

T1/E1/CEPT/ISDN-PRI Transformers

Dual Surface Mount

- ◆ Dual SMT package contains both transmit and receive transformers
- ◆ Extended and standard temperature range models available
- ◆ Models matched to leading transceiver ICs
- ◆ ET-Constant: All Coils have an ET-Constant of 10V-usec minimum
- ◆ Isolation voltage: 1500Vrms

ELECTRICAL SPECIFICATIONS @25°C

Model No.	Turns Ratio (pri:sec ±2%)	OCL ⁽²⁾ (mH Min)	CW/W ⁽²⁾ (pF Max)	LL ⁽²⁾ (uH Max)	DCR Pri (Ohms Max)	DCR Sec (Ohms Max)	Pcakage/ Schematics		Primary pins
							None- RoHS	RoHS compliant	
Extended Temperature Range Models – Operating Temperature -40°C TO +85°C ⁽¹⁾									
UT23821	1CT:2CT & 1CT:2CT	1.20 & 1.20	50 & 50	0.80 & 0.80	1.00 & 1.00	1.70 & 1.70	SMD1/1E	SMD2/1E	12-10, 4-6
UT23822	1CT:2CT & 1:1.36CT	1.60 & 1.60	60 & 55	1.00 & 0.80	1.70 & 1.70	2.00 & 1.70	SMD1/2E	SMD22E	12-10, 4-6
UT23825	1:1.15CT & 1CT:2CT	1.60 & 1.60	60 & 50	0.80 & 0.80	1.00 & 1.00	1.00 & 2.00	SMD1/4E	SMD24E	12-10, 4-6
UT23826 ⁽⁵⁾	1:1/1.266 & 1:2CT	1.20 & 1.20	50 & 60	0.80 & 0.80	1.00 & 1.00	1.10 & 1.70	SMD1/5E	SMD25E	12-10, 4-6
UT23827 ⁽¹⁾	1:2CT & 2:1	1.60 & 1.60	55 & 40	1.30 & 1.30	1.10 & 1.10	1.10 & 0.70	SMD1/6E	SMD26E	1-3, 4-6
UT23828	1CT:1CT & 1CT:1CT	1.20 & 1.20	50 & 50	0.80 & 0.80	1.00 & 1.00	1.00 & 1.00	SMD1/1E	SMD21E	1-3, 4-6
UT23874	1CT:1.15CT & 1CT:1.15CT	1.20 & 1.20	50 & 50	0.80 & 0.80	1.20 & 1.20	1.40 & 1.40	SMD1/1E	SMD21E	1-3, 4-6
UT23877	1CT:1CT & 1CT:2CT	1.20 & 1.20	50 & 50	0.80 & 0.80	1.00 & 1.00	1.00 & 1.80	SMD1/1E	SMD21E	1-3, 4-6
UT23881	1CT:2.3CT & 1CT:2CT	1.20 & 1.20	60 & 50	0.80 & 0.80	1.20 & 1.20	2.10 & 2.10	SMD1/1E	SMD21E	12-10, 4-6
UT23882	1CT:1.15CT & 1CT:1CT	1.60 & 1.60	60 & 60	0.80 & 0.80	1.20 & 1.20	1.40 & 1.20	SMD1/1E	SMD21E	12-10, 4-6
UT23884	1CT:1.36CT & 1CT:1.36CT	1.20 & 1.20	50 & 50	0.80 & 0.80	1.20 & 1.20	1.40 & 1.40	SMD1/1E	SMD21E	1-3, 4-6
UT23887	1CT:1.41CT & 1CT:1.41CT	1.20 & 1.20	50 & 50	0.80 & 0.80	0.90 & 0.90	1.20 & 1.20	SMD1/1E	SMD21E	12-10, 9-7
Standard Temperature Range Models – Operating Temperature 0°C TO +70°C									
UT23736 ⁽⁵⁾	1:1/1.266 & 1:1/1.266	1.50 & 1.50	45 & 45	0.40 & 0.40	0.80 & 0.80	1.00 & 1.00	SMD1/7E	SMD27E	12-10, 9-7
UT23761	1CT:2CT & 1CT:2CT	1.20 & 1.20	35 & 35	0.60 & 0.60	0.70 & 0.70	1.20 & 1.20	SMD1/1E	SMD21E	12-10, 4-6
UT23762	1CT:2CT & 1:1.36CT	1.20 & 1.20	35 & 37	0.60 & 0.80	0.70 & 0.70	1.20 & 0.90	SMD1/2E	SMD22E	12-10, 4-6
UT23763	1:2CT & 1:1.41CT	1.20 & 1.20	40 & 35	0.55 & 0.80	0.70 & 0.70	1.20 & 0.90	SMD1/5E	SMD25E	12-10, 4-6
UT23764	1CT:2CT & 1:1	1.20 & 1.20	30 & 30	0.55 & 0.80	0.70 & 0.70	1.20 & 0.70	SMD1/3E	SMD23E	1-3, 5-6
UT23765	1:1.15CT & 1CT:2CT	1.50 & 1.20	35 & 35	0.60 & 0.60	0.70 & 0.70	0.90 & 1.20	SMD1/4E	SMD24E	12-10, 4-6
UT23766 ⁽⁵⁾	1:1/1.266 & 1:2CT	1.50 & 1.20	40 & 40	0.40 & 0.50	0.70 & 0.70	0.90 & 1.20	SMD1/5E	SMD25E	12-10, 4-6
UT23769	1CT:2CT & 1:1.08CT	1.20 & 1.20	40 & 30	0.60 & 0.60	0.70 & 0.70	1.10 & 0.90	SMD1/2E	SMD22E	12-10, 4-6

Note: 1. For RoHS compliant products, the Ordering Code: TG-Model No. ex. TG-UT23821



DATA SHEET 01-23 FEB./06
1 OF 15



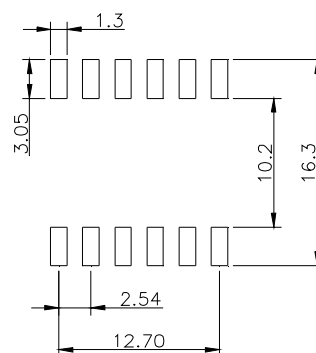
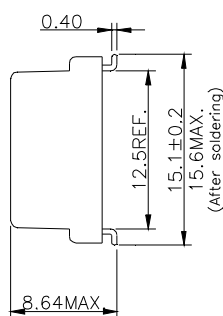
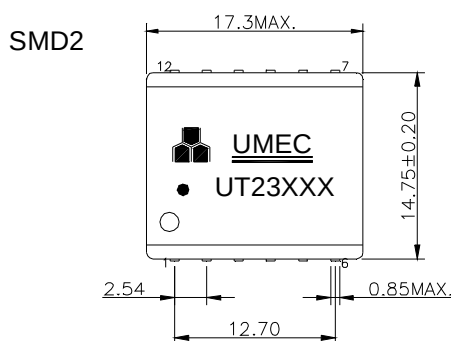
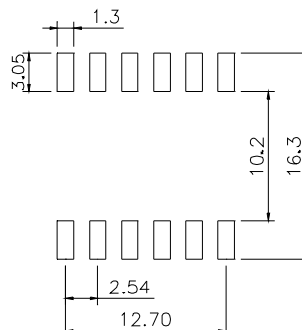
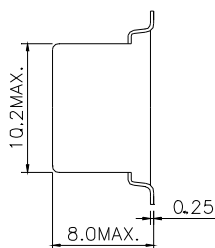
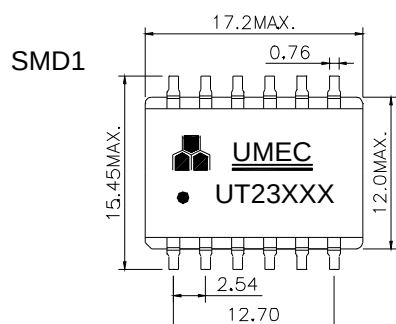
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TAICHUNG,TAIWAN,R.O.C

T1/E1/CEPT/ISDN-PRI Transformers

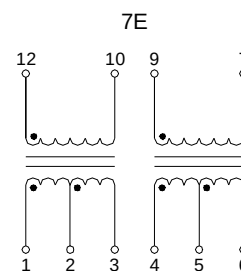
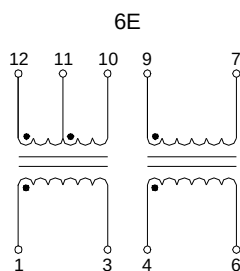
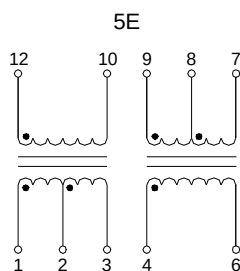
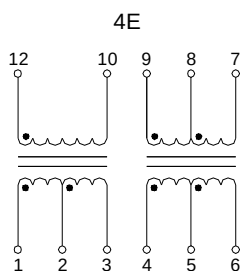
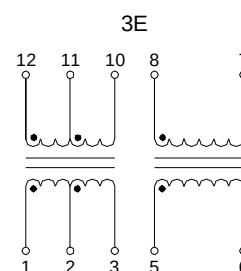
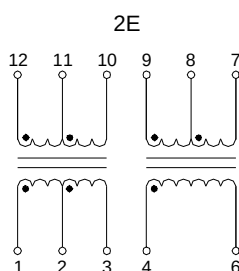
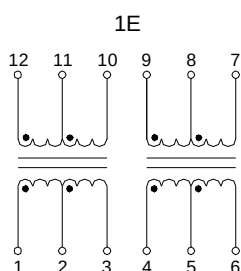
Dual Surface Mount

