

MODEM COUPLING TRANSFORMERS

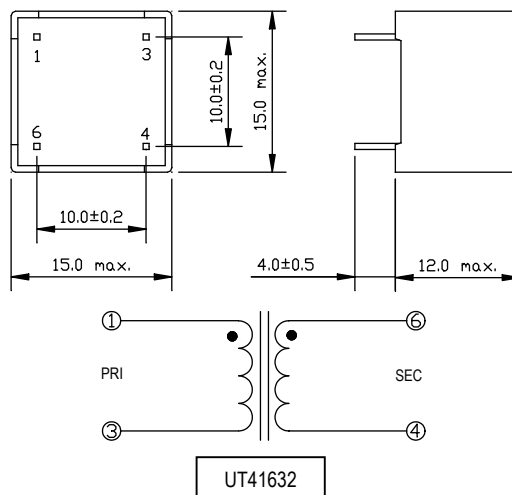
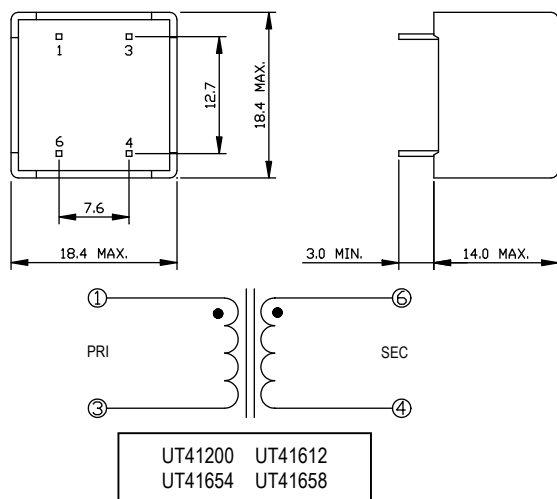
Compatible with 56kb/s technologies

- Low Harmonic distortion.
- Flat Frequency / Phase Response

ELECTRICAL SPECIFICATIONS @ 25°C :

SPECIFICATIONS		UT41200	UT41612	UT41654	UT41658	UT41632
Reflects 600Ω at PRI with RL=		600Ω	560Ω	360Ω	510Ω	600Ω
Turns Ratio (PRI. : SEC.)		1:1±1%	1:1±2%	1:1±2%	1:1±2%	1:1±2%
D.C. Current in PRI.		none	none	none	none	none
Dielectric Test		4000Vac	3750Vac	1500Vac	5000Vac	4600Vac
Agency Approvals:		BABT,UL	BABT	—	—	BABT
D.C.Resistance	PRI.	70Ω±10%	64Ω~72.5Ω	135Ω max.	100Ω typ.	45Ω±15%
	SEC.	70Ω±10%	64Ω~72.5Ω	135Ω max.	100Ω typ.	45Ω±15%
Insertion Loss	@ 1KHz 0dBm.	—	—	2.1dB max.	—	—
	@ 2KHz 0dBm.	1.5dB max.	1.5dB max.	—	2.0dB max.	1.5dB max.
Frequency Response	@100Hz to 4KHz , ref 1KHz	—	—	±0.1dB max.	±0.8dB	—
	@200Hz to 4KHz , ref 1KHz	±0.3dB	-1.0dB~+0.8dB	—	—	±0.4dB
Return Loss *	@ 200Hz to 3.5KHz	—	—	20dB min.	—	—
	@ 200Hz to 4KHz	10dB min.	20dB min.	—	16dB min.	16dB min.
Total Harmonic Distortion	@ 150Hz, -3dBm.	—	—	-75dB max.	-75dB typ.	—
	@ 450Hz, 0dBm.	—	—	—	-80dB typ.	—
	@ 1KHz, 0dBm.	0.1% max.	0.1% max.	—	—	—
Longitudinal Balance	@ 200Hz to 3.5KHz	—	—	60dB min.	—	—
	@ 300Hz to 4KHz	85dB min.	80dB min.	—	—	—
Shunt Inductance on PRI. (parallel mode)	@ 200Hz 10mV	2.8H min.	—	—	11H typ.	1.48H min.
	@ 200Hz 20mV	—	4.0H min.	—	—	—
	@1KHz 20mV	—	3.0H min.	—	—	—
Shunt Resistance (parallel mode)	@ 200Hz 10mV	—	—	—	12KΩ min.	4.75KΩ min.
	@200Hz 20mV	—	20KΩ min.	—	—	—
	@1KHz 20mV	—	25KΩ min.	—	—	—
Leakage Inductance	@1KHz 1V, SEC. shorted	16mH max.	16mH~19mH	—	25mH typ.	—

