

T1/CEPT/ISDN-PRI TRANSFORMERS

Dual Surface Mount, 1500Vrms, Extended and Standard Temperature Range



- Dual SMT package contains both transmit and receive transformers
- Models matched to leading transceiver ICs
- Isolation voltage: 1500Vrms
- RoHS"NL" peak solder rating 260°C
- non-RoHS peak solder rating 235°C

Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

Part Number	Tums Ratio (Pri:Sec±2%)	OCL@ 25°C (mH MIN)	L _L (μH MAX)	C _{W/W} (pF MAX)	DCR Pri (Ω MAX)	DCR Sec (Ω MAX)	Package/ Schematic	Primary Pins
EXTENDED TEMPERATURE RANGE MODELS ₁ – OPERATING TEMPERATURE -40°C TO +85°C								
SH68841	1CT:2CT & 1CT:2CT	1.20 & 1.20	0.80 & 0.80	50 & 50	1.00 & 1.00	1.70 & 1.70	AN/2	12-10, 4-6
SH68822	1CT:2CT & 1:1.36CT	1.60 & 1.60	1.00 & 0.80	60 & 55	1.70 & 1.70	2.00 & 1.70	AN/1	12-10, 4-6
SH68825	1:1.15CT & 1CT:2CT	1.60 & 1.60	0.80 & 0.80	60 & 50	1.00 & 1.00	1.20 & 2.00	AN/4	12-10, 4-6
SH68826	1:1/1.26 & 1:2CT	1.20 & 1.20	0.80 & 0.80	50 & 60	1.00 & 1.00	1.10 & 1.70	AN/5	12-10, 4-6
SH68827	1:1CT & 2:1	1.60 & 1.60	1.30 & 1.30	55 & 40	1.10 & 1.10	1.10 & 0.70	AN/6	1-3, 4-6
SH68828	1CT:1CT & 1CT:1CT	1.20 & 1.20	0.80 & 0.80	50 & 50	1.00 & 1.00	1.00 & 1.00	AN/2	1-3, 4-6
SH68874	1CT:1.15CT & 1CT:1.15CT	1.20 & 1.20	0.80 & 0.80	50 & 50	1.20 & 1.20	1.40 & 1.40	AN/2	1-3, 4-6
SH68877	1CT:1CT & 1CT:2CT	1.20 & 1.20	0.80 & 0.80	50 & 50	1.00 & 1.00	1.00 & 1.80	AN/2	1-3, 4-6
SH68882	1CT:1.15CT & 1CT:1CT	1.60 & 1.60	0.80 & 0.80	60 & 60	1.20 & 1.20	1.40 & 1.20	AN/2	12-10, 4-6
SH68884	1CT:1.36CT & CT:1.36CT	1.20 & 1.20	0.80 & 0.80	50 & 50	1.20 & 1.20	1.40 & 1.40	AN/2	1-3, 4-6
SH68887	1CT:1.41CT & CT:1.41CT	1.20 & 1.20	0.80 & 0.80	50 & 50	1.40 & 1.40	1.20 & 1.20	AN/2	12-10, 9-7
SH68881	1CT:2.3CT & 1CT:2CT	1.20 & 1.20	0.80 & 0.80	60 & 50	1.20 & 1.20	2.10 & 2.10	AN/2	10-12, 4-6
SHX1277	1CT:1CT & 1CT:2CT	1.20 & 1.20	0.80 & 0.80	50 & 50	1.00 & 1.00	1.00 & 1.80	AN/2	1-3, 4-6
STANDARD TEMPERATURE RANGE MODELS – OPERATING TEMPERATURE 0°C TO +70°C								
SH1131	1CT:1 & 1:1.36CT	0.70 & 0.70	0.70 & 0.70	20 & 20	0.25 & 0.50	0.80 & 0.40	AN/7	1-3, 9-7
SH68861	1CT:2CT & 1CT:2CT	1.20 & 1.20	0.60 & 0.60	35 & 35	0.70 & 0.70	1.20 & 1.20	AN/2	12-10, 4-6
SH68862	1CT:2CT & 1:1.36CT	1.20 & 1.20	0.60 & 0.80	35 & 37	0.70 & 0.70	1.20 & 0.90	AN/1	12-10, 4-6
SH68863	1:2CT & 1:1.14CT	1.20 & 1.20	0.55 & 0.80	40 & 35	0.70 & 0.70	1.20 & 0.90	AN/5	12-10, 4-6
SH68864	1CT:2CT & 1:1	1.20 & 1.20	0.30-0.55 & 0.80	30 & 30	0.70 & 0.70	1.20 & 0.70	AN/3	1-3, 5-6
SH68865	1:1.15CT & 1CT:2CT	1.50 & 1.20	0.80 & 0.60	35 & 35	0.70 & 0.70	0.90 & 1.20	AN/4	12-10, 4-6
SH68866	1:1/1.26 & 1:2CT	1.50 & 1.20	0.40 & 0.50	40 & 40	0.70 & 0.70	0.90 & 1.20	AN/5	12-10, 4-6
SH68869	1CT:2CT & 1:1.08CT	1.20 & 1.20	0.60 & 0.60	40 & 30	0.70 & 0.70	1.10 & 0.90	AN/1	12-10, 4-6
SH68836	1:1/1.26 & 1:1/1.26	1.50 & 1.50	0.40 & 0.40	45 & 45	0.80 & 0.80	1.00 & 1.00	AN/7	12-10, 9-7