Mechanicals



Dimensions: mm
Tolerance: ± 0.25 mm
Co-planarity: 0.1mm

Schematics



DATA SHEET 01-23 FEB./06
2 OF 15



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T1/E1/CEPT/ISDN-PRI Transformers

Dual Surface Mount, Small Package

- ◆ Dual SMT package contains both transmit and receive transformers
- ◆ Models matched to leading transceiver ICs
- ◆ Designed to meet ITU-T & FCC requirements
- ◆ Isolation voltage: 1500Vrms

ELECTRICAL SPECIFICATIONS @25°C

Model No.		Turns Ratio (pri:sec ±5%)	OCL ⁽²⁾ (mH Min)	CW/W ⁽²⁾ (pF Max)	LL ⁽²⁾ (uH Max)	DCR Pri (Ohms Max)	DCR Sec (Ohms Max)	Package/ Schematics		Primary pins
STD Temp.	EXT Temp.							None- RoHS	RoHS compliant	
UT23026		1CT:1CT & 1CT:1.36CT	1.20 & 1.20	30 & 30	0.60 & 0.60	0.70 & 0.70	0.70 & 1.00	SO1/A	SO-L/A	16-14, 6-8
UT23061	UT23074	1CT:2.42CT & 1CT:2.42CT	1.20 & 1.20	25 & 25	0.60 & 0.60	0.70 & 0.70	1.20 & 1.20	SO1/A	SO-L /A	1-3, 6-8
UT23065	UT23070	1CT:1CT & 1CT:1.5CT	1.20 & 1.20	30 & 30	0.60 & 0.60	0.70 & 0.70	0.70 & 1.00	SO1/A	SO-L /A	16-14, 6-8
UT23804	UT23071	1CT:1.41CT&1CT:1.41CT	1.20 & 1.20	30 & 30	0.80 & 0.80	0.70 & 0.70	0.90 & 0.90	SO2/A	SO-L /A	16-14, 11-9
UT23805	UT23072	1CT:1.41CT&1CT:1.41CT	1.20 & 1.20	30 & 30	0.80 & 0.80	0.70 & 0.70	0.90 & 0.90	SO2/A	SO-L /A	1-3, 11-9
UT23810		1:1.385CT & 1:1:1	1.20 & 1.20	35 & 35	0.80 & 0.50	0.80 & 0.80	0.80 & 0.80	SO2/E	SO-L /E	1-2, 7-8
UT23811		1CT:2CT & 1:1	1.20 & 1.20	35 & 35	0.80 & 0.50	0.80 & 0.80	1.80 & 0.80	SO2/F	SO-L /F	1-3, 11-9
UT23812		1:2CT & 1:1.36	1.20 & 1.20	35 & 35	0.80 & 0.80	0.80 & 0.80	1.80 & 0.80	SO2/G	SO-L /G	16-14, 6-8
UT23813		1:2CT & 1:2CT	1.20 & 1.20	35 & 35	0.80 & 0.80	0.80 & 0.80	1.80 & 1.80	SO2/H	SO-L /H	16-14, 6-8
UT23816		1:1.15CT & 1:2CT	1.20 & 1.20	35 & 35	0.50 & 0.80	0.80 & 0.80	0.80 & 1.80	SO2/H	SO-L /H	16-14, 6-8
UT23817 ⁽⁵⁾		1:1/1.266 & 1:2CT	1.20 & 1.20	35 & 35	0.80 & 0.80	0.80 & 0.80	0.80 & 1.80	SO2/H	SO-L /H	16-14, 6-8
UT23818		1:1.36CT & 1:2CT	1.50 & 1.50	40 & 40	0.50 & 0.50	0.90 & 0.90	1.30 & 1.30	SO2/H	SO-L /H	16-14, 6-8
-	UT23823	1CT:1CT & 1CT:2.4CT	1.20 & 1.20	30 & 30	0.80 & 0.80	0.85 & 0.85	0.85 & 1.50	SO1/A	SO-L /A	9-11, 1-3
-	UT23073	1CT:1CT & 1CT:1.67CT	1.00 & 1.00	25 & 25	0.80 & 0.80	0.80 & 0.80	0.80 & 1.80	SO1/A	SO-L /A	6-8, 14-16
UT23824		1CT:1CT & 1CT:1.36CT	1.20 & 1.20	30 & 30	0.60 & 0.60	0.70 & 0.70	1.00 & 1.00	SO1/A	SO-L /A	1-3, 6-8
UT23829		1CT:1.5CT & 1CT:1.5CT	1.50 & 1.50	40 & 40	0.80 & 0.80	0.70 & 0.70	0.90 & 0.90	SO1/A	SO1/A	1-3, 6-8
UT23840		1CT:2CT & 1CT:2.3CT	1.20 & 1.20	30 & 30	0.80 & 0.80	0.90 & 0.90	1.30 & 1.30	SO1/A	SO-L /A	6-8, 14-16
UT23841 ⁽⁴⁾		2CT:1/1.26 & 2CT:1/1.26	1.50 & 1.50	40 & 40	0.50 & 0.50	0.70 & 0.70	1.00 & 1.00	SO1/A	SO-L /A	1-3, 11-9
UT23842 ⁽⁴⁾		2CS:1.57/2 & 2CS:1.57/2	1.50 & 1.50	40 & 40	0.50 & 0.50	0.70 & 0.70	1.00 & 1.00	SO1/D	SO-L /D	1-2, 5-6
UT23861	-	1CT:2CT & 1CT:2CT	1.20 & 1.20	30 & 30	0.60 & 0.60	0.70 & 0.70	1.20 & 1.20	SO2/A	SO-L /A	16-14, 6-8
-	UT23022	1CT:2CT & 1CT:2CT	1.20 & 1.20	30 & 30	0.60 & 0.60	0.70 & 0.70	1.40 & 1.40	SO1/A	SO-L /A	16-14, 6-8
UT23862	UT23066	1CT:2CT & 1:1.36CT	1.20 & 1.20	30 & 30	0.60 & 0.60	0.70 & 0.70	1.20 & 0.80	SO2/B	SO-L /B	16-14, 6-8
UT23865	UT23067	1:1.15CT & 1CT:2CT	1.20 & 1.20	30 & 30	0.60 & 0.60	0.70 & 0.70	0.70 & 1.20	SO2/C	SO-L /C	16-14, 6-8
UT23866 ⁽⁵⁾	UT23068 ⁽⁵⁾	1:1/1.266 & 1CT:2CT	1.20 & 1.20	30 & 30	0.60 & 0.60	0.70 & 0.70	0.80 & 1.20	SO2/C	SO-L /C	16-14, 6-8
UT23870	UT23069	1CT:1.15CT & 1CT:1.15CT	1.20 & 1.20	30 & 30	0.60 & 0.60	0.70 & 0.70	1.00 & 1.00	SO2/A	SO-L /A	1-3, 6-8
UT23878	-	1CT:1CT & 1CT:2CT	1.20 & 1.20	30 & 30	0.60 & 0.60	0.70 & 0.70	0.70 & 1.20	SO2/A	SO-L /A	16-14, 6-8
-	UT23062	1CT:1CT & 1CT:2CT	1.20 & 1.20	30 & 30	0.60 & 0.60	0.70 & 0.70	0.70 & 1.00	SO1/A	SO-L /A	16-14, 6-8

Note: 1. Standard(STD) operating temperature range is 0°C to +70°C. Extended(EXT) operating temperature range is -40°C to +85°C.

