

# 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 <sup>(2)</sup> (mH Min)	CW/W <sup>(2)</sup> (pF Max)	LL <sup>(2)</sup> (uH Max)	DCR Pri (Ohms Max)	DCR Sec (Ohms Max)	Package/ Schematics	Primary pins
							RoHS compliant	
Extended Temperature Range Models – Operating Temperature -40°C TO +85°C <sup>(1)</sup>								
UT23821	1CT:2CT & 1CT:2CT	1.20 & 1.20	50 & 50	0.80 & 0.80	1.00 & 1.00	1.70 & 1.70	SMD/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	SMD/2E	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	SMD/4E	12-10, 4-6
UT23826 <sup>(5)</sup>	1:1/1.266 & 1:2CT	1.20 & 1.20	50 & 60	0.80 & 0.80	1.00 & 1.00	1.10 & 1.70	SMD/5E	12-10, 4-6
UT23827 <sup>(1)</sup>	1:2CT & 2:1	1.60 & 1.60	55 & 40	1.30 & 1.30	1.10 & 1.10	1.10 & 0.70	SMD/6E	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	SMD/1E	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	SMD/1E	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	SMD/1E	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	SMD/1E	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	SMD/1E	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	SMD/1E	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	SMD/1E	12-10, 9-7
Standard Temperature Range Models – Operating Temperature 0°C TO +70°C								
UT23736 <sup>(5)</sup>	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	SMD/7E	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	SMD/1E	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	SMD/2E	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	SMD/5E	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	SMD/3E	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	SMD/4E	12-10, 4-6
UT23766 <sup>(5)</sup>	1:1/1.266 & 1:2CT	1.50 & 1.20	40 & 40	0.40 & 0.50	0.70 & 0.70	0.90 & 1.20	SMD/5E	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	SMD/2E	12-10, 4-6

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



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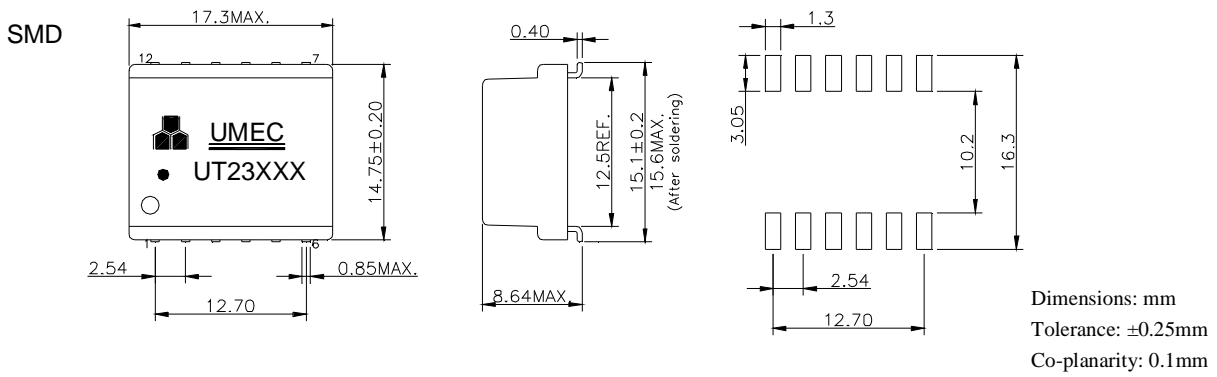
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TEL:886-4-23590096 FAX:886-4-23590129