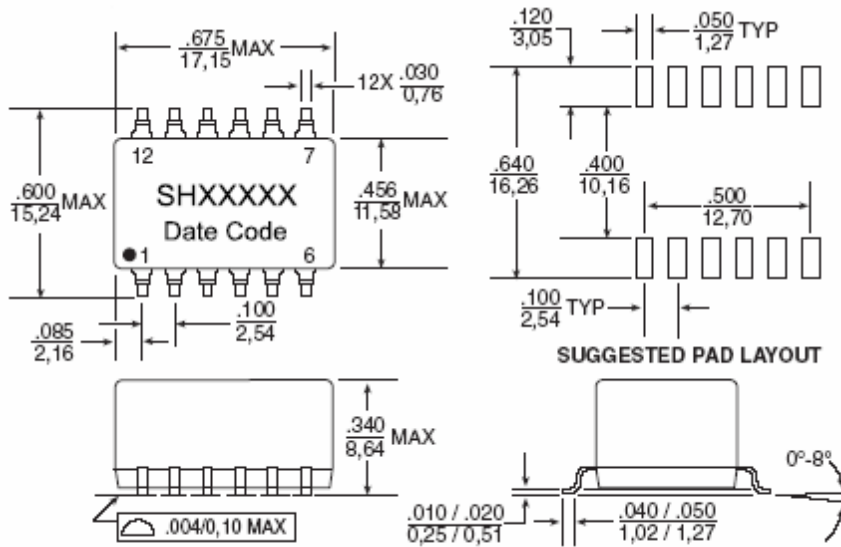
T1/CEPT/ISDN-PRI TRANSFORMERS

Dual Surface Mount, 1500Vrms, Extended and Standard Temperature Range



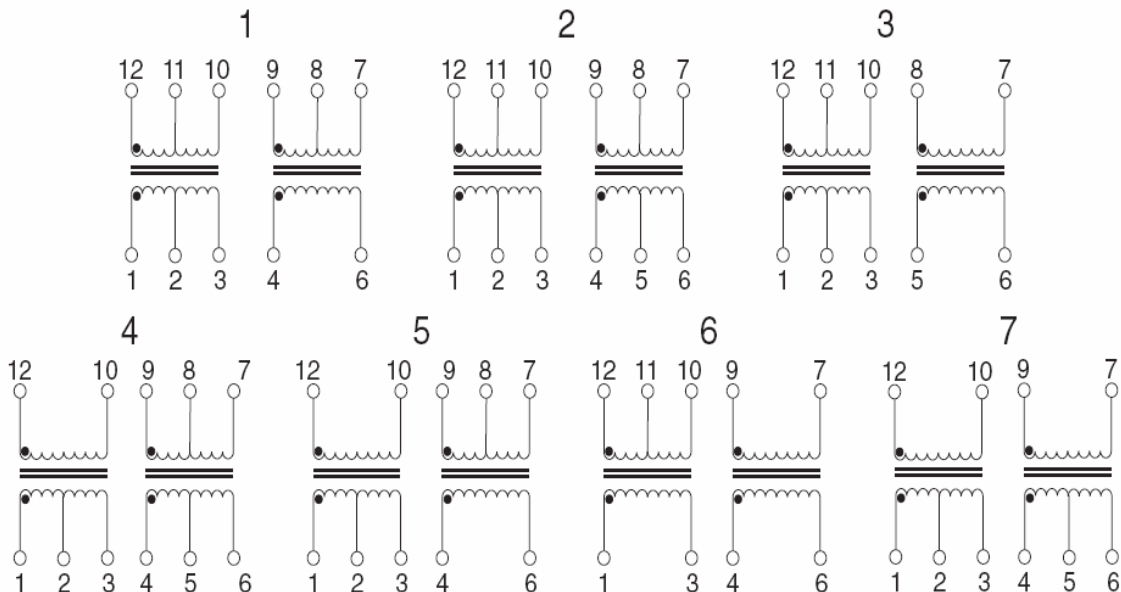
Mechanical

AN



Dimensions: $\frac{\text{Inches}}{\text{mm}}$ Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