2. For RoHS compliant products, the Ordering Code: TG-Model No. ex. TG-UT23026.



DATA SHEET 01-23 FEB./06
3 OF 15



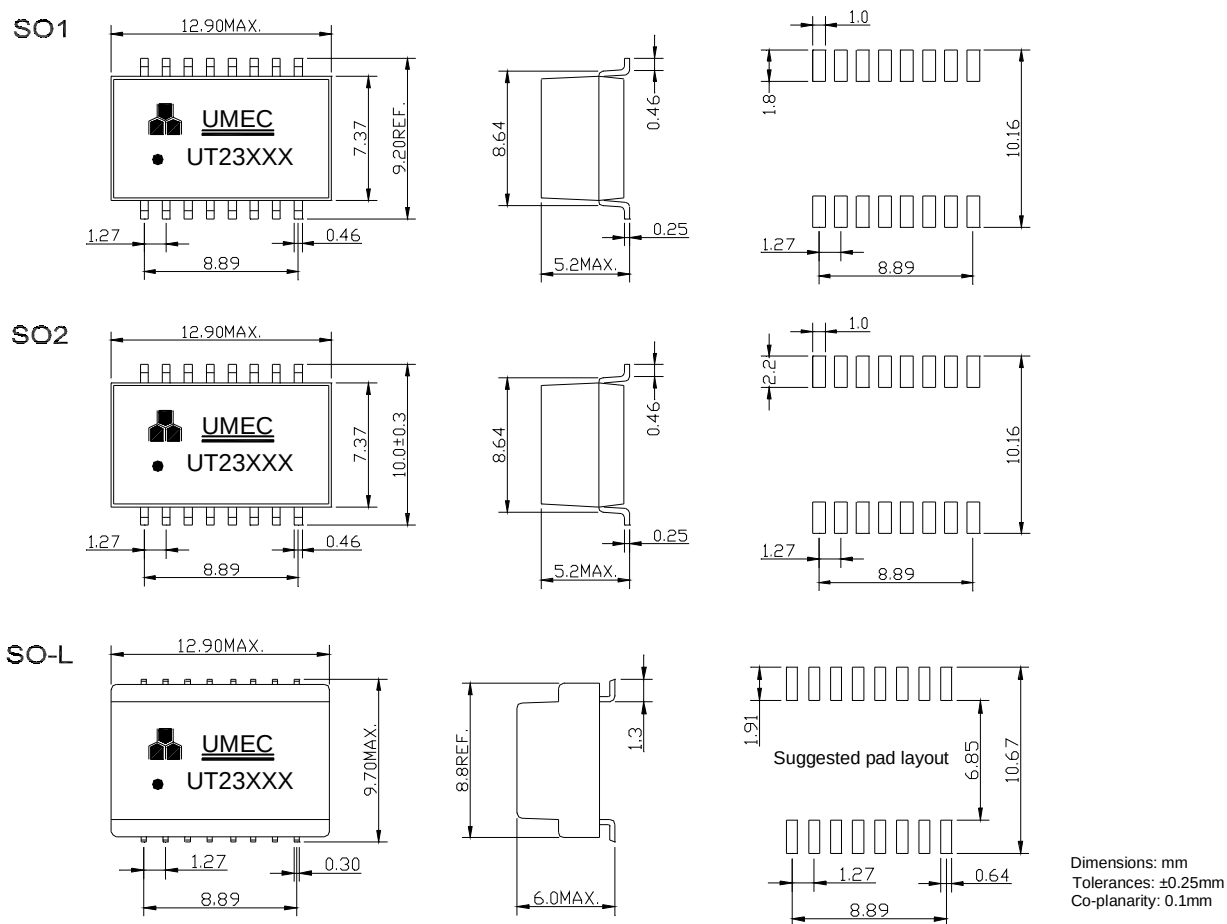
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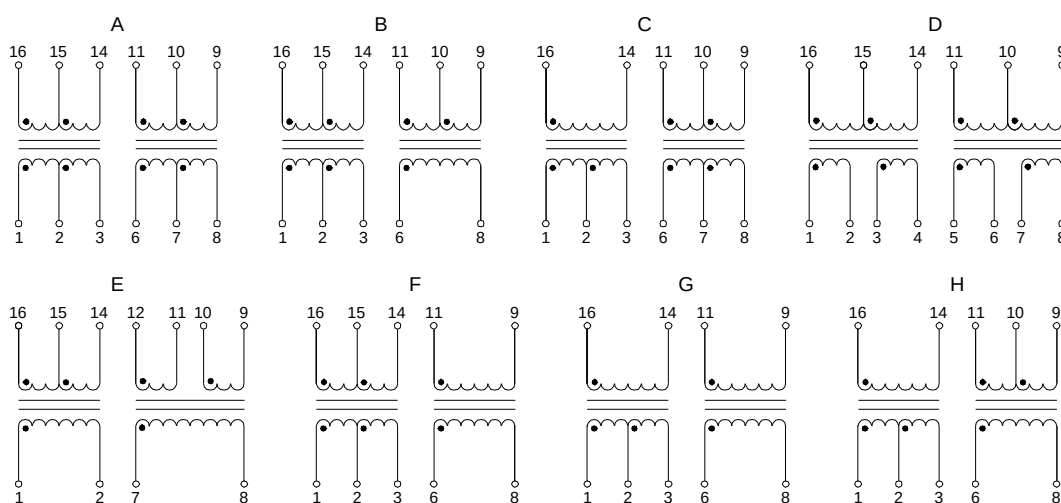
T1/E1/CEPT/ISDN-PRI Transformers

Dual Surface Mount, Small Package

Mechanicals



Schematics



DATA SHEET 01-23 FEB./06
4 OF 15



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3,27TH RD.,TAICHUNG INDUSTRIAL PARK,
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T1/E1/CEPT/ISDN-PRI Transformers

Single Through Hole

- ◆ Extended and standard temperature range models available
- ◆ Models matched to leading transceiver ICs
- ◆ ET-Constant: All Coils have an ET-Constant of 10V-usec minimum
- ◆ Isolation voltage: 1500Vrms

ELECTRICAL SPECIFICATIONS @25°C

Model No.	Turns Ratio (pri:sec ±5%)	OCL ⁽²⁾ (mH Min)	Cw/w ⁽²⁾ (pF Max)	LL ⁽²⁾ (uH Max)	DCR Pri (Ohms Max)	DCR Sec (Ohms Max)	Schem.	Primary pins
Standard Temperature Range Models – Operating Temperature 0°C TO +70°C								
UT23931	1:1.1(1:2CS)	1.20	25	0.50	0.70	0.70 & 0.70	2S	1-2
UT23932	1:1:1	2.00	40	0.5	0.70	0.70	2S	1-2
UT23933	1CT:3CT	1.20	30	0.50	0.70	1.60	4S	1-5
UT23934	1:1	1.20	25	0.50	0.70	0.70	1S	1-2
UT23935	1:1CT	0.06	23	0.75	0.60	0.60	3S	2-6
UT23936	1CT:1	1.20	25	0.80	0.70	0.70	3S	1-5
UT23937	1:1.36	1.20	35	0.80	0.70	0.80	1S	5-6
UT23938	1:1.26CT	0.06	23	0.75	0.60	0.60	3S	2-6
UT23940	1.26CS:1(1:1:1.58)	0.30	30	0.60	0.80	0.60	2S	1-4(2,3 sh.)
UT23941	1CS:1	0.80	30	0.60	0.80	0.60	2S	1-4(2,3 sh.)
UT23942	1CS:1.31(1:1:2.62)	0.80	30	0.40	0.80	0.60	2S	1-4(2,3 sh.)
UT23943	1CT:2CT	1.20	30	0.55	0.70	1.20	4S	1-5
UT23945	2.53CT:1	2.00	20	1.50	1.00	0.50	3S	1-5
UT23351	1:2CT	1.20	40	0.50	0.70	1.10	3S	2-6
UT23352	1:2CT	2.00	40	0.50	0.70	1.40	3S	2-6
UT23363	1:4CT	0.50	40	1.00	0.50	1.50	5S	1-5
UT23379	1:1.14CT	1.20	35	0.80	0.70	0.80	5S	1-5
UT23388	1:1.15CT	1.50	35	0.60	0.70	0.90	3S	2-6
UT23389 ⁽⁵⁾	1:1/1.266	1.50	35	0.40	0.70	0.90	3S	2-6
UT23403	1:1.266CT	1.50	18	0.80	0.80	0.92	3S	2-6
UT23415	1CT:2CT	1.20	30	0.55	0.70	1.20	4S	1-5
UT23558	1:2.3CT	1.20	35	0.80	0.70	1.20	5S	1-5
UT23586	1:1.36CT	1.20	35	0.80	0.70	0.90	5S	1-5
UT23755	1CT:1CT	1.20	25	0.80	0.80	0.80	4S	1-5
UT23644	1CT:1	0.70	20	0.70	0.20	0.80	3S	1-5
UT23645	1:1.36CT	0.70	20	0.70	0.50	0.40	5S	1-5
Extended Temperature Range Models – Operating Temperature -40°C TO +85°C ⁽⁴⁾								
UT23647	1:1.5CT	1.20	30	0.60	0.70	1.00	3S	2-6
UT23340	1:1.36	1.20	35	0.80	0.90	1.20	1S	5-6
UT23770	1:1.15CT	1.50	40	0.80	0.90	1.00	3S	2-6
UT23771	1CT:2CT	1.20	45	0.60	1.00	2.00	4S	2-6
UT23778	1CT:1CT	1.20	50	1.10	1.00	1.00	4S	1-5
UT23600	1CT:3CT	1.20	60	0.80	0.90	2.70	4S	1-5
UT23664 ⁽⁵⁾	1:1/1.266	1.50	50	0.80	0.90	1.10	3S	2-6