SCHEMATIC & DIMENSION : (UNIT : mm)



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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

MODEM COUPLING TRANSFORMERS

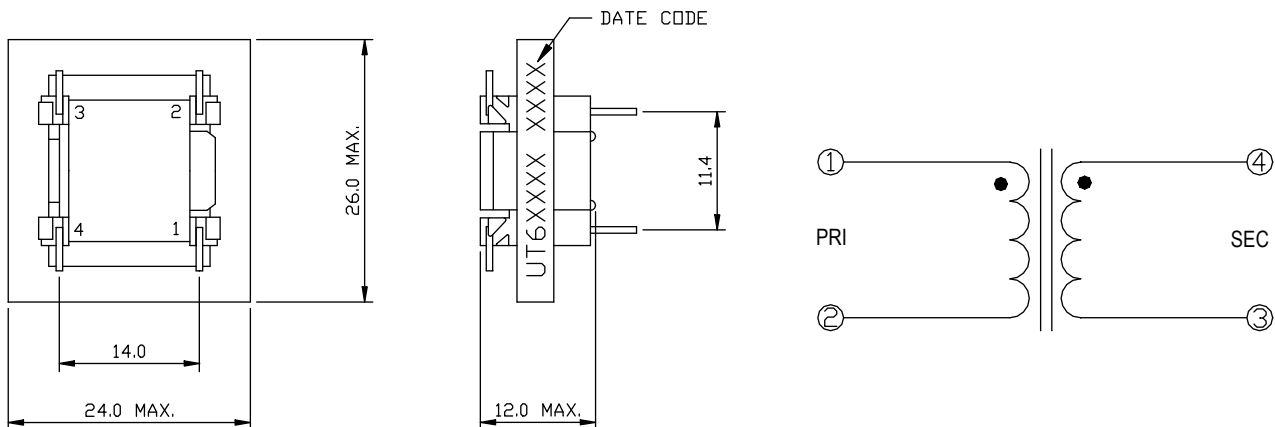
Compatible with 56kb/s technologies

- Low Harmonic distortion.
- Flat Frequency / Phase Response

ELECTRICAL SPECIFICATIONS @ 25°C

SPECIFICATIONS		UT68025	UT68039	UT68056	UT68079	UT69372
Reflects 600ohms at PRI with RL=		374Ω	301Ω	374Ω	301Ω	530Ω
Turns Ratio (PRI.:SEC.)		1:1±2%	1:1±2%	1:1±2%	1:1±2%	1:1±2%
D.C.Current in Pri.		none	none	none	none	none
Dielectric Test		1250Vac	1250Vac	1250Vac	1250Vac	1250Vac
Agency Approvals:		—	—	—	—	—
D.C.Resistance	PRI.	108Ω±10%	150Ω±10%	108Ω±10%	150Ω±10%	43Ω±10%
	SEC.	120Ω±10%	150Ω±10%	120Ω±10%	150Ω±10%	43Ω±10%
Insertion Loss	@ 1KHz 0dBm.	2±0.25dB	3±0.5dB	2±0.25dB	3±0.5dB	1.0dB max.
Frequency Response	@ 200Hz to 4KHz , ref 1KHz	±0.25dB	±0.25dB	±0.25dB	±0.25dB	±0.2dB
Return Loss *	@ 300Hz	—	26dB min.	—	—	—
	@ 1KHz	—	—	30dB typ.	30dB typ.	—
	@ 3KHz	—	18dB min.	—	—	—
	@ 300Hz to 3KHz	20dB min.	—	—	—	25dB min.
Total Harmonic Distortion	@ 600Hz, -10dBm.	-76dBmax.	-86dBtyp.	-86dB typ.	-86dBtyp.	-80dB typ.
Longitudinal Balance	@ 60Hz to 1KHz	—	60dB min.	—	60dB min.	—
	@ 200Hz to 1KHz	60dB min.	—	60dB min.	—	60dB min.
	@ 1KHz to 4KHz	40dB min.	40dB min.	40dB min.	40dB min.	40dB min.
Shunt Inductance on PRI. (parallel mode)	@ 200Hz 1V	12H min.	20H min.	—	—	3H min.