Schematics



T1/CEPT/ISDN-PRI TRANSFORMERS

Dual Surface Mount, 1500Vrms, Small Package



- Dual SMT package contains both transmit and receive transformers
- Models matched to leading transceiver ICs
- Isolation voltage: 1500Vrms
- RoHS"NL" peak solder rating 260°C
- non-RoHS peak solder rating 235°C

Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

Part Number	Tums Ratio (Pri:Sec ±5%)	OCL (mH MIN)	C _{w/w} (pF MAX)	L _L (μH MAX)	DCR Pri (Ω MAX)	Package/ Schematic	Primary Pins
SH65861	1CT:2CT & 1CT:2CT	1.20 & 1.20	30 & 30	.60 & .60	.70 & .70	BH/1	16-14, 6-8
SH65862	1CT:2CT & 1:1.36CT	1.20 & 1.20	30 & 30	.60 & .60	.70 & .70	BH/2	16-14, 6-8
SH65865	1:1.15CT & 1CT:2CT	1.20 & 1.20	30 & 30	.60 & .60	.70 & .70	BH/3	16-14, 6-8
SH65866	1:1/1.26 & 1CT:2CT	1.20 & 1.20	30 & 30	.60 & .60	.70 & .70	BH/3	16-14, 6-8
SH65870	1CT:1.15CT & 1CT:1.15CT	1.20 & 1.20	30 & 30	.60 & .60	.70 & .70	BH/1	1-3, 6-8
SH1022	1CT:1CT & 1CT:1.15CT	1.20 & 1.20	30 & 30	.80 & .80	.70 & .70	BH/1	16-14, 6-8
SH68678	1CT:1CT & 1CT:2CT	1.20 & 1.20	30 & 30	.60 & .60	.70 & .70	BH/1	16-14, 6-8
SH68786	1CT:1.41CT & 1CT:1.41CT	1.00 & 1.00	30 & 30	.60 & .60	.70 & .70	BH/1	16-14, 11-9
SH1023	1CT:1.41CT & 1CT:1.41CT	1.00 & 1.00	30 & 30	.60 & .60	.70 & .70	BH/1	1-3, 11-9
SH1144	1CT:1 CT & 1CT:2.4CT	1.00 & 1.00	30 & 30	.80 & .80	.85 & .85	BH/1	9-11, 1-3
SH1097	1CT:1 CT & 1CT:1.67CT	1.00 & 1.00	25 & 25	.80 & .80	.80 & .80	BH/1	6-8, 14-16
SH1136	1CT:1 CT & 1CT:1.36CT	1.20 & 1.20	30 & 30	.60 & .60	.70 & .70	BH/1	6-8, 1-3
SH1121	1CT:1.5 CT & 1CT:1.5CT	1.50 & 1.50	40 & 40	.80 & .80	.70 & .70	BH/1	1-3, 6-8
SH1122	1CT:2CT & 1CT:2.3CT	1.20 & 1.20	30 & 30	.80 & .80	.90 & .90	BH/1	6-8, 14-16
SH1021	2CT:1/1.26 & 2CT:1/1.26	1.50 & 1.50	40 & 40	.50 & .50	.70 & .70	BH/1	1-3, 11-9
SH1075	2CS:1.57/2 & 2CS:1.57/2	1.50 & 1.50	40 & 40	.50 & .50	.70 & .70	BH/4	1-2, 5-6
SH1190	1CT:1CT & 1CT:1.36CT	1.20 & 1.20	30 & 30	.60 & .60	.70 & .70	BH/1	16-14, 6-8
SH1137	1CT:2.42CT & 1CT:2.42CT	1.20 & 1.20	25 & 25	.60 & .60	.70 & .70	BH/1	1-3, 6-8
SH1146	1:2/2.4 & 1:0.79/1	1.00 & 1.00	35 & 35	1.00 & 1.00	.80 & .80	BH/5	1-3, 6-8
SH1286	1CT:2.4CT & 1CT:2.4CT	1.20 & 1.20	15 & 15	.30 & .30	.30 & .30	BH/1	1-3, 6-8
SHX1317	1:2CT & 1:2CS	1.20 & 1.20	35 & 35	.50 & 1.00	1.00 & 1.00	BH/6	1-3, 11-9
SHX1189	1:1.36CT & 1:2CT	1.20 & 1.20	30 & 30	.60 & .60	1.00 & 1.00	BH/7	16-14, 6-8
SHX1188	1CT:2CT & 1CT:2CT	1.20 & 1.20	30 & 30	.60 & .60	.70 & .70	BH/1	1-3, 6-8
SHX1187	1CT:2CT & 1:1	1.20 & 1.20	30 & 30	.60 & .60	.70 & .70	BH/8	1-3, 6-8
SHX1088	1CT:2CT & 1CT:2.42CT	1.20 & 1.20	35 & 35	.80 & .80	1.00 & 1.00	BH/1	1-3, 6-8
SHX1089	1CT:1CT & 1CT:1CT	1.20 & 1.20	30 & 30	.80 & .80	.70 & .70	BH/1	1-3, 6-8
SHX1098	1CT:1.26CT & 1CT:1.26CT	1.20 & 1.20	30 & 30	.60 & .60	.70 & .70	BH/1	1-3, 6-8
SHX1099	1CT:1:0.8 & 1CT:1:0.8	1.20 & 1.20	30 & 30	.80 & .80	1.00 & 1.00	BH/4	16-14, 11-9
SHX1186	1CT:1.58:2 & 1:1.65:2	1.20 & 1.20	30 & 30	.80 & .80	1.00 & 1.00	BH/9	2-4, 6-7
SHX1467	1CT:1:1 & 1CT:1:1	1.20 & 1.20	30 & 30	.80 & .80	1.00 & 1.00	BH/4	16-14, 11-9