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

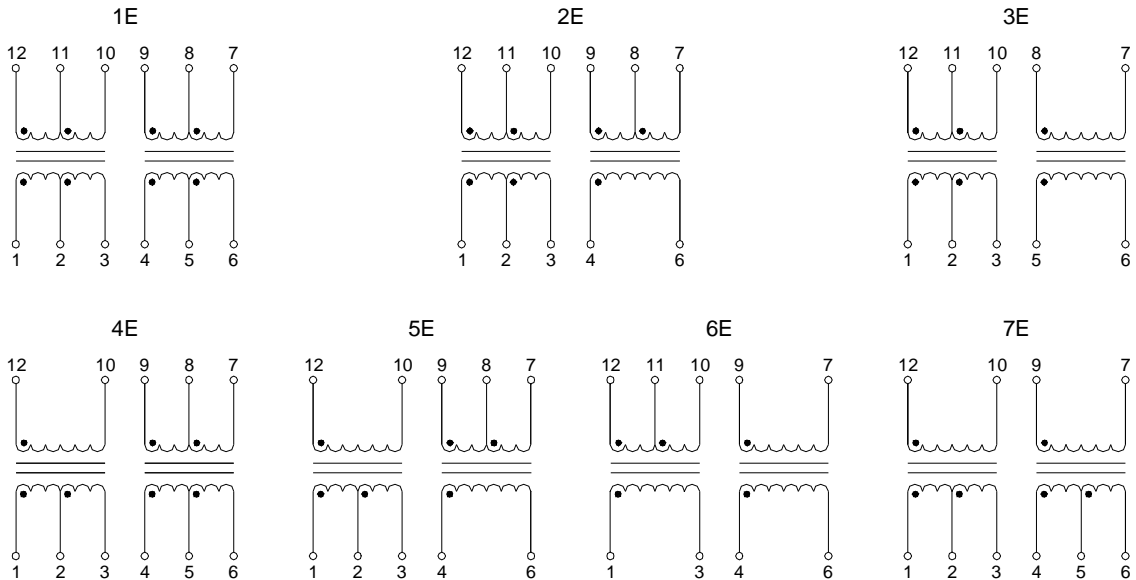
# T1/E1/CEPT/ISDN-PRI Transformers

## Dual Surface Mount

### Mechanicals



### Schematics



# 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 <sup>(2)</sup> (mH Min)	CW/W <sup>(2)</sup> (pF Max)	LL <sup>(2)</sup> (uH Max)	DCR Pri (Ohms Max)	DCR Sec (Ohms Max)	Package/ Schematics	Primary pins
STD Temp.	EXT Temp.							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	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	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	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	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	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	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	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	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	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	SO-L/H	16-14, 6-8
UT23817 <sup>(5)</sup>		1:1/1.266 & 1:2CT	1.20 & 1.20	35 & 35	0.80 & 0.80	0.80 & 0.80	0.80 & 1.80	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	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	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	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	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	SO-L/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	SO-L/A	6-8, 14-16
UT23841 <sup>(4)</sup>		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	SO-L/A	1-3, 11-9
UT23842 <sup>(4)</sup>		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	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	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	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	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	SO-L/C	16-14, 6-8
UT23866 <sup>(5)</sup>	UT23068 <sup>(5)</sup>	1:1/1.266 & 1CT:2CT	1.20 & 1.20	30 & 30	0.60 & 0.60	0.70 & 0.70	0.80 & 1.20	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	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	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	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.