SCHEMATIC & DIMESION : (UNIT : mm)



UT68025	UT68039
UT68056	UT68079
	UT69372

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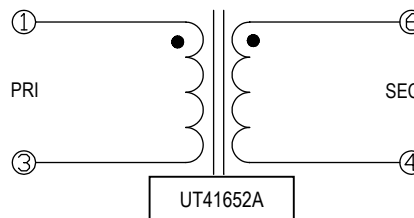
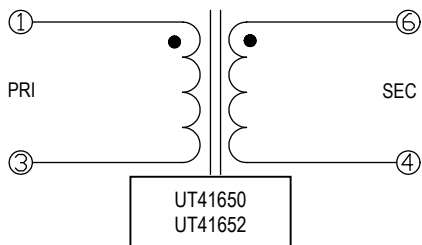
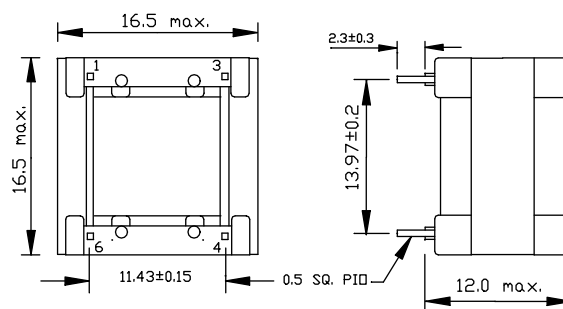
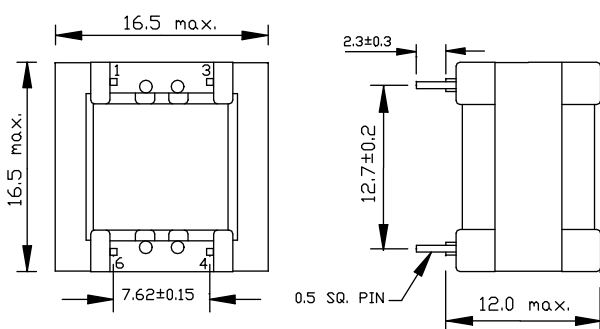
Compatible with 56kb/s technologies

- Low Harmonic distortion.
- Flat Frequency / Phase Response

ELECTRICAL SPECIFICATIONS @ 25°C

SPECIFICATIONS		UT41650	UT41652	UT41652A
Reflects 600ohms at PRI with RL=		374Ω	301Ω	301Ω
Turns Ratio (PRI.:SEC.)		1:1±1%	1:1±1%	1:1±1%
D.C.Current in Pri.		none	none	none
Dielectric Test		1500Vac	1500Vac	1250Vac
Agency Approvals:		—	CSA "NRTL/C"	CSA "NRTL/C"
D.C.Resistance	PRI.	108Ω±10%	150Ω±10%	150Ω±10%
	SEC.	120Ω±10%	150Ω±10%	150Ω±10%
Insertion Loss	@ 1KHz 0dBm.	2.0dB	3.0dB max.	3.0Db max.
Frequency Response	@ 200Hz to 4KHz , ref 1KHz	±0.1dB	±0.2dB	±0.2dB
Return Loss *	@ 200Hz to 4KHz	—	32dB min.	32dB min.
	@ 200Hz to 4KHz	20dB min.	—	—
Total Harmonic Distortion	@ 150Hz, -3dBm.	—	-80dB max.	-80dB max.
	@ 150Hz, 0dBm.	-75dBmax.	—	—
	@ 300Hz, 0dBm.	-86dBmax.	—	—
	@ 300Hz, -10dBm.	—	-86dB max.	-86dB max.
	@ 600Hz, 0dBm.	-90dBmax.	—	—
Longitudinal Balance	@ 200Hz to 1KHz	60dB min.	80dB min.	80dB min.
	@ 1KHz to 4KHz	60dB min.	80dB min.	80dB min.
Shunt Inductance on PRI. (parallel mode)	@ 200Hz 1V	40H min.	—	—
	@ 250Hz 1V	—	35H min.	35H min.

SCHEMATIC & DIMENSION : (UNIT : mm)