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

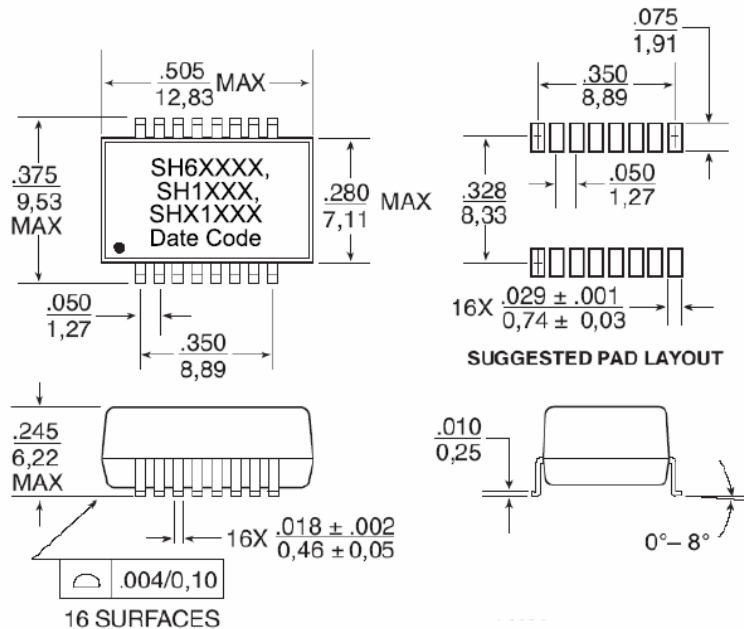
T1/CEPT/ISDN-PRI TRANSFORMERS

Dual Surface Mount, 1500Vrms, Small Package



Mechanical

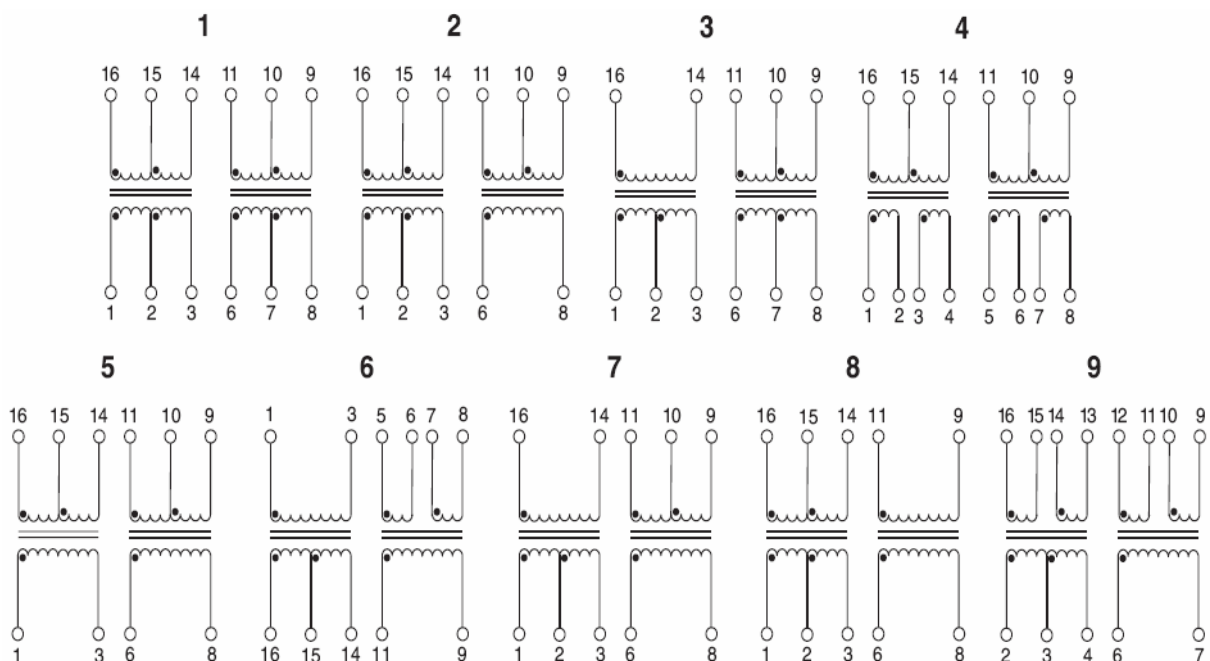
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Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

Schematics



T1/CEPT/ISDN-PRI TRANSFORMERS

Single Reinforced Insulation, 3KVrms



- For T1/CEPT line interfaces
- Matched to leading transceiver ICs
- Designed to meet ITU-T G.703
- RoHS"NL" peak solder rating 260°C
- non-RoHS peak solder rating 235°C

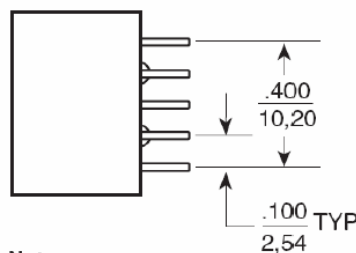
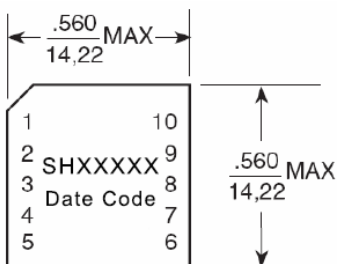
Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C (Unless Otherwise Noted)

