

# ISDN U-Interface Transformers

For both 2B1Q & 4B3T ISDN U-Interface Applications

Excellent Longitudinal Balance

Designed for use with leading Transceiver Chips

Meets key parameters of ANSI T1.601-1992

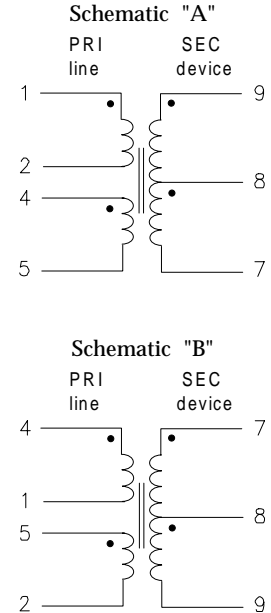
Isolation 2000 V<sub>RMS</sub> & 3000 V<sub>RMS</sub> Minimum

Surface Mount Versions Available

Manufacturer Name	I.C. P/N	Transformer P/N	High Isolation P/N
Motorola	MC145472	T-13209	T-13223
Motorola	MC145572	T-13207	T-13221
National	TP 3410	T-13211	T-13224
National	TP 3410	T-13212	T-13220
Siemens	PEB 2091	T-13214	T-13222
Siemens	PEB 2090/20901	T-13215	T-13225
SGS-Thomson	SD 5411	T-13210	T-13219

## Electrical Specifications at 25°C

Part Number	Turns Ratio (± 3%)	OCL <sup>(1,3)</sup> Pri ±6% (mH)	Line Side Pins	DCR <sup>(1)</sup> max. (Ω)	DCR <sup>(2)</sup> max. (Ω)	DC Bias (mA)	Coding	Isolation (V <sub>RMS</sub> )	Schem. Style <sup>(3)</sup>
T-13207	1.25:1	28.0	(1-5)	12	8	80	2B1Q	2000	A
T-13209	2.00:1	27.0	(1-5)	11.6	6.4	60	2B1Q	2000	A
T-13210	1.50:1	15.0	(4-2)	16	2.5	60	2B1Q	2000	B
T-13211	1.50:1	27.0	(4-2)	20	3.0	60	2B1Q	2000	B
T-13212	1.50:1	27.0	(1-5)	20	3.0	60	2B1Q	2000	A
T-13214	1.65:1	15.5	(1-5)	6.0	3.5	60	2B1Q	2000	A
T-13215	1.32:1	7.7	(1-5)	2.4	2.7	60	4B3T	2000	A
T-13219	1.50:1	15.0	(4-2)	18	3.0	60	2B1Q	3000	B
T-13220	1.50:1	27.0	(1-5)	20	3.0	60	2B1Q	3000	A
T-13221	1.25:1	25.5	(1-5)	13	9.0	80	2B1Q	3000	A
T-13222	1.65:1	15.5	(1-5)	6.0	3.5	60	2B1Q	3000	A
T-13223	2.00:1	27.0	(1-5)	12.6	7.4	60	2B1Q	3000	A
T-13224	1.50:1	27.0	(4-2)	20	3.0	60	2B1Q	3000	B
T-13225	1.32:1	7.7	(1-5)	2.7	3.0	60	4B3T	3000	A



1. Line Side.
2. Device Side
3. OCL Tested @10 kHz / 700 mV, pins 2&4 shorted for Schem. "A"; pins 1&5 shorted for Schem. "B."
3. For all parts unused Pin # 6 can be removed for keying to printed circuit board. Add suffix "-9"

**Longitudinal Balance (2B1Q Coding)**  
 281 Hz to 40 KHz      55 dB min.  
 > 40 KHz              -20 dB/decade

**Longitudinal Balance (4B3T Coding)**  
 5 KHz                    20 dB min.  
 20 KHz to 150 KHz    40 dB min.  
 1 MHz                    36 dB min.

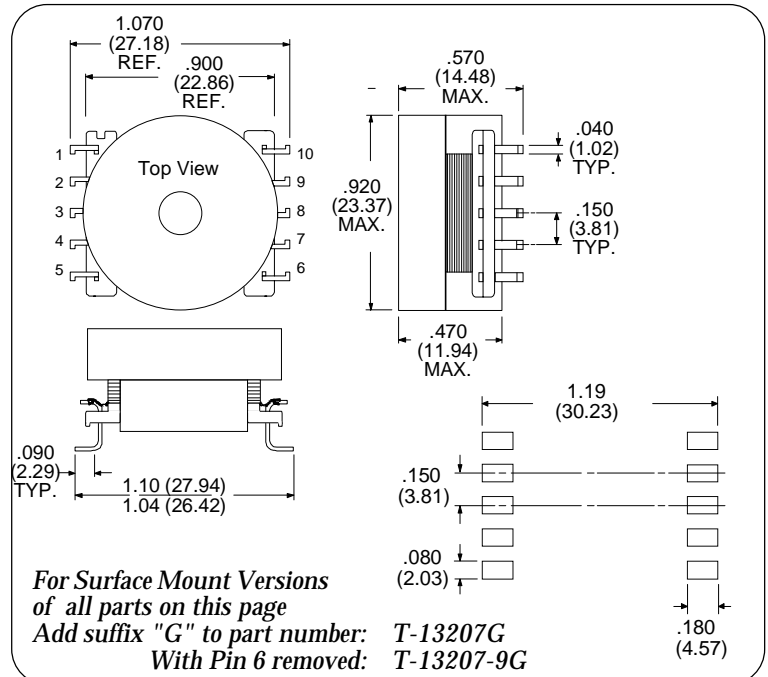
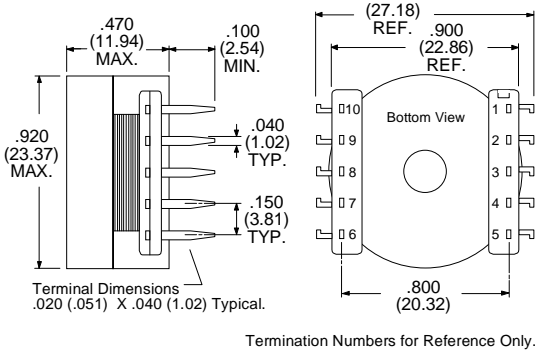
**Return Loss**  
 10 and 25 KHz      20 dB min.

Operating Temp. Range -40°C to +85°C

Primary is Line Side / Secondary is Chip Side

**Surge Voltage Capability:**  
 Metallic Voltage: 800 V peak, 10/700 μs  
 Longitudinal Voltage: 2400 V peak, 10/560 μs

## Package Physical Dimensions in inches (mm)



For Surface Mount Versions of all parts on this page  
 Add suffix "G" to part number: T-13207G  
 With Pin 6 removed: T-13207-9G