Note: 1. For RoHS compliant products, the Ordering Code: TG-Model No. ex. TG-UT23931



DATA SHEET 01-23 FEB./06
5 OF 15



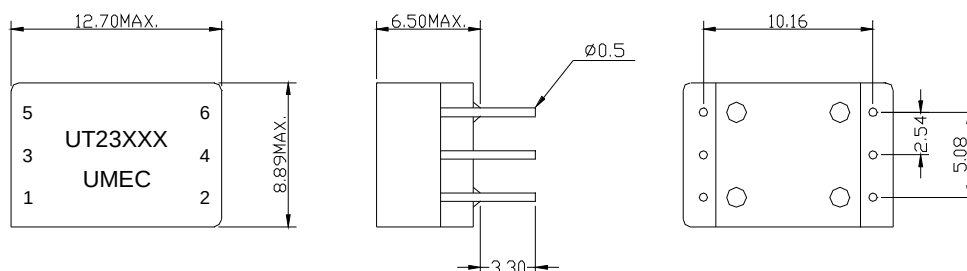
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T1/E1/CEPT/ISDN-PRI Transformers

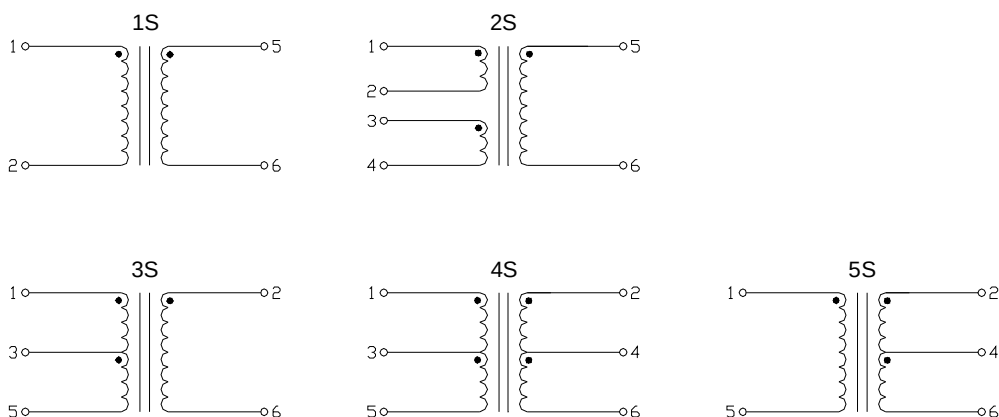
Single through hole

Mechanicals



Dimensions: mm
Tolerances: ± 0.25 mm
Unused pins not provided

Schematics



DATA SHEET 01-23 FEB./06
6 OF 15



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T1/E1/CEPT/ISDN-PRI Transformers

Dual Through Hole

- ◆Dual package contains both transmit and receive transformers
- ◆Extended and Standard Temperature Range Models Available
- ◆Models matched to leading transceiver ICs
- ◆ET-Constant: All Coils have an ET-Constant of 10 V-usec minimum
- ◆Isolation voltage: 1500Vrms

ELECTRICAL SPECIFICATIONS @25°C

Model No.	Turns Ratio (pri:sec ±5%)	OCL ⁽²⁾ (mH Min)	C _{w/w} ⁽²⁾ (pF Max)	LL ⁽²⁾ (uH Max)	DCR Pri (Ohms Max)	DCR Sec (Ohms Max)	Schem.	Primary pins
Standard Temperature Range Models – Operating Temperature 0°C TO +70°C								
UT23951	1:2CT & 1:2CT	1.20 & 1.20	35 & 35	0.50 & 0.50	0.70 & 0.70	1.20 & 1.20	1D	14-12 ,5-7
UT23952	1:2CT & 1:1.36	1.20 & 1.20	35 & 35	0.50 & 0.80	0.80 & 0.80	1.20 & 1.00	2D	14-12 ,5-7
UT23953	1:2CT & 1:2CT	2.00 & 2.00	50 & 50	0.60 & 0.60	0.70 & 0.70	1.20 & 1.20	3D	14-12,10-8
UT23954	1CT:2CT & 1:1	1.20 & 1.20	30 & 30	0.55 & 0.80	0.70 & 0.70	1.20 & 0.70	4D	1-3 ,5-7
UT23955	1:1.26CT & 1.58:1	0.80 & 0.80	30 & 30	0.50 & 0.50	0.60 & 0.60	0.70 & 0.30	5D	1-3 ,5-7
UT23956	1:1CT & 2:1	0.80 & 0.80	30 & 30	0.60 & 0.60	0.50 & 0.50	0.50 & 0.20	5D	1-3 ,5-7
UT23957	1:1.31CT & 2.62:1	1.20 & 1.20	30 & 30	0.80 & 0.80	0.60 & 0.60	0.50 & 0.30	5D	1-3 ,5-7
UT23958	1:1 & 1CT:1	1.20 & 1.20	30 & 30	0.60 & 0.80	0.70 & 0.70	0.70 & 0.70	5D	5-7 ,14-12
UT23959	1:1CT & 2.53CT:1	0.06 & 2.00	23 & 25	0.75 & 1.50	0.60 & 1.00	0.60 & 0.70	3D	10-8 ,1-3
UT23960	1:1CT & 2CT:1	0.06 & 1.20	25 & 30	0.75 & 0.80	0.60 & 0.70	0.60 & 0.70	3D	10-8 ,1-3
UT23565	1:1.15CT & 1:2CT	1.50 & 1.20	35 & 40	0.60 & 0.50	0.70 & 0.70	1.10 & 1.30	1D	14-12 ,5-7
UT23566 ⁽⁵⁾	1:1/1.266 & 1:2CT	1.50 & 1.20	40 & 40	0.50 & 0.40	0.70 & 0.70	0.90 & 1.30	1D	14-12 ,5-7
Extended Temperature Range Models – Operating Temperature -40°C TO +85°C ⁽¹⁾								
UT23567	1:1.15CT & 1:2CT	1.50 & 1.20	40 & 60	0.80 & 0.80	0.9 & 0.90	1.00 & 1.70	1D	14-12,5-7
UT23568 ⁽⁵⁾	1:1/1.266 & 1:2CT	1.50 & 1.20	50 & 60	0.80 & 0.80	0.9 & 0.90	1.00 & 1.70	1D	14-12,5-7
UT23774	1CT:2CT & 1:1.36CT	1.20 & 1.20	50 & 50	0.96 & 0.80	1.00 & 1.00	1.70 & 1.20	6D	14-12,5-7
UT23618 ⁽⁶⁾	1CT:1CT&3CT:1CT:0.25	1.20 & 32.0	40 & 65	0.80 & 0.80	1.00 & 3.00	1.00 & 1.200	7D	1-3 ,11-9
UT23950 ⁽⁶⁾	1CT:1CT & 1CT:3CT:1	1.20 & 0.60	40 & 40	0.80 & 0.80	1.00 & 0.80	1.00 & 2.00	7D	1-3 ,4-6

Note: 1. For RoHS compliant products, the Ordering Code: TG-Model No. ex. TG-UT23951

Green Product



DATA SHEET 01-23 FEB./06
7 OF 15



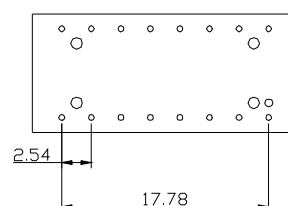
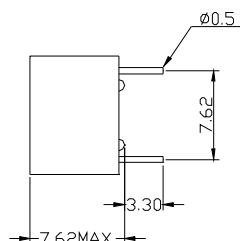
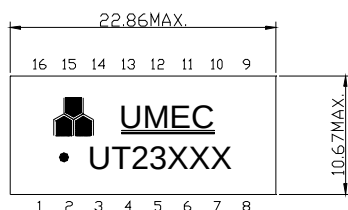
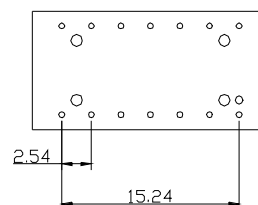
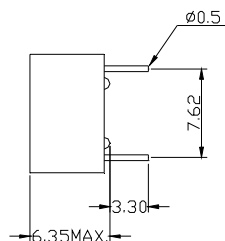
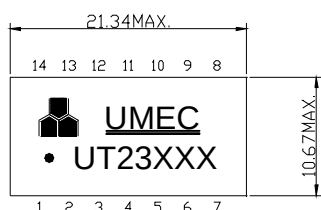
UNIVERSAL MICROELECTRONICS CO.,LTD.
TEL:886-4-23590096 FAX:886-4-23590129