Part Number	Turns Ratio (± 5%)	OCL@25°C (mH MIN)	C _{W/W} (pF MAX)	L _L (μH MAX)	DCR Pri (ΩMAX)	DCR Sec (ΩMAX)	Safety Agency Recognition	Package/Schematic	Primary Pins
SH65830	1.27CS:1	.800	15	0.70	0.50	0.35	C,T,U,B	IS/3	1-5
SH65831	1CS:1	.800	15	0.70	0.50	0.45	C,T,U,B	IS/3	1-5
SH65832	1:1.36CT	1.20	35	0.60	0.70	0.90	C,T,U,B	IS/4	10-6
SH65833	1CT:2CT	1.20	20	0.30-0.55	0.50	0.90	C,T,U,B	IS/1	1-5
SH65834	1:1	1.20	20	0.50	0.50	0.50	C,T,U,B	IS/2	1-5
SH65835	1CT:2CT	1.20	15	0.80	0.70	1.10	C,T,U,B	IS/1	1-5
SH65836	1CT:3CT:1	.600	30	0.80	0.70	1.70	C,T,U,B	IS/5	1-3
SH65837	1:1.08/1.36	1.50	20	0.60	0.70	0.90	C,T,U,B	IS/4	10-6
SH65838	1:1.14CT	1.50	30	1.00	0.70	0.90	C,T,U,B	IS/4	10-6
SH65839	1:1/1.26	1.50	35	0.60	0.70	1.10	C,T,U,B	IS/4	10-6
SH68646	1:1.58/2	1.50	20	0.70	0.70	1.20	C,T,U,B	IS/4	10-6
SH68788	1CT:1.41CT	1.20	20	0.80	0.60	0.80	T,U,B	IS/1	10-6

