

British Standard Institute (BSI) Approved Transformers for Voice/Data/PCMCIA Modem Applications

▲ Safety Agency

- SPT-032, SPT-034, SPT-046, SPT-047, SPT-048, SPT-049 and SPT-050 meet United States (FCC) and Canadian (DOC) standards
- Certified to BSI (British Standards Institute) standard BS EN 60950.

▲ Specifications

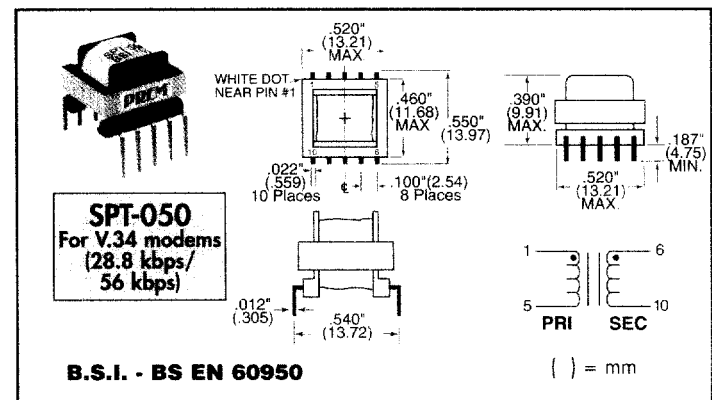
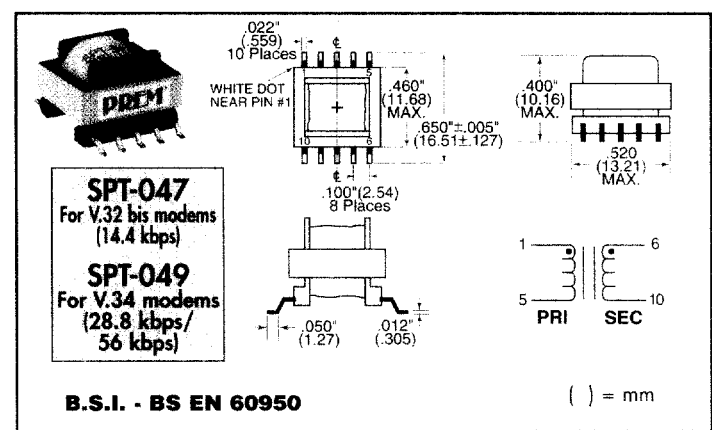
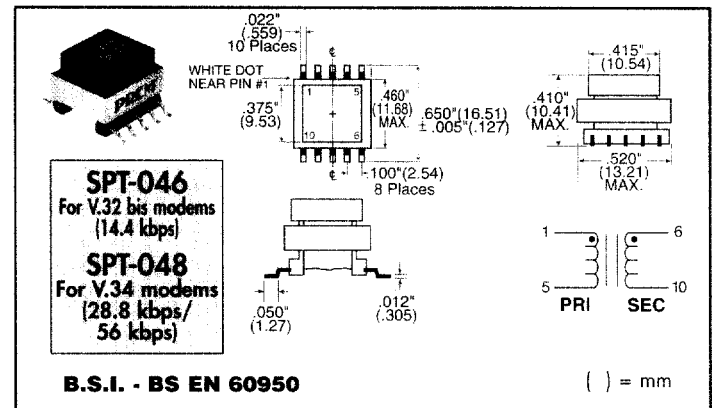
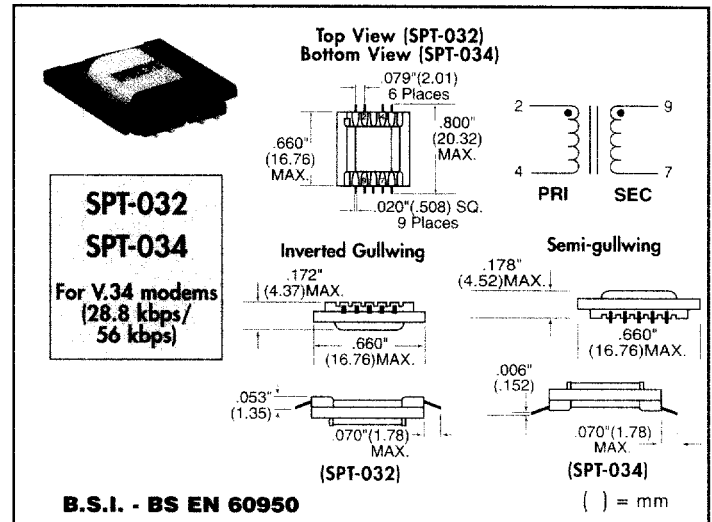
- Rated for maximum working voltage of 250 Volts.
- Designed for dry (no DC) circuits.
- Impedance ratios of 600Ω to 600Ω.
- Hipot rating is 1500 VRMS for 1 minute minimum.
- Utilizes supplementary insulations.

▲ Configuration

- Gull-wing lead style (except SPT-050) and small package dimensions.
- Designed for automated pick and place assembly equipment.
- Shipped in JEDEC style anti-static, non-sloughing trays designed to maintain lead coplanarity.
- SPT-046 and SPT-047 have a cap so they can be placed by a vacuum-tipped pickup head on some automated SMT assembly equipment.
- Two lead styles available: SPT-032 & SPT-034. The extremely low profile SPT-032 has an inverted gull-wing form so it can be placed within a square hole in the printed circuit board for further height savings.