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

T1/E1/CEPT/ISDN-PRI Transformers

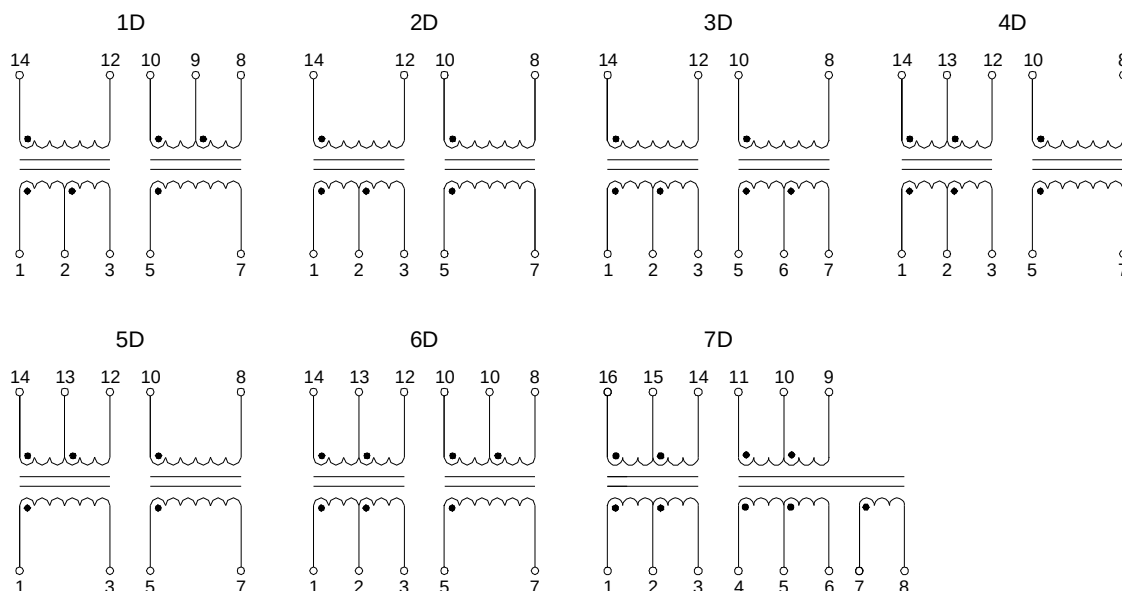
Dual Through Hole

Mechanicals



Dimensions: mm
Tolerances: ± 0.25 mm
Unused pins not provided

Schematics



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DATA SHEET 01-23 FEB./06
8 OF 15

T1/E1/CEPT/ISDN-PRI Transformers

Single Reinforced Insulation

- ◆ Designed to meet for reinforced insulation per EN 60950 and UL 1950
- ◆ Models matched to leading transceiver ICs
- ◆ Designed to meet ITU-T G.703
- ◆ Isolation voltage: 3000Vrms

ELECTRICAL SPECIFICATIONS @25°C

Model No.	Turns Ratio (pri:sec ±5%)	OCL ⁽²⁾ (mH Min)	C _{w/w} ⁽²⁾ (pF Max)	LL ⁽²⁾ (uH Max)	DCR Pri (Ohms Max)	DCR Sec (Ohms Max)	Schem.	Primary pins
UT20788	1CT:1.41CT	1.20	20	0.80	0.60	0.80	1S	10-6
UT23830	1.27CS:1	0.80	15	0.70	0.50	0.35	3S	1-5
UT23831	1CS:1	0.80	15	0.70	0.50	0.45	3S	1-5
UT23832	1:1.36CT	1.20	35	0.60	0.70	0.90	4S	10-6
UT23833	1CT:2CT	1.20	20	0.55	0.50	0.90	1S	1-5
UT23834	1:1	1.20	20	0.50	0.50	0.50	2S	1-5
UT23835	1CT:2CT	1.20	15	0.80	0.70	1.10	1S	1-5
UT23836 ⁽¹⁾	1CT:3CT:1	0.60	30	0.80	0.70	1.70	5S	1-3
UT23837 ⁽⁵⁾	1:1.08/1.36	1.50	20	0.60	0.70	0.90	4S	10-6
UT23838	1:1.14CT	1.50	30	1.0	0.70	0.90	4S	10-6
UT23839 ⁽⁵⁾	1:1/1.266	1.50	35	0.60	0.70	1.10	4S	10-6
UT23646 ⁽⁵⁾	1:1.58/2	1.50	20	0.70	0.70	1.20	4S	10-6

Note: 1. For RoHS compliant products, the Ordering Code: TG-Model No. ex. TG-UT20788



DATA SHEET 01-23 FEB./06
9 OF 15



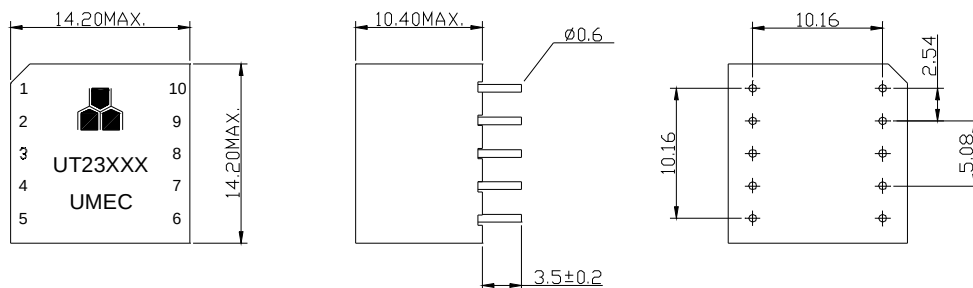
UNIVERSAL MICROELECTRONICS CO.,LTD.
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3,27TH RD.,TAICHUNG INDUSTRIAL PARK,
TAICHUNG,TAIWAN,R.O.C

T1/E1/CEPT/ISDN-PRI Transformers

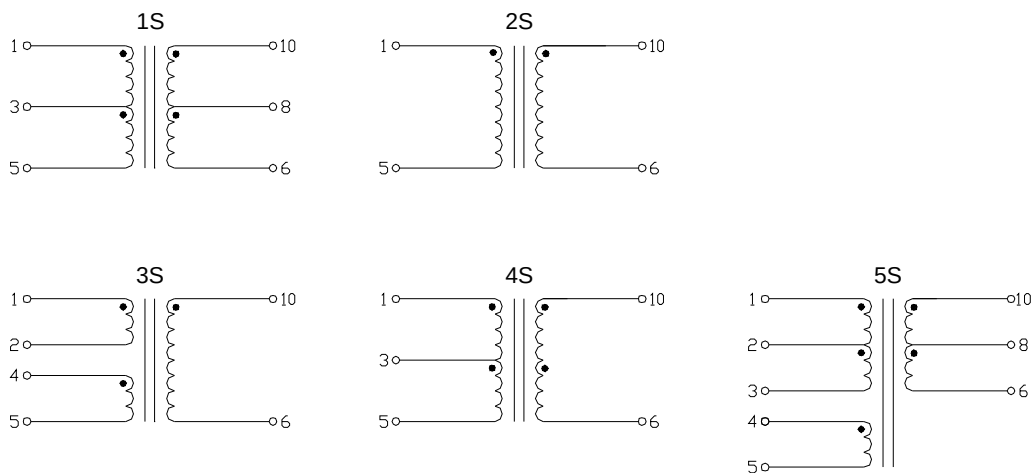
Single Reinforced Insulation

Mechanicals



Dimensions: mm
Tolerances: ± 0.25 mm
Unused pins not provided

Schematics



DATA SHEET 01-23 FEB./06
10 OF 15



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

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

T1/E1/CEPT/ISDN-PRI Transformers

Quad Port T1/E1 with 8 Transformers

- ◆Quad package contains 4 transmit and 4 receive channels
- ◆Extended and standard temperature range models available
- ◆Models matched to leading quad T1/E1/CEPT/ISDN-PRI transceiver ICs
- ◆Isolation voltage: 1500Vrms