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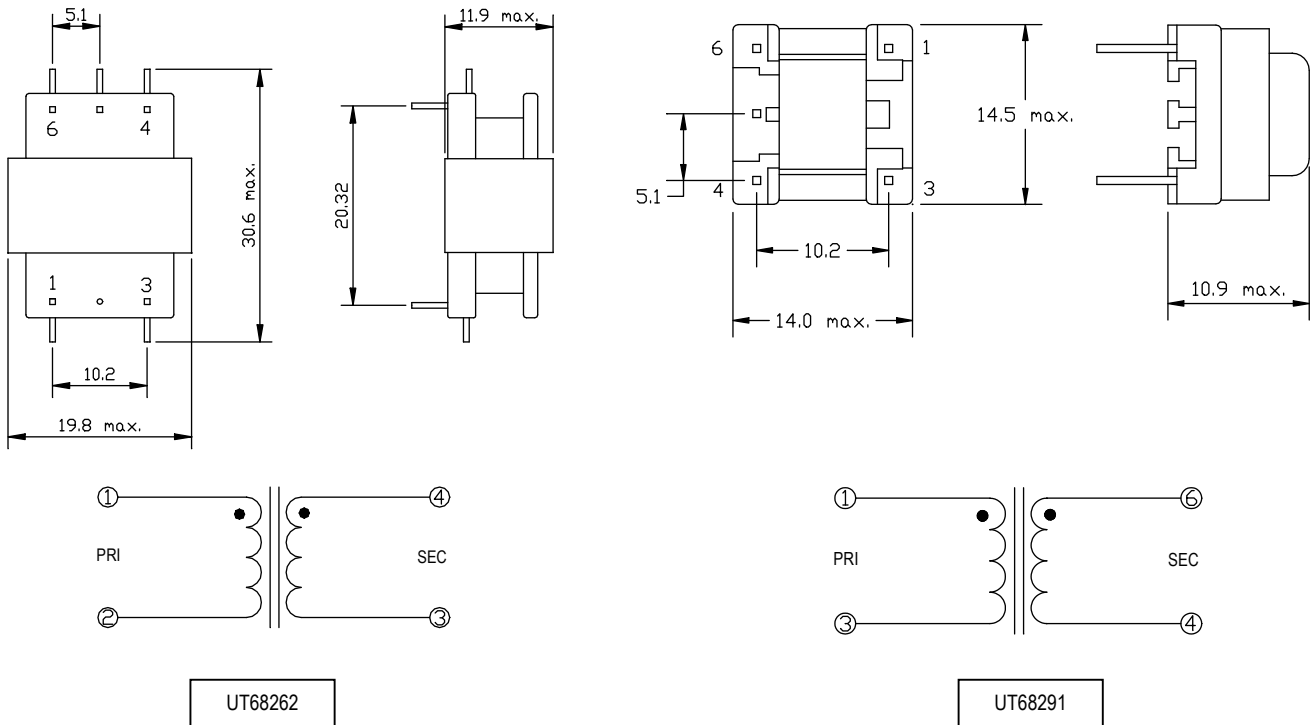
Compatible with 56kb/s technologies

- Low Harmonic Distortion
- Flat Frequency / Phase Response

ELECTRICAL SPECIFICATIONS @ 25°C

SPECIFICATIONS		UT68262	UT68291
Reflects 600ohms at PRI with RL=		374Ω	348Ω
Turns Ratio (PRI.:SEC.)		1:1±2%	1:1±2%
D.C.Current in Pri.		none	none
Dielectric Test		1250Vac	3750Vac
Agency Approvals:		—	—
D.C.Resistance	PRI.	103Ω nom.	152Ω±10%
	SEC.	128Ω nom.	151Ω±10%
Insertion Loss	@ 1KHz 0dB.	2.0±0.25dB	3.25dB max.
Frequency Response	@ 200Hz to 4KHz , ref 1KHz	±0.25dB	—
	@ 300Hz to 4KHz , ref 1KHz	—	±0.5dB
Return Loss *	@ 300Hz to 3KHz	15dB min.	14dB min.
Total Harmonic Distortion	@ 600Hz, -10dBm.	-82dB max.	-83dB typ.
Longitudinal Balance	@ 60Hz to 1KHz	—	60dB min.
	@ 200Hz to 1KHz	60dB min.	—
	@ 1KHz to 4KHz	40dB min.	60dB min.

SCHEMATIC & DIMENSION : (UNIT : mm)



