRANSFORMER/MODULE

ISDN-IC/S₀-Interface Module Selection

chip manufacturer	chip designation	through hole	SMT design	IEC 950 design
Infineon (Siemens)	PEB/PSB2080 PEB/PSB2081 PEB/PSB2084 PEB/PSB2085 PEB/PSB2086 PEB/PSB2080 PEB/PSB2186	UT21615 UT21624	UT21615-TS UT21624-TS	UT21802 UT21816
AMD	AM79C30A AM79C32A	UT21615 UT21624	UT21615-TS UT21624-TS	UT21802 UT21816
AT&T	T7250 T7252 T7256 T7259	UT21626	UT21626-TS	
Intel	29C53AA	UT21626	UT21626-TS	
Mietec	MTC-2072	UT21615 UT21624	UT21615-TS UT21624-TS	UT21802 UT21816
Mitel	MT8930 MT8931	UT21615 UT21624	UT21615-TS UT21624-TS	UT21802 UT21816
Motorola	MC145474 MC145475	UT21627	UT21627-TS	
	MC145574	UT21626	UT21626-TS	
National	TP3420 TP3421	UT21615 UT21624	UT21615-TS UT21624-TS	UT21802 UT21816
	SGS Thomson	ST5420 ST5421	UT21615 UT21624	UT21802 UT21816

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ISDN S₀-INTERFACE TRANSFORMER/MODULE

electrical specifications @ 25⁰C:

Transformer

UMEC Model no.	n ±1%	ΔI _{dc} mA	L _H mH Min.	L _S uH Max.	C _K pF Max.	C _w pF NOM.	R _{CU,IC} Ω NOM.	R _{CU,L} Ω NOM.	U _P KVrms	figure/ schematic
Flat design										
UT21113	4:1:1	3	30	3	45	20	3.8	1.2	1.5	A
UT21166	2:2:1:1	5	30	5	145	110	5.0	1.6	1.5	B
UT21167	1:1:1:1	5	30	5	120	20	1.6	1.6	1.5	B
UT21168	1.8:1.8:1:1	5	30	5	120	80	4.0	1.6	1.5	B
UT21169	2.5:2.5:1:1	5	30	7	140	200	6.0	1.6	1.5	B
Upright design										
UT21521	4:1:1	3	30	3	45	20	3.8	1.2	1.5	A
UT21595	2;2:1:1	5	30	5	145	110	5.0	1.6	1.5	B
UT21596	1;1;1;1	5	30	5	120	20	1.6	1.6	1.5	B
UT21597	1.8:1.8:1:1	5	30	5	120	80	4.0	1.6	1.5	B
UT21598	2.5:2.5:1:1	5	30	7	140	200	6.0	1.6	1.5	B
SMT design										
UT21113-TS	4:1:1	3	30	3	45	20	3.8	1.2	1.5	A
UT21166-TS	2;2:1:1	5	30	5	145	110	5.0	1.6	1.5	B
UT21167-TS	1;1;1;1	5	30	5	120	20	1.6	1.6	1.5	B
UT21168-TS	1.8:1.8:1:1	5	30	5	120	80	4.0	1.6	1.5	B
UT21169-TS	2.5:2.5:1:1	5	30	7	140	200	6.0	1.6	1.5	B
IEC 950 design										
UT21711	4;1:1	1	30	3	45	30	1.85	0.19	4.0	A
UT21728	2:1:1	1	25	3	30	60	1.8	0.4	4.0	C
UT21729	2/2:1/1	5	30	15	45	130	3.0	1.3	4.0	B
UT21731	2.5/2.5:1/1	5	30	15	45	200	4.0	1.3	4.0	B
UT21732	1.8/1.8:1/1	5	30	15	45	120	2.6	1.3	4.0	B

Note: 1 Low cost design solutions are available.