ELECTRICAL SPECIFICATIONS @25°C

MModel No.		Turns Ratio (pri:sec ±2%)		OCL ⁽²⁾ (mH Min)		Cww ⁽²⁾ (pF Max)	LL ⁽²⁾ (uH Max)		Schem.	Primary pins	
STD Temp.	EXT Temp.	Transmit	Receive	Transmit	Receive	Transmit / Receive	Transmit	Receive		Transmit	Receive
UT23023	UT23058	1:2CT	1CT:2	1.2	1.2	35	0.6	0.6	3Q	4-5,9-10,14-15,19-20	1-3,6-8,11-13,16-18
UT23024	UT23027	1:2.4	1:1	1.0	1.0	35	0.5	0.5	6Q	1-2,8-9,11-12,18-19	24-25,27-28,34-35,37-38
UT23025	UT23053	1CT:1.41	1CT:1.41	1.2	1.2	35	0.6	0.6	3Q	1-3,6-8,11-13,16-18	21-23,26-28,31-33,36-38
UT23028	UT23050	1:2CT	1:2CT	1.2	1.2	35	0.8	0.8	3Q	4-5,9-10,14-15,19-20	24-25,29-30,34-35,39-40
UT23032	UT23048	1:1.36	1:1.36CT	1.2	1.2	35	0.6	0.6	1Q	1-2,6-7,11-12,16-17	21-23,26-28,31-33,36-38
UT23033	UT23049	1:1.14	1:1.14CT	1.2	1.2	35	0.6	0.6	1Q	1-2,6-7,11-12,16-17	21-23,26-28,31-33,36-38
UT23034	UT23051	1:2	1:2CT	1.2	1.2	35	0.6	0.6	4Q	1-2,9-10,11-12,19-20	23-25,26-28,33-35,36-38
UT23035	UT23052	1:1.36CT	1:2CT	1.2	1.2	35	0.6	0.6	3Q	24-25,29-30,34-35,39-40	4-5,9-10,14-15,19-20
UT23036	UT23031	1:2CT	1:1CT	1.2	1.2	35	0.6	0.6	2Q	1-2,6-7,11-12,16-17	21-22,26-27,31-32,36-37
UT23037	UT23054	1:1.15	1:2CT	1.2	1.2	35	0.6	0.6	1Q	1-2,6-7,11-12,16-17	21-23,26-28,31-33,36-38
UT23038 ⁽⁵⁾	UT23055 ⁽⁵⁾	1:1/1.266	1:2CT	1.2	1.2	35	0.6	0.6	2Q	1-2,6-7,11-12,16-17	21-22,26-27,31-32,36-37
UT23039	UT23056	1:1.15	1:1.15	1.2	1.2	35	0.6	0.6	5Q	1-3,6-8,11-13,16-18	4-5,9-10,14-15,19-20
UT23040	UT23057	1:2	1:2	1.2	1.2	35	0.6	0.6	5Q	1-3,6-8,11-13,16-18	4-5,9-10,14-15,19-20
UT23041	-	1:1.08	1:1.08CT	1.2	1.2	35	0.4	0.5	1Q	1-2,6-7,11-12,16-17	21-23,26-28,31-33,36-38
UT23042	-	1:1.70	1:1.36CT	1.2	1.2	35	0.8	0.6	1Q	1-2,6-7,11-12,16-17	21-23,26-28,31-33,36-38
UT23043	-	1:1.36CT	1:1CT	1.2	1.2	35	0.6	0.6	3Q	24-25,29-30,34-35,39-40	4-5,9-10,14-15,19-20
UT23044 ⁽⁵⁾	-	1:2/2.4	1:0.79/1	1.0	1.0	35	1.0	1.0	7Q	1-2,9-10,11-12,19-20	24-25,26-27,34-35,36-37
UT23045	-	1:2.42	1:2.42	1.2	1.2	35	0.6	0.6	5Q	1-3,6-8,11-13,16-18	4-5,9-10,14-15,19-20
UT23046	-	1:2.1CT	1:2.1CT	1.2	0.6	35	0.6	0.6	2Q	1-2,6-7,11-12,16-17	21-22,26-27,31-32,36-37
UT23047	-	1:2.45CT	1:2.45CT	1.2	0.6	35	0.6	0.6	2Q	1-2,6-7,11-12,16-17	21-22,26-27,31-32,36-37
-	UT23059	1:1.5	1.41:1	1.0	1.0	35	0.5	0.5	6Q	1-2,8-9,11-12,18-19	24-25,27-28,34-35,37-38

Note: 1. Standard(STD) operating temperature range is 0°C to +70°C. Extended(EXT) operating temperature range is -40°C to +85°C.

2. For RoHS compliant products, the Ordering Code: TG-Model No. ex. TG-UT23023



DATA SHEET 01-23 FEB./06
11 OF 15



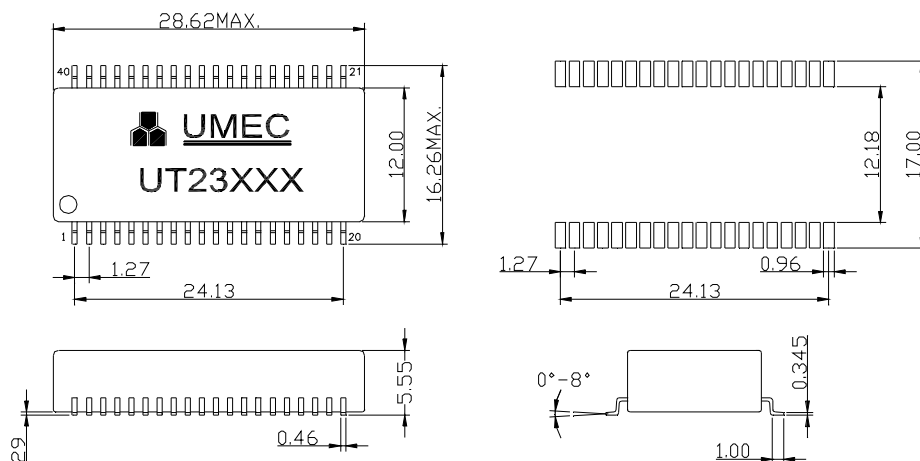
UNIVERSAL MICROELECTRONICS CO.,LTD.
TEL:886-4-23590096 FAX:886-4-23590129

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

T1/E1/CEPT/ISDN-PRI Transformers

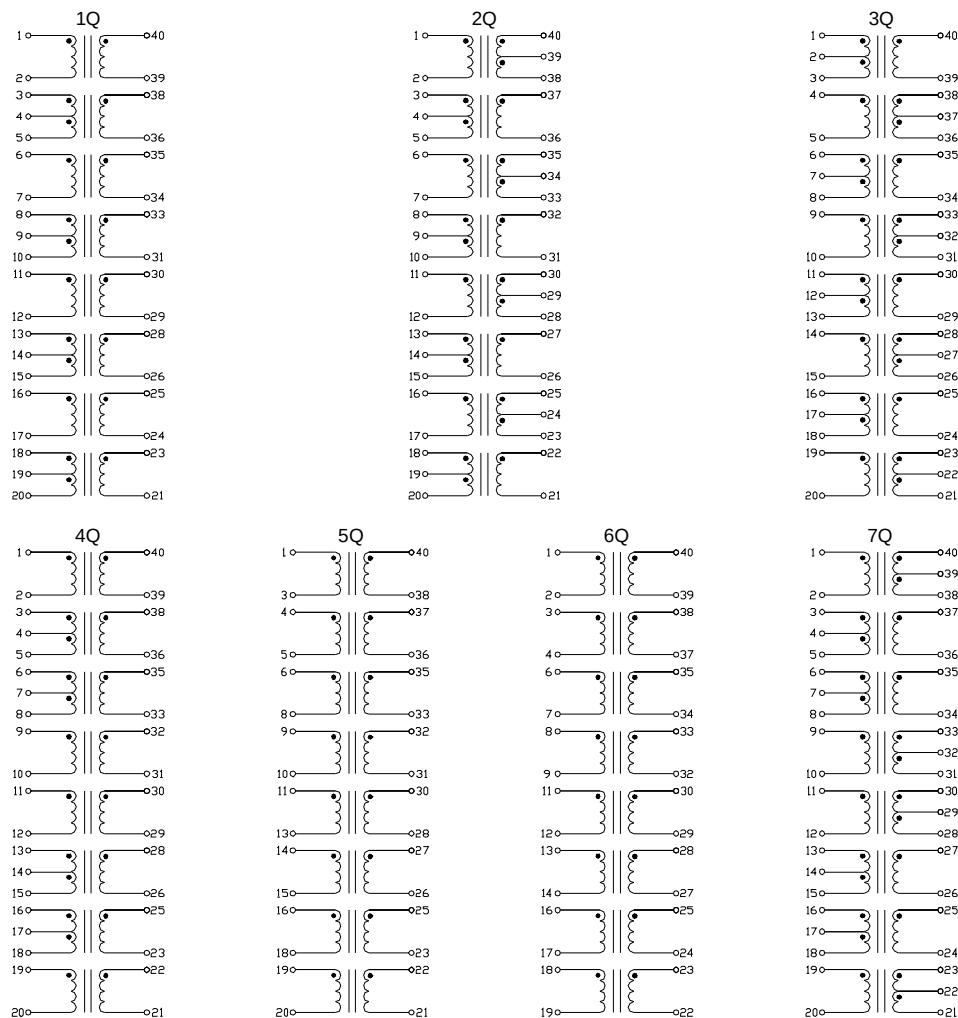
Quad Port T1/E1 with 8 Transformers

Mechanicals



Dimensions: mm
Tolerance: ± 0.254 mm
Co-planarity: 0.1mm

Schematics:



DATA SHEET 01-23 FEB./06
12 OF 15



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3,27TH RD.,TAICHUNG INDUSTRIAL PARK,
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Transformer Selection Guide