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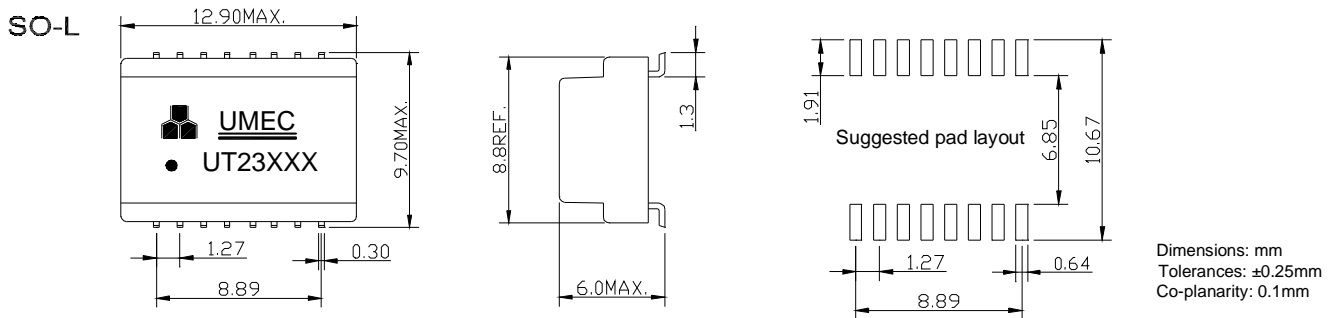
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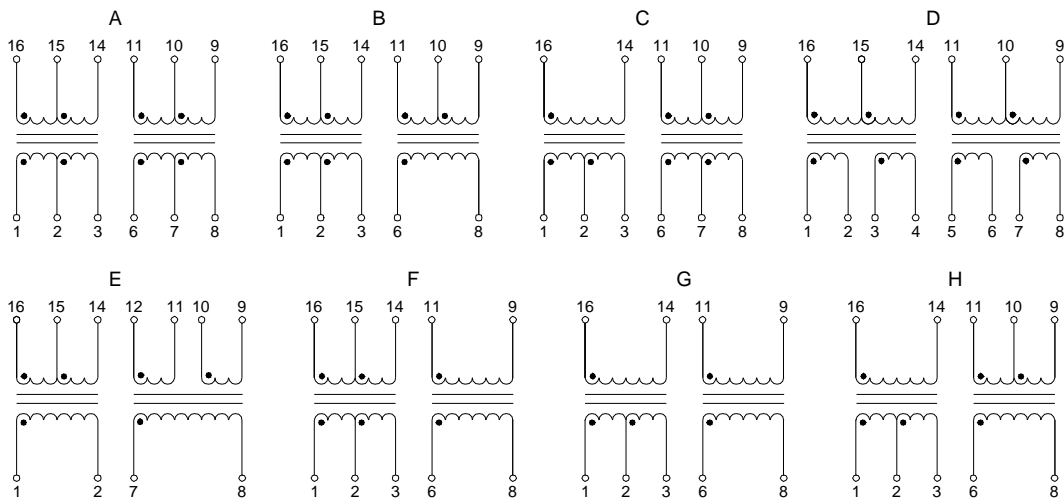
# T1/E1/CEPT/ISDN-PRI Transformers

## Dual Surface Mount, Small Package

### Mechanicals



### Schematics



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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 <sup>(2)</sup> (mH Min)	C <sub>w/w</sub> <sup>(2)</sup> (pF Max)	LL <sup>(2)</sup> (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 <sup>(5)</sup>	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 <sup>(1)</sup>								
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 <sup>(5)</sup>	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



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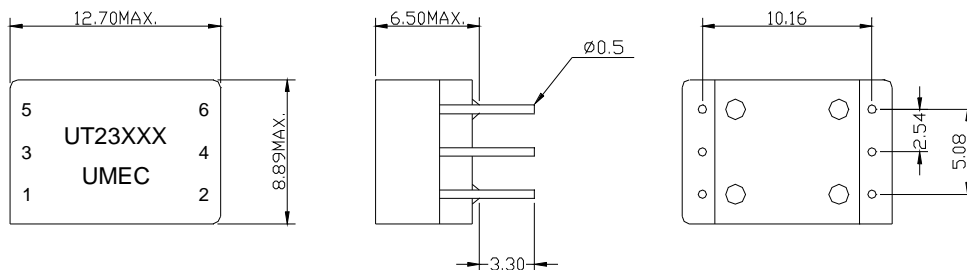
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# T1/E1/CEPT/ISDN-PRI Transformers