2. For RoHS compliant products, the Ordering Code: TG-Model No. ex. TG-UT21113



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TAICHUNG,TAIWAN,R.O.C

ISDN S₀-INTERFACE TRANSFORMER/MODULE

electrical specifications @ 25⁰C:

Module

UMEC Model No.	Transformer									Choke				figure/schematic
	n ±1%	ΔI _{dc} mA	L _H mH Min.	L _S uH Max.	C _K pF Max.	C _w pF Nom.	R _{CU.IC} Ω Nom.	R _{CU.L} Ω Nom.	U _P KVrms	L _N mH	L _S uH Max.	R _{CU} Ω Nom.	U _P KVrms	
Through hole														
UT21615	4:1/1	3	30	3	120	100	2.5	0.8	1.5	4x5	0.6	1.1	0.5	A
UT21624	2/2:1/1	5	30	5	150	200	3.2	1.1	2.0	4x5	0.6	1.0	0.5	B
UT21626	2.5/2.5:1/1	5	30	5	150	250	6.0	1.6	1.5	4x5	0.6	1.1	0.5	B
UT21627	1/1:1/1	5	30	5	150	140	1.6	1.6	1.5	4x5	0.6	1.1	0.5	B
SMT design														
UT21615-TS	4:1/1	3	30	3	120	100	2.5	0.8	1.5	4x5	0.6	1.1	0.5	A
UT21624-TS	2/2:1/1	5	30	5	150	200	3.2	1.1	2.0	4x5	0.6	1.0	0.5	B
UT21626-TS	2.5/2.5:1/1	5	30	5	150	250	6.0	1.6	2.0	4x5	0.6	1.1	0.5	B
UT21627-TS	1/1:1/1	5	30	5	150	140	1.6	1.6	2.0	4x5	0.6	1.1	0.5	B
IEC 950 design														
UT21802	4:1:1	1	30	5	45	30	3.4	1.0	4.0	4x5	0.6	1.0	0.5	A
UT21816	4:1:1	3.6	30	5	45	30	3.4	1.0	4.0	4x5	0.6	1.0	0.5	A

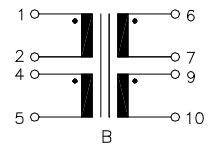
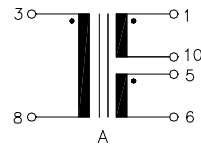
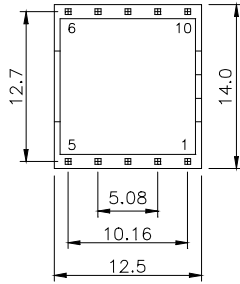
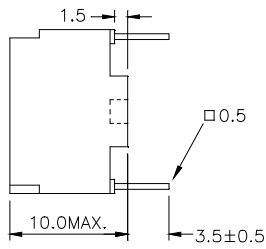
- Note: 1. Modules combine two So-transformers and one current compensated 4-fold choke
 2. Low cost design solutions are available.
 3. For RoHS compliant products, the Ordering Code: TG-Model No. ex. TG-UT21615



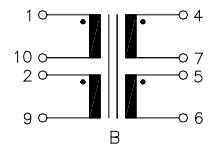
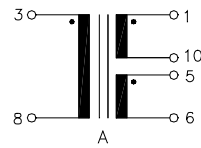
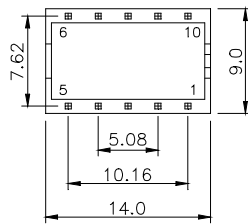
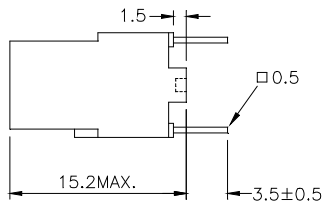
ISDN S₀-INTERFACE TRANSFORMER

Dimensions and connections (tolerance = ±0.2mm)