IC Manufacturer IC Part Number	Comments	Dual SMT		Dual SMT		Single Through Hole				Dual Through Hole		Reinforced 3.0KVrms Single Through Hole		
		Std Temp	Ext Temp	Std Temp	Ext Temp	Std Temp		Ext Temp		Std Temp	Ext Temp	TX	RX	
		TX & RX	TX & RX	TX & RX	TX & RX	TX	RX	TX	RX	TX & RX	TX & RX			
Conexant(Rockwell) BT8510 BT8510 BT8370/5/6 BT8370/5/6	T1/E1 T1/E1 BETTER RL LOW POWER	UT23866 UT23841 UT23026 UT23865	UT23068 UT23067	UT23766 UT23765	UT23826 UT23826 UT23822 UT23825	UT23389 UT23389 UT23937 UT23388	UT23351 UT23351 UT23936 UT23936	UT23664 UT23664 UT23340 UT23770	UT23771 UT23771 UT23771 UT23771	UT23566 UT23566 UT23952 UT23565	UT23568 UT23568 UT23774 UT23567	UT23839 UT23839 UT23832 UT23838	UT23835 UT23835 UT23834 UT23834	
Cirrus Logic(Crystal) 61318 61318 61577 61304A/05A/535A/74A/75/58A 61304A/05A/535A/74A/75/58A 61304A/05A/535A/74A/75/58A 61582, 61583 61310, 61581 61310, 61581 61881 61584/84A 61582/83A/84	120 E1 75 E1 T1&E1 T1 75 E1 120 E1 - - HOST - IQ3 IQ5	UT23878 UT23861 UT23866 UT23866 UT23870 UT23878 UT23065 UT23865 UT23861 UT23870	UT23062 UT23022 UT23067 UT23068 UT23068 UT23069 UT23062 UT23070 UT23067 UT23022 UT23069	UT23877 UT23821 UT23765 UT23766 UT23766 UT23874 UT23877 UT23765 UT23761 UT23874	UT23877 UT23821 UT23825 UT23826 UT23826 UT23877 UT23825 UT23821 UT23874	UT23351 UT23648 UT23351 UT23388 UT23389 UT23389 UT23388 UT23351 UT23351 UT23388 UT23351 UT23388	UT23936 UT23936 UT23351 UT23351 UT23351 UT23351 UT23936 UT23351 UT23351 UT23351 UT23936 UT23936	UT23771 UT23648 UT23771 UT23771 UT23770 UT23664 UT23664 UT23770 UT23771 UT23771 UT23771 UT23771 UT23770	UT23778 UT23778 UT23771 UT23771 UT23771 UT23664 UT23664 UT23770 UT23778 UT23771 UT23771 UT23771	UT23951 UT23951 UT23565 UT23566 UT23566 UT23951 UT23951 UT23565 UT23951 UT23951	UT23568 UT23567 UT23568 UT23568 UT23568 UT23951 UT23951 UT23567 UT23567 UT23567	UT23835 UT23646 UT23835 UT23835 UT23838 UT23839 UT23839 UT23838 UT23835 UT23835 UT23838 UT23835 UT23835 UT23838 UT23835 UT23838	UT23835 UT23835 UT23835 UT23835 UT23835 UT23839 UT23839 UT23838 UT23835 UT23835 UT23838 UT23835 UT23835 UT23838 UT23835 UT23838	
Maxim(Dallas) DS2186/87 DS2186/87 DS2151/2152/2153/2154 DS2151/2152/2153/2154 DS2148/Q48 DS2148/Q48 DS21352/Q352, DS21354/Q354 DS21552/Q552, DS21554/Q554 DS21552/Q552, DS21554/Q554	- - - - 3V 5V - - -	UT23865 UT23824 UT23865 UT23824 UT23878 UT23824 UT23878 UT23865 UT23865 UT23824	UT23067 UT23067 UT23062 UT23062 UT23067 UT23067	UT23765 UT23762 UT23765 UT23762 UT23877 UT23762 UT23877 UT23765 UT23765 UT23762	UT23825 UT23822 UT23825 UT23825 UT23877 UT23822 UT23877 UT23825 UT23825 UT23822	UT23388 UT23586 UT23388 UT23388 UT23586 UT23586 UT23586 UT23388 UT23388 UT23586	UT23936 UT23636 UT23936 UT23936 UT23936 UT23936 UT23936 UT23936 UT23936 UT23936	UT23770 UT23340 UT23770 UT23770 UT23771 UT23340 UT23771 UT23340 UT23771 UT23340	UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778	UT23565 UT23952 UT23565 UT23952 UT23951 UT23952 UT23951 UT23565 UT23951 UT23952	UT23567 UT23774 UT23567 UT23774 UT23568 UT23774 UT23568 UT23774 UT23567 UT23774	UT23838 UT23832 UT23838 UT23834 UT23838 UT23832 UT23838 UT23832 UT23838 UT23832	UT23834 UT23834 UT23834 UT23834 UT23838 UT23834 UT23838 UT23834 UT23838 UT23834	
Exar T5683A, 59L91 T5894, T5897, T5997 T5791/93/94/95 T5684 T7288	- - - - CEPT1	UT23861 UT23861 UT23866 UT23862 UT23862	UT23022 UT23022 UT23068 UT23066 UT23066	UT23761 UT23761 UT23766 UT23762 UT23762	UT23821 UT23821 UT23826 UT23822 UT23822	UT23415 UT23415 UT23934 UT23937 UT23937	UT23415 UT23415 UT23934 UT23415 UT23351	UT23771 UT23771 UT23664 UT23340 UT23340	UT23771 UT23771 UT23778 UT23771 UT23771	UT23951 UT23951 UT23566 UT23952 UT23952		UT23835 UT23835 UT23839 UT23832 UT23837	UT23835 UT23835 UT23834 UT23835 UT23835	
GW Telecom Technology GW7600/7620	T1/E1	UT23861	UT23022	UT23761	UT23821	UT23351	UT23351	UT23771	UT23771	UT23951		UT23835	UT23835	
Infinion Technologies(Siemens) PEB 2254/55 PEB 2254/55 PEB 22504 PEB 22504 PEB 22554 PEB 22556/3.3V	E1/T1/J1 E1/T1/J1 3.3V 5V 3.3V E1/T1/J1	UT23804 UT23805 UT23823 UT23823	UT23071 UT23072 UT23823 UT23823	UT23887 UT23887 	UT23887 UT23887 							UT20788 UT20788 	UT20788 UT20788 	
Level One(Intel) LXT 300/301 LXT 304/305/307 LXT 304/305/307 LXT 304/305/307 LXT 304/305/307 LXT 304/305/307 LXT 310/311 LXT 312/313/315 LXT 317/318/19 LXT 331 LXT 331/332 LXT 331/332 LXT 331/332 LXT 334/335 LXT 334/335 LXT 334/335 LXT 350/361 LXT 351/359/361 LXT 351/360 LXT 380/381/384/386/388 LXT 380/381/384/386/388	- T1/E1 T1 75/120 E1 DSX-1, D4 - - - T1/E1 - - - T1/E1 - - T1/E1 120/75 E1 75E1 T1 T1/E1 120 E1 T1/E1 T1/E1 T1/E1	UT23861 UT23861 UT23865 UT23866 UT23840 UT23878 - UT23878 UT23861 UT23840 UT23865 UT23861 UT23862 UT23866 UT23866 UT23065 UT23878 UT23840 UT23878 UT23861 UT23878 UT23861	UT23022 UT23022 UT23067 UT23068 UT23062 UT23022 UT23062 UT23066 UT23066 UT23070 UT23062 UT23062 UT23066 UT23066 UT23070 UT23062 UT23062 UT23022	UT23761 UT23761 UT23765 UT23766 UT23881 UT23877 UT23877 UT23761 UT23840 UT23765 UT23761 UT23862 UT23766 UT23766 UT23882 UT23877 UT23840 UT23878 UT23877 UT23761	UT23821 UT23821 UT23825 UT23826 UT23881 UT23877 UT23877 UT23821 UT23881 UT23825 UT23881 UT23825 UT23821 UT23826 UT23826 UT23826 UT23882 UT23877 UT23881 UT23877 UT23821	UT23351 UT23351 UT23388 UT23389 UT23558 UT23351 UT23933 UT23936 UT23351 UT23936 UT23351 UT23558 UT23351 UT23351 UT23351 UT23351 UT23351 UT23351 UT23351 UT23351 UT23351 UT23351	UT23771 UT23771 UT23770 UT23664 UT23771 UT23771 UT23771 UT23771 UT23771 UT23771 UT23771 UT23771 UT23771 UT23771 UT23771 UT23771 UT23771 UT23771 UT23771 UT23771 UT23771	UT23771 UT23771 UT23771 UT23771 UT23771 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778 UT23778	UT23951 UT23951 UT23565 UT23566 UT23566 UT23951 UT23954 UT23954 UT23951 UT23951 UT23951 UT23951 UT23951 UT23951 UT23951 UT23951 UT23951 UT23951 UT23951 UT23951		UT23835 UT23835 UT23838 UT23835 UT23839 UT23835 UT23835 UT23835 UT23835 UT23835 UT23835 UT23835 UT23835 UT23835 UT23835 UT23835 UT23835 UT23835 UT23835 UT23835 UT23835	UT23835 UT23835 UT23835 UT23835 UT23835 UT23834 UT23834 UT23834 UT23834 UT23834 UT23834 UT23834 UT23834 UT23834 UT23834 UT23834 UT23834 UT23834 UT23834 UT23834 UT23834		
Agere(Lucent) T7288, T7290A T7289A T7688, T7690, T7698 T7688, T7690, T7698 T7693 TLIU4C1 TLIU4C1	CEPT DS1 CEPT DS1 CEPT DS1 CEPT	UT23862 UT23865 UT23870 UT23061 UT23870	UT23066 UT23067 UT23069 UT23074 UT23069	UT23762 UT23765 UT23884 UT23874 UT23884	UT23822 UT23825 UT23884 UT23874 UT23884	UT23586 UT23379 UT23586 UT23379 UT23586	UT23415 UT23379 UT23586 UT23379 UT23586	UT23340 UT23770 UT23340 UT23770 UT23770	UT23771 UT23771 UT23340 UT23770 UT23770	UT23952 UT23565 UT23954 UT23954 UT23954	UT23774 UT23567 UT23774 UT23778 UT23340	UT23832 UT23838 UT23832 UT23838 UT23838 UT23838 UT23838	UT23835 UT23835 UT23832 UT23838 UT23838 UT23838 UT23832	
Zarlink(Mitel) MT9071, MT9076 MT9071, MT9076 MT9074, MT9075	- - -	UT23061	UT23074				UT23351	UT23934	UT23771	UT23778	UT23954	UT23568	UT23835	UT23834
PMC-Sierra PM4341/6341/4314 PM4351/4354	- COMET	UT23862 UT23061	UT23066 UT23074	UT23762	UT23822	UT23937	UT23351	UT23340	UT23771	UT23952	UT23774	UT23832	UT23835	
VLSI VP14Q574 VP14Q574	T1 E1	UT23865 UT23866	UT23067 UT23068	UT23765 UT23766	UT23825 UT23826	UT23388 UT23388	UT23351 UT23351	UT23770 UT23664	UT23771 UT23771	UT23565 UT23566	UT23567 UT23568	UT23839	UT23835	UT23835