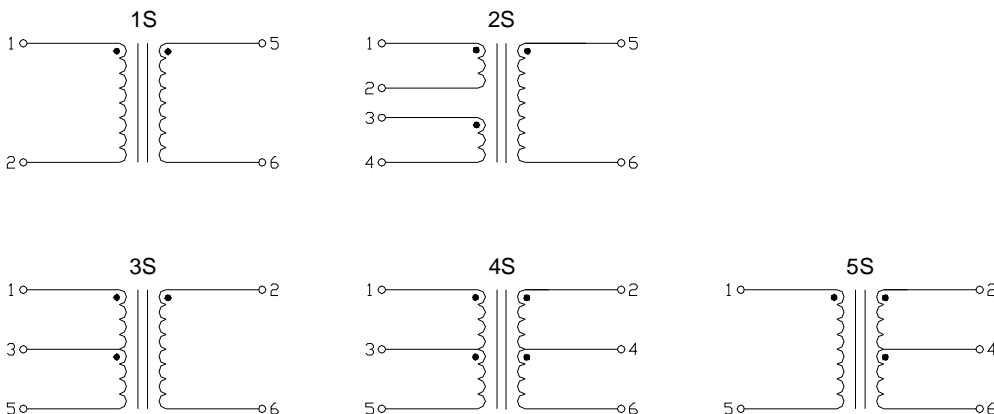
## Single through hole

### Mechanicals



Dimensions: mm  
Tolerances:  $\pm 0.25$ mm  
Unused pins not provided

### Schematics



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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 <sup>(2)</sup> (mH Min)	C <sub>w/w</sub> <sup>(2)</sup> (pF Max)	LL <sup>(2)</sup> (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 <sup>(5)</sup>	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 <sup>(1)</sup>								
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 <sup>(5)</sup>	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 <sup>(6)</sup>	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 <sup>(6)</sup>	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



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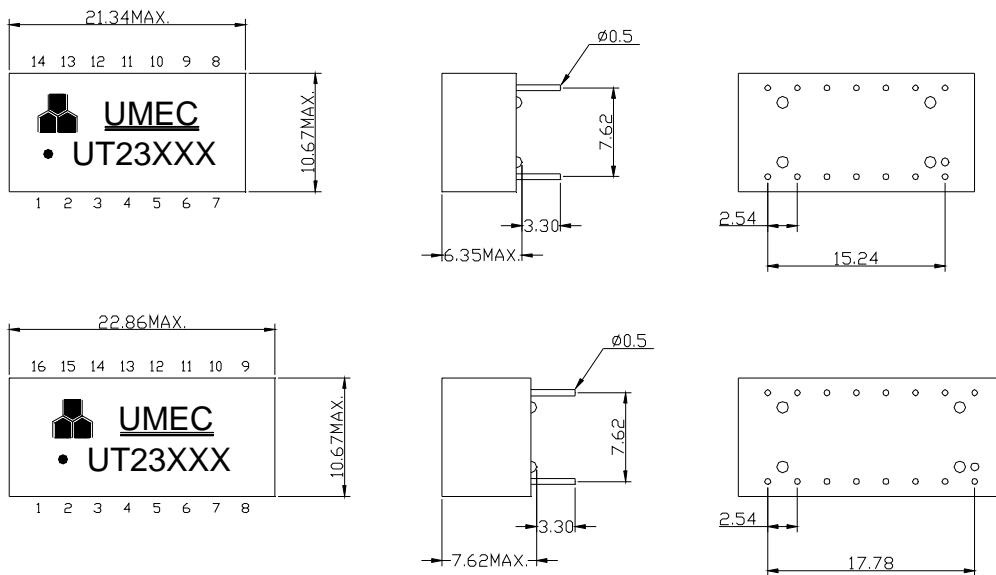
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TAICHUNG,TAIWAN,R.O.C