Mechanical

Schematics

IS

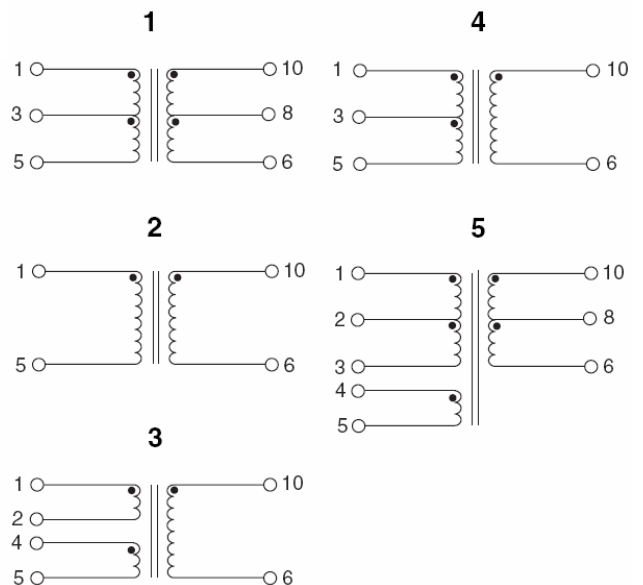


Notes:

Leads are 22 AWG solderable.
Unused pins not provided.

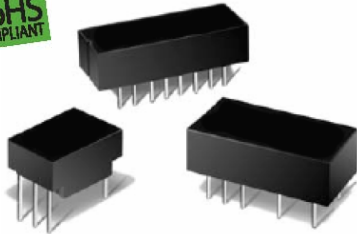
Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$



T1/CEPT/ISDN-PRI TRANSFORMERS

Single Through Hole, 1500Vrms



- Extended and standard temperature range
- Dual and single through hole models available
- Models matched to leading transceiver ICs
- Isolation Voltage: 1500Vrms MIN
- RoHS"NL" peak solder rating 260°C
- non-RoHS peak solder rating 235°C

Electrical Specifications @ 25°C

Part Number	Turns Ratio (Pri:Sec± 5%)	OCL@25°C (mH MIN)	C _{W/W} (pF MAX)	L _L (μH MAX)	DCR Pri (ΩMAX)	DCR Sec (ΩMAX)	Package/ Schematic	Primary Pins
STANDARD TEMPERATURE RANGE SINGLE TRANSFORMERS – OPERATING TEMPERATURE 0°C TO +70°C								
SH64931	1:1:1(1:2CS)	1.20	25	0.50	0.70	0.70 & 0.70	HC/2	1-2
SH64933	1CT:3CT	1.20	30	0.50	0.70	1.60	HC/4	1-5
SH64934	1:1	1.20	25	0.50	0.70	0.70	HC/1	1-2
SH64936	1CT:1	1.20	25	0.80	0.70	0.70	HC/3	1-5
SH64937	1:1.36	1.20	35	0.80	0.70	0.80	HC/1	5-6
SH64940	1.26CS:1(1:1:1.58)	0.30	30	0.60	0.80	0.60	HC/2	1-4
SH64941	1CS:1	0.80	30	0.60	0.80	0.60	HC/2	1-4
SH64942	1CS:1.31	0.80	30	0.40	0.80	0.60	HC/2	1-4
SH64943	1CT:2CT	1.20	30	0.30-0.55	0.70	1.20	HC/4	1-5
SH65351	1:2CT	1.20	40	0.50	0.70	1.30	HC/3	2-6
SH65363	1:4CT	0.50	40	1.0	0.50	1.50	HC/5	1-5
SH65379	1:1.14CT	1.20	35	0.80	0.70	0.80	HC/5	1-5
SH65388	1:1.15CT	1.50	35	0.60	0.70	0.90	HC/3	2-6
SH65389	1:1/1.26	1.50	40	0.40	0.70	0.90	HC/3	2-6
SH65415	1CT:2CT	1.20	30	0.50	0.70	1.20	HC/4	1-5
SH65558	1:2.3CT	1.20	35	0.80	0.70	1.40	HC/5	1-5
SH65586	1:1.36CT	1.20	35	0.80	0.70	0.90	HC/5	1-5
SH65755	1CT:1CT	1.20	25	0.80	0.80	0.80	HC/4	1-5
SH68644	1CT:1	0.70	20	0.70	0.20	0.80	HC/3	1-5
SH68645	1:1.36CT	0.70	20	0.70	0.50	0.40	HC/5	1-5
SH1054	1:1.5CT	1.20	30	0.60	0.70	1.00	HC/3	2-6
SH1249	1:1.26CT	1.20	60	0.80	0.90	1.00	HC/4	2-6
SH64951	1:2CT & 1:2 CT	1.20 & 1.20	35 & 35	0.50 & 0.50	0.70 & 0.70	1.20 & 1.20	HD/1	14-12,5-7
SH64952	1:2CT & 1:1.36	1.20 & 1.20	35 & 35	0.50 & 0.80	0.80 & 0.80	1.20 & 1.00	HD/2	14-12,5-7
SH64953	1:2CT & 1:2 CT	2.00 & 2.00	50 & 50	0.60 & 0.60	1.00 & 1.00	2.00 & 2.00	HD/3	14-12,10-8
SH64954	1CT:2CT & 1:1	1.20 & 1.20	30 & 30	0.30-0.55 & 0.50	0.70 & 0.70	1.20 & 0.70	HD/4	1-3,5-7
SH64955	1:1.26CT & 1.58:1	0.80 & 0.80	30 & 30	0.50 & 0.50	0.60 & 0.60	0.70 & 0.30	HD/5	1-3,5-7
SH64956	1:1CT & 2:1	0.80 & 0.80	30 & 30	0.60 & 0.60	0.50 & 0.50	0.50 & 0.20	HD/5	1-3,5-7
SH64957	1CT:1.31 & 2.62:1	1.20 & 1.20	30 & 30	0.80 & 0.80	0.60 & 0.60	0.50 & 0.30	HD/5	1-3,5-7
SH65565	1:1.15CT & 1:2CT	1.50 & 1.20	35 & 40	0.60 & 0.50	0.70 & 0.70	1.10 & 1.30	TD/1	14-12,5-7
SH65566	1:1/1.26 & 1:2CT	1.50 & 1.20	40 & 40	0.50 & 0.40	0.70 & 0.70	0.90 & 1.30	TD/1	14-12,5-7