DATA SHEET 01-23 FEB./06

13 OF 15



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TEL:886-4-23590096 FAX:886-4-23590129

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

T1/E1/CEPT/ISDN-PRI Transformers

Quad Port T1/E1 with 8 Transformers

Transformer Selection Guide

IC Manufacturer IC Part Number	Comments	UMEC Model No.	
		Std Temp	Ext Temp
Conexant(Rockwell) BT8370 CN8380 R8069, R8069A, R8069B	T1/E1 T1/E1 -	UT23035 UT23023 UT23036	UT23052 UT23058 UT23031
Cirrus Logic(Crystal) 61534, 61544, 61574, 6158, 61535 61535A, 61574A, 61575, 6158A 61535A, 61574A, 61575, 6158A 6152 61583 61583 61584, 61584A	T1 & PCM-30 T1 E1 - T1/E1(3.3V) T1/E1(5.0V) IQ3	UT23028 UT23037 UT23028 UT23035 UT23040 UT23039 UT23028	UT23050 UT23054 UT23050 UT23052 UT23057 UT23056 UT23050
Maxim(Dallas) DS2186, DS2187 DS2151, DS2152, DS2153, DS2154 DS21Q352, DS21Q354 DS21Q552, DS21Q554	- T1/E1 3V Quad 5V Quad	UT23035 UT23035 UT23036 UT23035	UT23052 UT23052 UT23031 UT23052
Exar T5650, T5620, T5675, T5681, 5683 56L22, 56L85, C240, C260, C262, C277 T5793, T5794 T5684 T7288 T5894 T5897	- - Quad E1 T1 CEPT1 Quad E1 7-Channel E1	UT23028 UT23028 UT23038 UT23035 UT23035 UT23028 UT23028	UT23050 UT23050 UT23055 UT23052 UT23052 UT23050 UT23050
Level One(Intel) LXT 300/301/305 LXT 304A/305A LXT 304A/305A LXT 310/311 LXT 317/318 LXT 317/318 LXT 317/318 LXT 331 LXT 332 LXT 332 LXT 334 LXT 334 LXT 335 LXT 360/361/370 LXT 380/381/384/386/388 LXT 380/381/384/386/388	- T1 PCM-30/75/120 - T1/E1 T1/E1 (Alternate) T1/E1 (Alternate) E1 E1 E1 (Alternate) Quad E1 Quad T1 Quad E1 T1/E1 T1/E1 T1/E1	UT23028 UT23037 UT23038 UT23036 UT23028 UT23034 UT23036 UT23036 UT23028 UT23034 UT23035 UT23036 UT23035 UT23036 UT23036 UT23036	UT23050 UT23054 UT23055 UT23031 UT23050 UT23051 UT23031 UT23031 UT23050 UT23051 UT23052 UT23031 UT23052 UT23031 UT23031 UT23058
Agere(Lucent) T7288 T7289 T7290 T7633 T7683 T7688 T7688 T7689 T7690 T7690	CEPT DS1 T1 & CEPT Dual T1/E1 Quad T1 Quad E1 Quad T1 DS1 CEPT	UT23035 UT23037 UT23035 UT23046/47 UT23028 UT23032 UT23033 UT23033 UT23032	UT23052 UT23054 UT23052 - UT23050 UT23048 UT23049 UT23049 UT23048
PMC-Sierra PM4341, PM6341, PM4314 PM4351	- COMET	UT23035 UT23045	UT23052 -
Infineon Technologies(Siemens) PEB 2254/2255 PEB 22554/22504 PEB 22504	5V 3.3V 5V	UT23025 UT23024/44 -	UT23053 UT23027 UT23059
VLSI VP14Q574 VP14Q574 VP14Q575 VP14Q575	T1 E1 T1 75 E1	UT23037 UT23037 UT23037 UT23037	UT23054 UT23054 UT23054 UT23054

DATA SHEET 01-23 FEB./06
14 OF 15



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T1/E1/CEPT/ISDN-PRI Transformers

Application Notes

- 1. Extended Temperature Range Models:** For extended temperature range transformers (-40°C to +85°C operating temperature range), OCL(Open Circuit Inductance for the primary winding) is specified at both -40°C and +25°C. At -40°C, OCL is 600uH minimum for all low temperature models with the exception of UT23827 which is 800uH minimum and UT23836 which is 300uH minimum. All other parameters are specified at +25°C only. Standard Temperature Range is 0°C to +70°C.
- 2. OCL(primary inductance), Cw/w (coupling capacitance), and L_L (leakage inductance)** are measured at the primary winding.
- 3. In order To obtain 1CT:1 ratio from 1CT:2CT ratio ,** could use only one-half of the secondary (2CT) winding.
- 4. The turns ratio of these parts** have been designed, in conjunction with semiconductor vendor recommendations to allow connections to various terminations (e.g. 75 or 120Ω with the same transformer). For example UT23842 can be used with the Siemens PEB 2235 to achieve connection to the 75 or 120Ω cable. For 75Ω termination, the PEB 2235 requires the following turns ratio:1:1.57(Tx) and 1:1.26(Rx), which can be achieved using pins (1-2):(15-16) for Tx and (10-11):(5-8) for Rx. For 120Ω, the following turns ratio are required: 1:2(Tx) and 1:1(Rx), which are pins (1-2):(16-14) for Tx and (9-11):(5-8) for Rx on UT23842.
- 5. Dual Ratio Transformer:** These transformers have tapped secondary windings to provide two turns ratios. Use the entire primary winding and connect the secondary pins listed below to obtain the desired turns ratio:

Model Number	Turns Ratio 1	Secondary pins	Turns Ratio 2	Secondary pins
UT23038 and UT23055	1:1 1:1 1:1 1:1	40-39 35-34 30-29 25-24	1:1.266 1:1.266 1:1.266 1:1.266	40-38 35-33 30-28 25-23
UT23044	1:2 1:2 1:2 1:2	40-39 33-32 30-29 23-22	1:2.4 1:2.4 1:2.4 1:2.4	40-38 33-31 30-28 23-21
UT23068	1:1	2-3	1:1.266	1-3
UT23389	1:1	3-5	1:1.266	1-5
UT23566	1:1	2-3	1:1.266	1-3
UT23568	1:1	2-3	1:1.266	1-3
UT23646	1:1.58	3-5	1:2	1-5
UT23664	1:1	3-5	1:1.266	1-5
UT23736	1:1	2-3/5-6	1:1.266	1-3/4-6
UT23766	1:1	2-3	1:1.266	1-3
UT23817	1:1	2-3	1:1.266	1-3
UT23826	1:1	2-3	1:1.266	1-3
UT23837	1:1.08	3-5	1:1.36	1-5
UT23839	1:1	3-5	1:1.266	1-5
UT23866	1:1	2-3	1:1.266	1-3

- 6. UT23618 and UT23950:** The fault locate winding is (7-8).

*Specifications are subject to change without prior notice.

DATA SHEET 01-23 FEB./06
15 OF 15



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