# T1/E1/CEPT/ISDN-PRI Transformers

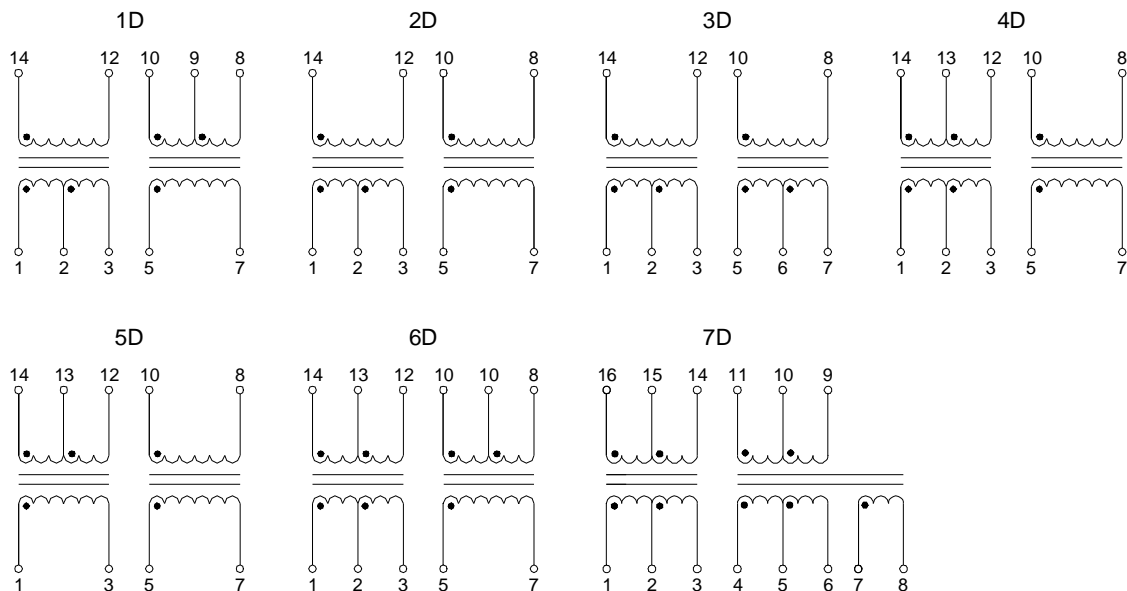
## Dual Through Hole

### Mechanicals



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

### Schematics





# 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 <sup>(2)</sup> (mH Min)	C <sub>w/w</sub> <sup>(2)</sup> (pF Max)	LL <sup>(2)</sup> (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 <sup>(1)</sup>	1CT:3CT:1	0.60	30	0.80	0.70	1.70	5S	1-3
UT23837 <sup>(5)</sup>	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 <sup>(5)</sup>	1:1/1.266	1.50	35	0.60	0.70	1.10	4S	10-6
UT23646 <sup>(5)</sup>	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



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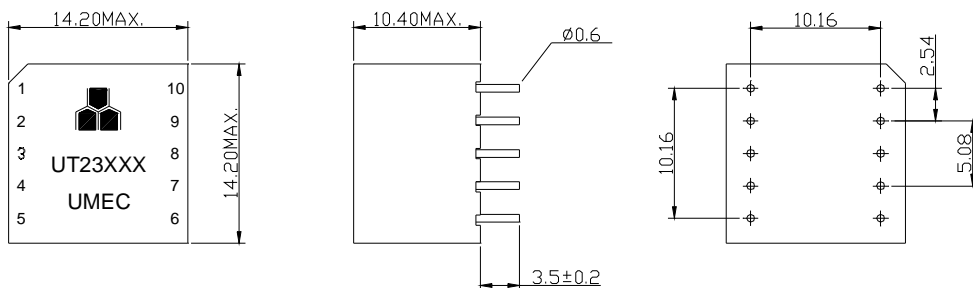
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# T1/E1/CEPT/ISDN-PRI Transformers