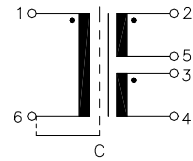
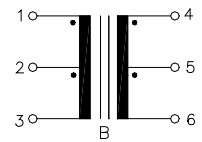
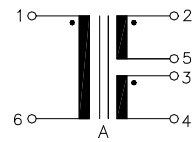
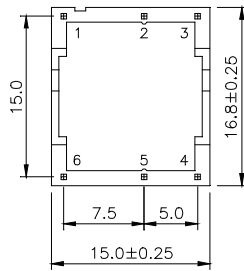
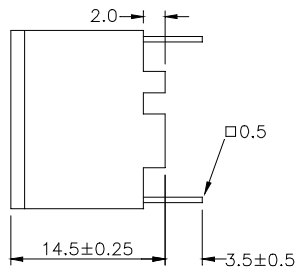
UT211..



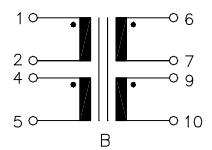
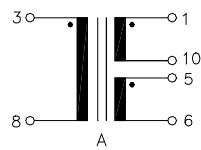
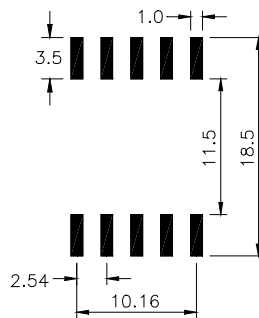
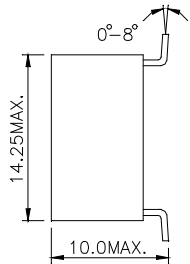
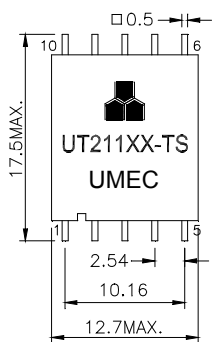
UT215..



UT217..



UT211..-TS(SMT design)*)



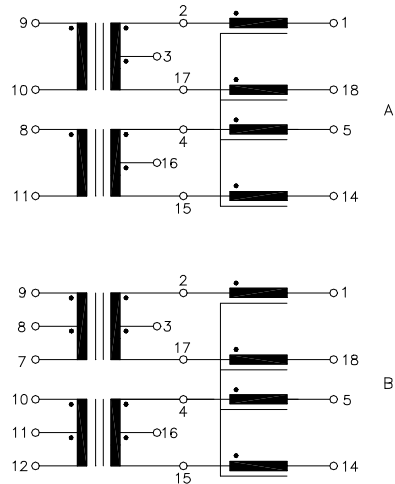
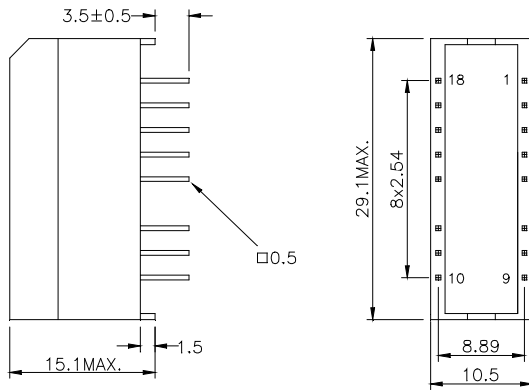
*) pins arrangement according to customer requirement.



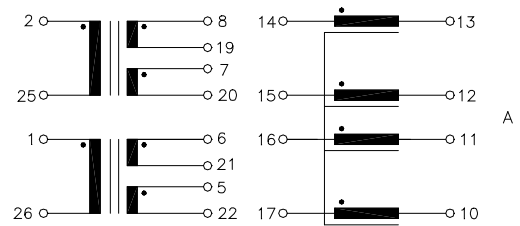
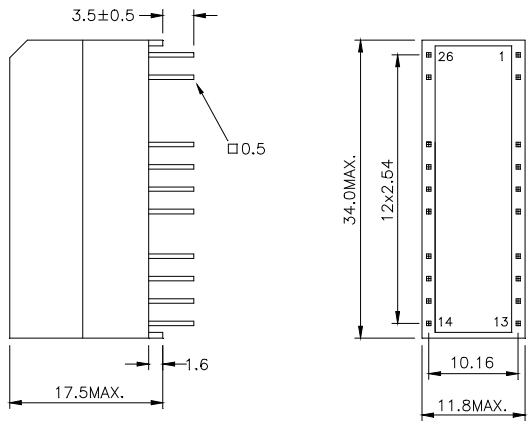
ISDN S₀-INTERFACE MODULE