PREM	SPT-032 ¹	SPT-034 ¹	SPT-046 ²	SPT-047 ²	SPT-048 ³	SPT-049 ³	SPT-050 ³
Suitable for Modem Speeds up to and including:	V.34	V.34	V.32bis	V.32bis	V.34	V.34	V.34
IMPEDANCE (Ω)	PRI	600	600	600	600	600	600
	SEC	600	600	600	600	600	600
URNS RATIO ± 2%	1:1	1:1	1:1	1:1	1:1	1:1	1:1
MAXIMUM DC UNBALANCE	0mA	0mA	0mA	0mA	0mA	0mA	0mA
INS. LOSS REF @ 1KHz	3.3dB	3.3dB	2.0dB	2.0dB	3.15dB	3.15dB	3.15dB
RETURN LOSS MIN. @ 300Hz -3500Hz	25dB*	25dB*	18dB	18dB	15dB	15dB	15dB
T.H.D. @ 0dBm 300Hz (TYP.)	-60dB	-60dB	-60dB	-60dB	-60dB	-60dB	-60dB
T.H.D. @ -10dBm 600Hz	-82dB Max.	-82dB Max.	-76dB Typ.	-76dB Typ.	-82dB Typ.	-82dB Typ.	-82dB Typ.
DC RESISTANCE ± 10%	PRI	155Ω	155Ω	92.5Ω	92.5Ω	128.6Ω	128.6Ω
	SEC	159Ω	159Ω	126.7Ω	126.7Ω	176.0Ω	176.0Ω
FREQUENCY RESPONSE @ 200-4000Hz	±0.2dB	±0.2dB	±0.3dB	±0.3dB	±0.3dB	±0.3dB	±0.3dB
MEETS LONGITUDINAL BAL. FCC PART 68 & IEEE 455	YES	YES	YES	YES	YES	YES	YES
DIELECTRIC STRENGTH 1 MINUTE MIN.	1500 Vac	1500 Vac	1500 Vac	1500 Vac	1500 Vac	1500 Vac	1500 Vac

1- Resistive load of 294 ohms was used to reflect 600 ohms on all test parameters.
 2- Resistive load of 400 ohms was used to reflect 600 ohms on all test parameters.
 3- Resistive load of 310 ohms was used to reflect 600 ohms on all test parameters.
 * 300Hz only.



Telephony-Voice, Data, and xDSL

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PART		SPT-042	SPT-043	SPT-044	SPT-2000	SPT-2001	SPT-2002	SPT-2003	SPT-2004
IMPEDANCE (Ω)	PRIMARY	600	600	600split	•	135nom.	•	100 \pm 10%	100nom.
	SECONDARY	600	600	600split	•	32	•	400	100
TURNS RATIO		1:1 \pm 2%	1:1 \pm 2%	1:1 \pm 2%	1.8:1 \pm 1%	2:1 \pm 2%	1:1.36 \pm 2%	1:2 \pm 1%	1:1 \pm 1%
MAXIMUM DC UNBALANCE		0mA	0mA	0mA	0mA	160mA	0mA	0mA	0mA
INSERTION LOSS		1.2dB TYP@1KHz	1.0dB TYP@1KHz	1.0dB TYP@1KHz	•	0.5dB MAX@300KHz	•	0.2dB MAX@772KHz	•
RETURN LOSS MINIMUM		20dB 300Hz-3.5KHz	20dB 300Hz-4KHz	20dB 300Hz-4KHz	•	16.5dB 40KHz-300KHz	•	15.0dB 100KHz-4MHz	10.0dB 30KHz-1.1MHz
T.H.D.	@0dBm 300Hz	-50dB TYP	-58dB TYP	-58dB TYP	•	-70dB MIN 40KHz@14dBm	•	•	•
	@-10dBm 600Hz	-64dB MAX	-72dB TYP	-72dB TYP	•	•	•	•	•
TOTAL DCR \pm 10% UNLESS NOTED	PRIMARY	56.0 Ω	56.0 Ω	56.0 Ω	2.35 Ω MAX	2.50 Ω MAX	0.200 Ω MAX	0.600 Ω MAX	2.60 Ω
	SECONDARY	73.0 Ω	73.0 Ω	73.0 Ω	1.0 Ω MAX	1.0 Ω MAX	0.500 Ω MAX	1.20 Ω MAX	2.25 Ω
FREQUENCY RESPONSE		\pm 0.3dB 200-4KHz	\pm 0.3dB 200-4KHz	\pm 0.3dB 200-4KHz	•	\pm 0.2dB 40KHz-300KHz	•	\pm 0.5dB 100K-4.0MHz*	•
MEETS LONGITUDINAL BALANCE PART 68.310		YES	YES	YES	•	•	35dB MIN @1.544MHz	35dB MIN @1.544MHz	40dB MIN @1.1MHz
DIELECTRIC STRENGTH PRI-SEC-CORE		1500VAC	1500VAC	1500VAC	1500VAC	1500VAC	1500VAC	1500VDC	1250VAC
L PRIMARY @ 0.100V		•	•	•	1.94mH \pm 6% @10KHz	2.0mH \pm 6% @10KHz	700 μ Hy MIN @1.0KHz	•	25.4mH MIN @10KHz
MAX L LEAKAGE @ 0.100V		•	•	•	•	11.0 μ Hy @100KHz(1-5)	1.3 μ Hy@10KHz (1-3);100mA AC	•	•

SPT-2000: For Level One SK70704/70707 1168Kbps HDSL Data Pump applications
 SPT-2001: For Brooktree NT8921/BT8970 1168 HDSL applications
 SPT-2002: For Dallas Semiconductor DS2125Q/DS2153Q T1/E1 applications

SPT-2003: T1/E1 Pulse transformer
 SPT-2004: For Analog Devices ADmnp 910 ADSL applications
 * REF. 772KHz