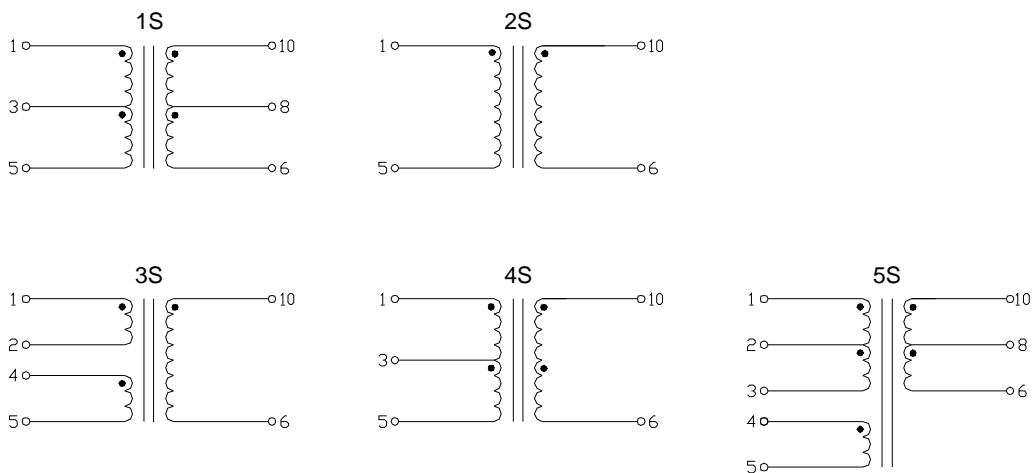
## Single Reinforced Insulation

### Mechanicals



Dimensions: mm  
 Tolerances:  $\pm 0.25$ mm  
 Unused pins not provided

### Schematics



# 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 <sup>(2)</sup> (mH Min)		Cww <sup>(2)</sup> (pF Max)	LL <sup>(2)</sup> (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 <sup>(5)</sup>	UT23055 <sup>(5)</sup>	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 <sup>(5)</sup>	-	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



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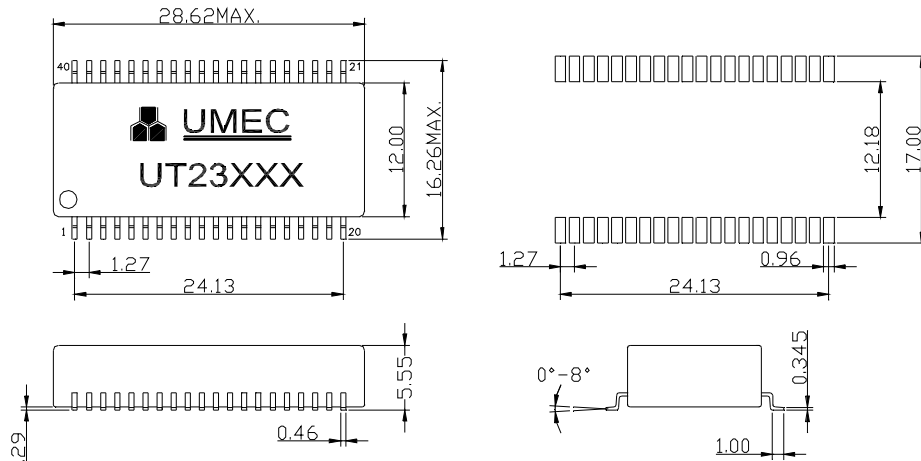
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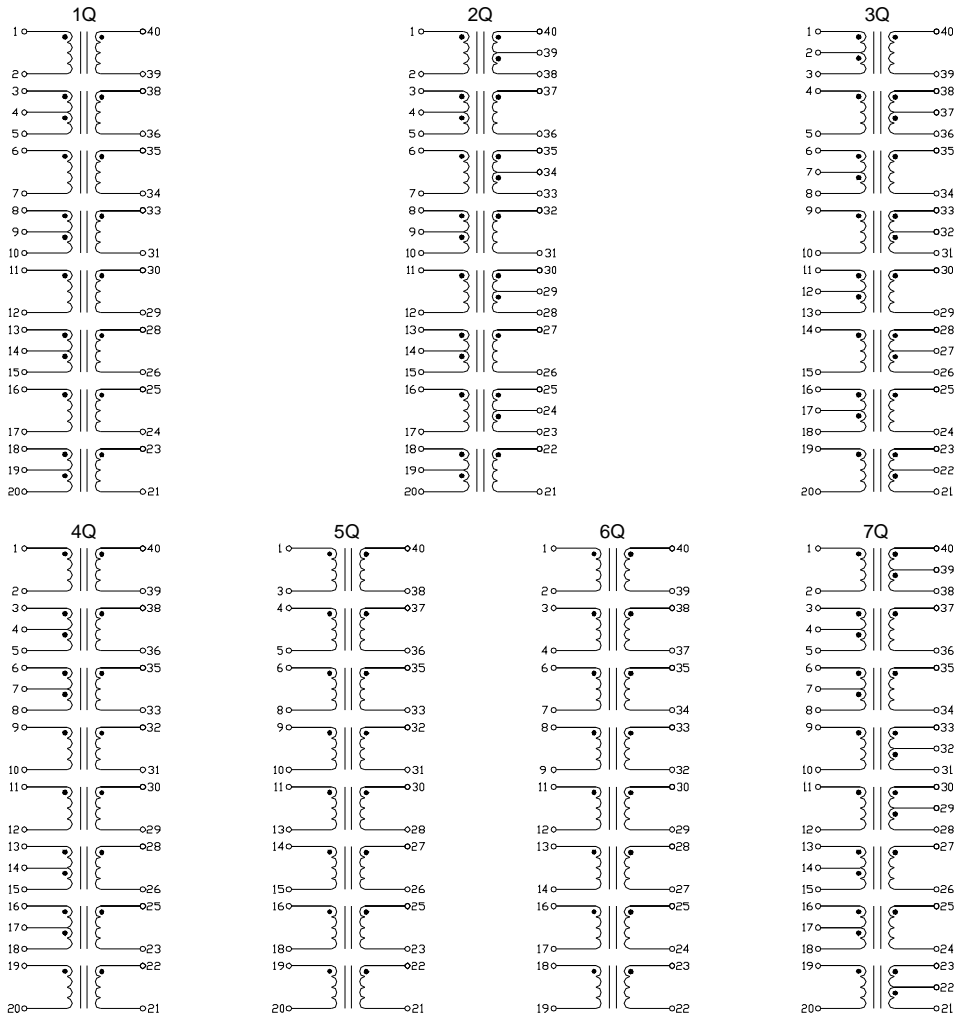
## Quad Port T1/E1 with 8 Transformers