Dimensions and connections (tolerance = ±0.2mm)

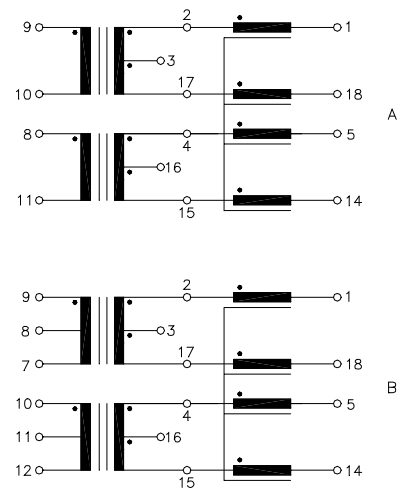
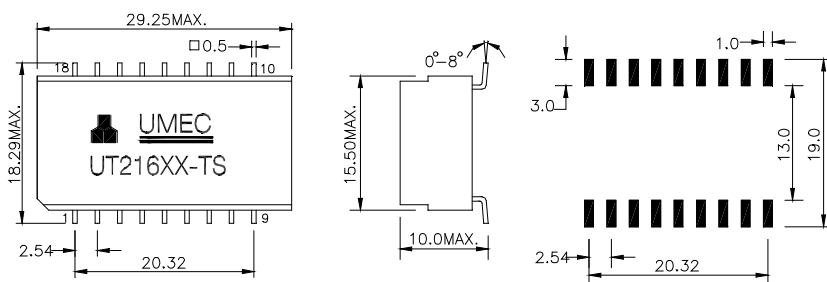
UT216..



UT218..



UT216..-TS(SMT design)*



*) pins arrangement to customer requirement.



ISDN S₀-INTERFACE TRANSFORMER/MODULE

definition of symbols:

Transformer:

n = transformer ratio: IC-side:Line-side.

ΔI_{dc} = max. permissible DC unbalance.

L_H = main inductance of winding(s) on Line-side(in series, $f=10\text{KHz}$ $U=100\text{mVrms}$).

L_S = leakage inductance of winding(s) on Line-side with winding(s)
on IC-side short circuited(each in series, $f=100\text{KHz}$ $U=100\text{mVrms}$).

C_K = coupling capacitance between the winding(s) on IC-side
and the winding(s) on Line-side(So-modules with each choke
winding in series, $f=10\text{KHz}$ $U=100\text{mVrms}$).

C_W = winding capacitance of winding(s) on Line-side(in series,
nominal value, $f=1\text{MHz}$ $U=1\text{Vrms}$).

$R_{CU,IC}$ = DC resistance of the winding(s) on IC-side(in series,
nominal value).

$R_{CU,L}$ = DC resistance of the winding(s) on Line-side(in series,
nominal value).

U_P = test voltage, rms value 50/60Hz, 2seconds, winding(s) on
Line-side to winding(s) on IC-side.

Choke:

L_N = rated inductance of a winding(tol. +50%/-30%, $f=10\text{KHz}$ $U=100\text{mVrms}$).

L_S = leakage inductance of winding when all other windings
short circuited(nominal value, $f=100\text{KHz}$ $U=100\text{mVrms}$).

R_{CU} = DC resistance of each winding(nominal value).

U_P =test voltage, rms value 50/60Hz, 2seconds, winding to winding.

Specifications are subject to change without prior notice.

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