T1/CEPT/ISDN-PRI TRANSFORMERS

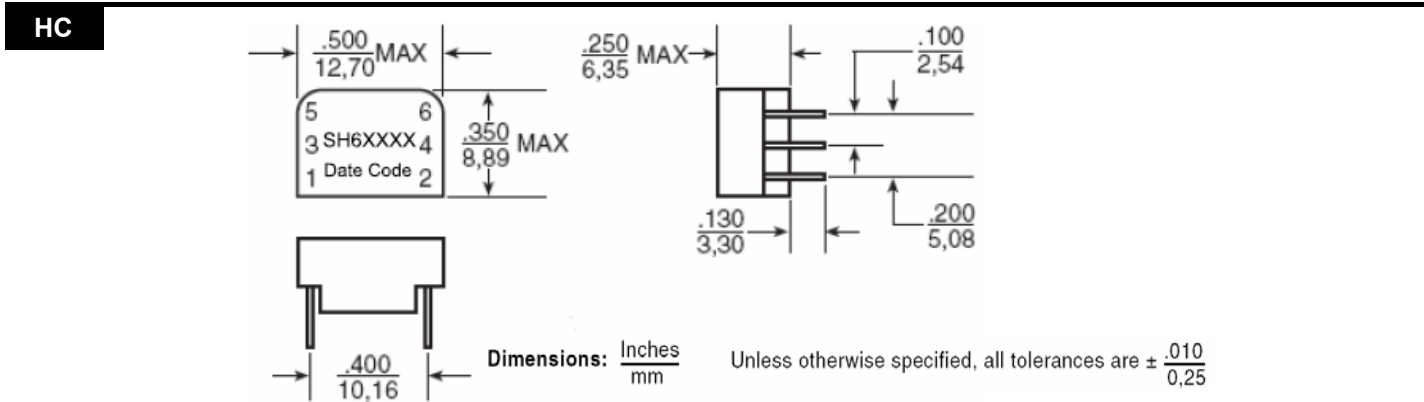
Single Through Hole, 1500Vrms



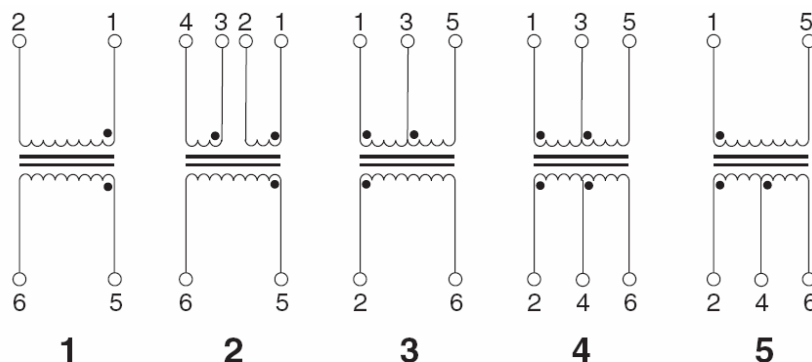
Electrical Specifications @ 25°C

Part Number	Turns Ratio (Pri:Sec± 5%)	OCL@25°C (mH MIN)	C _{w/w} (pF MAX)	L _L (μH MAX)	DCR Pri (ΩMAX)	DCR Sec (ΩMAX)	Package/ Schematic	Primary Pins
EXTENDED TEMPERATURE RANGE SINGLE TRANSFORMERS 1 – OPERATING TEMPERATURE -40°C TO +85°C								
SH65340	1:1.36	1.20	35	0.80	0.90	1.20	HC/1	5-6
SH65770	1:1.15CT	1.50	40	0.80	0.90	1.00	HC/3	2-6
SH65771	1CT:2CT	1.20	50	0.60	1.00	2.00	HC/4	2-6
SH65778	1CT:1CT	1.20	40	1.00	1.00	1.00	HC/4	1-5
SH68600	1CT:3CT	1.20	60	0.80	0.90	2.70	HC/4	1-5
SH68664	1:1/1.26	1.50	50	0.80	0.90	1.10	HC/3	2-6
SHX1252	1CT:1	1.20	40	1.00	1.00	1.00	HC/3	1-5
SH65567	1:1.15CT & 1:2CT	1.50 & 1.20	40 & 60	0.80 & 0.80	0.90 & 0.90	1.00 & 1.70	TD/1	14-12,5-7
SH65568	1:1/1.26 & 1:2CT	1.50 & 1.20	50 & 60	0.80 & 0.80	0.90 & 0.90	1.00 & 1.70	TD/1	14-12,5-7