### Mechanicals



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

### Schematics:





# 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
<b>Conexant(Rockwell)</b> BT8370 CN8380 R8069, R8069A, R8069B	T1/E1 T1/E1 -	UT23035 UT23023 UT23036	UT23052 UT23058 UT23031
<b>Cirrus Logic(Crystal)</b> 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
<b>Maxim(Dallas)</b> DS2186, DS2187 DS2151, DS2152, DS2153, DS2154 DS21Q352, DS21Q354 DS21Q552, DS21Q554	- T1/E1 3V Quad 5V Quad	UT23035 UT23035 UT23036 UT23035	UT23052 UT23052 UT23031 UT23052
<b>Exar</b> 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
<b>Level One(Intel)</b> 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 UT23023	UT23050 UT23054 UT23055 UT23031 UT23050 UT23051 UT23031 UT23031 UT23050 UT23051 UT23052 UT23031 UT23052 UT23031 UT23031 UT23058
<b>Agere(Lucent)</b> T7288 T7289 T7290 T7633 T7683 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
<b>PMC-Sierra</b> PM4341, PM6341, PM4314 PM4351	- COMET	UT23035 UT23045	UT23052 -
<b>Infineon Technologies(Siemens)</b> PEB 2254/2255 PEB 22554/22504 PEB 22504	5V 3.3V 5V	UT23025 UT23024/44 -	UT23053 UT23027 UT23059
<b>VLSI</b> VP14Q574 VP14Q574 VP14Q575 VP14Q575	T1 E1 T1 75 E1	UT23037 UT23037 UT23037 UT23037	UT23054 UT23054 UT23054 UT23054

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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<sub>L</sub> (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.