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MODEM COUPLING TRANSFORMERS

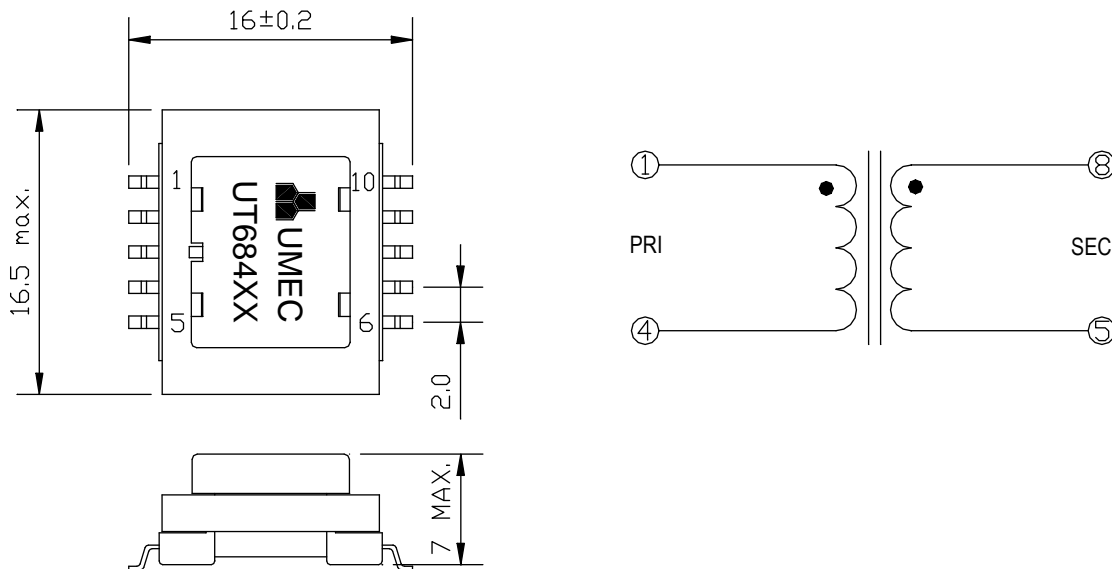
Compatible with 56kb/s technologies

- Low Harmonic Distortion.
- Flat Frequency / Phase Response
- Surface Mountable

ELECTRICAL SPECIFICATION @ 25°C

SPECIFICATIONS		UT68422	UT68455
Reflects 600ohms at PRI with RL=		392Ω	392Ω
Turns Ratio (PRI.:SEC.)		1:1±2%	1:1±1%
D.C.Current in Pri.		none	None
Dielectric Test		1250Vac	1250Vac
Agency Approvals:		—	—
D.C.Resistance	PRI.	100Ω ±10%	100Ω ±10%
	SEC.	120Ω ±10%	122Ω ±10%
Insertion Loss	@ 1KHz 0dBm.	2.0dB max.	2.0dB max.
Frequency Response	@ 300Hz to 3.5KHz , ref 1KHz	±0.2dB	±0.2dB
Return Loss *	@ 300Hz to 3KHz	25dB min.	25dB min.
Total Harmonic Distortion	@ 600Hz, -10dBm.	-80dB typ.	-86dB max.
Longitudinal Balance	@ 60Hz to 1KHz	60dB min.	—
	@ 200Hz to 1KHz	—	60dB min.
	@ 1KHz to 4KHz	40dB min.	40dB min.

SCHEMATIC & DIMENSION : (UNIT : mm)



UT68422 UT68455

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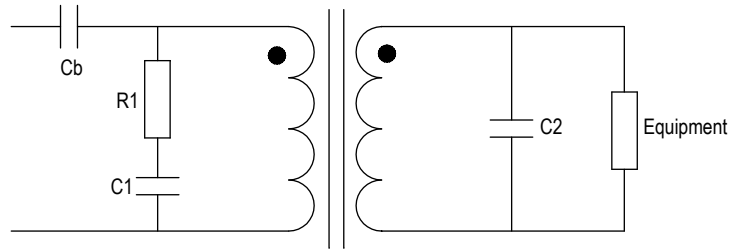
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MODEM COUPLING TRANSFORMERS

Compatible with 56kb/s technologies

RETURN LOSS TEST CIRCUITS

600Ω Match Recommended Circuit Description:



UM Model No.	Ref. Impedance Values	Recommended Circuit Values				
		Cb (uF)	R1 (Ω)	C1 (nF)	C2 (nF)	Equipment (Ω)
UT41200	600Ω	—	—	—	—	600Ω
UT41612	600Ω	6.8uF	—	27nF	33nF	560Ω
UT41632	600Ω	—	—	—	—	600Ω
UT41650	600Ω	—	—	—	—	374Ω
UT41652	600Ω	—	—	12nF	—	301Ω
UT41652A	600Ω	—	—	12nF	—	301Ω
UT41654	600Ω	—	—	—	—	360Ω
UT41658	600Ω	22uF	330Ω	33nF	39nF	510Ω
UT68025	600Ω	—	—	—	—	374Ω
UT68039	600Ω	—	—	—	—	301Ω
UT68056	600Ω	—	—	—	—	374Ω
UT68079	600Ω	—	—	—	—	301Ω
UT68262	600Ω	—	—	—	—	374Ω
UT68291	600Ω	—	—	—	—	348Ω
UT68422	600Ω	—	—	—	—	392Ω
UT68455	600Ω	—	—	—	—	392Ω
UT69372	600Ω	—	—	—	—	530Ω

*Specifications are subject to change without prior notice.