SH65774	1CT:2CT & 1:1.36CT	1.20 & 1.20	50 & 50	0.96 & 0.80	1.00 & 1.00	1.70 & 1.20	TD/7	14-12,5-7
SH68618	1CT:1CT & 3CT:1CT:0.25	1.20 & 32.0	40 & 65	0.80 & 0.80	1.00 & 3.00	1.00 & 1.20	BD/6	1-3,11-9
SH64950	1CT:1CT & 1CT:3CT:1	1.20 & 0.60	50 & 50	0.80 & 0.80	1.00 & 0.80	1.00 & 2.00	BD/6	1-3,4-6

Mechanical



Schematics



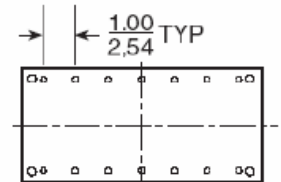
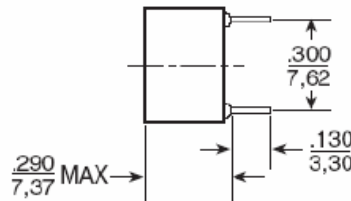
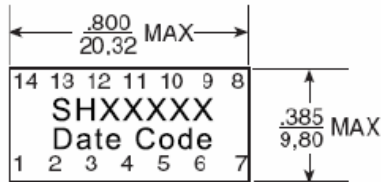
T1/CEPT/ISDN-PRI TRANSFORMERS

Single Through Hole, 1500Vrms

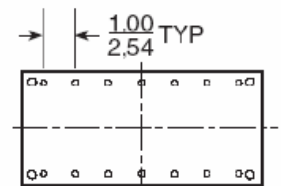
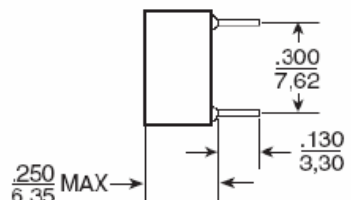
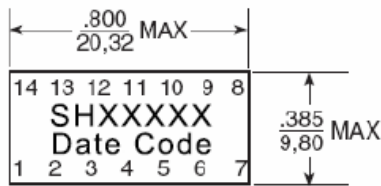


Mechanical

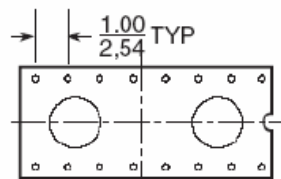
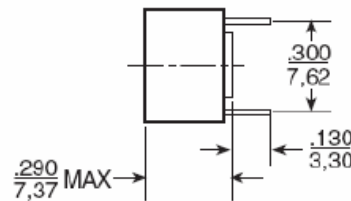
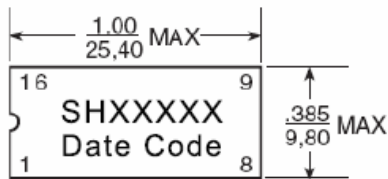
**TD
DUAL**



**HD
DUAL**



**BD
DUAL**



Note: Leads are 24 AWG solderable.

Dimensions: $\frac{\text{Inches}}{\text{mm}}$ Unless otherwise specified, all tolerances are $\pm \frac{.010}{0.25}$

Schematics

