

MMI

**FILTER
(10 BASE-T)**

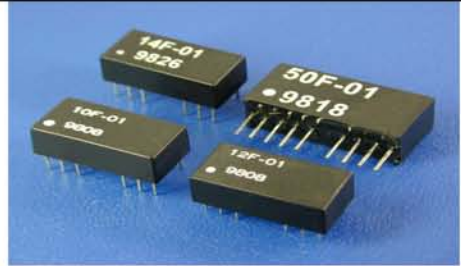


10/12/14/50F SERIES

10 BASE-T THROUGH HOLE INTERFACE MODULES

FEATURES

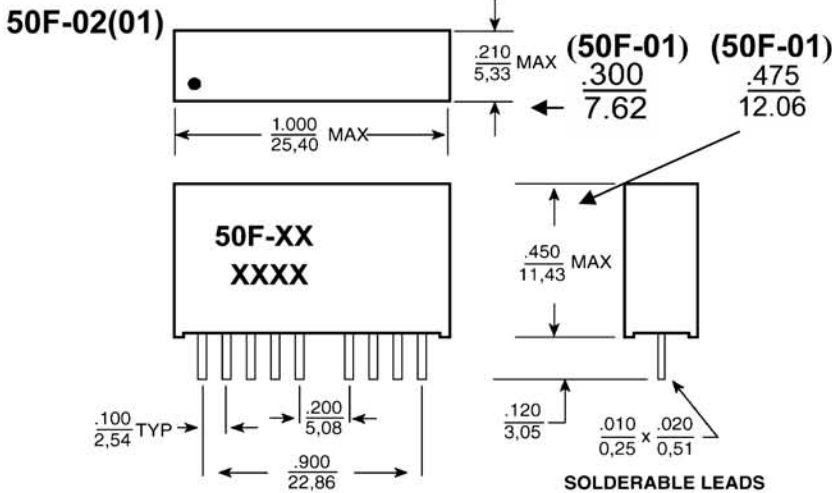
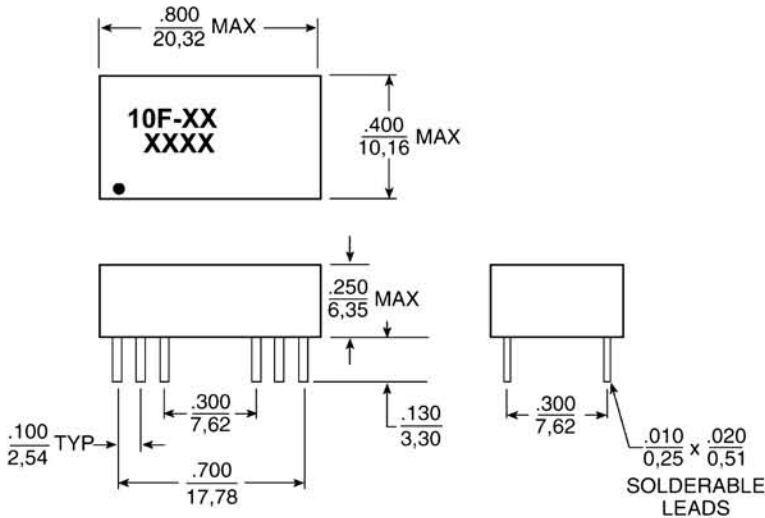
- For MAUs, hubs, and motherboard applications.
- High performance for maximum EMI suppression.
- Minimum 1500 Vrms isolation.
- Compatible with multiple 10Base-T chips.



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

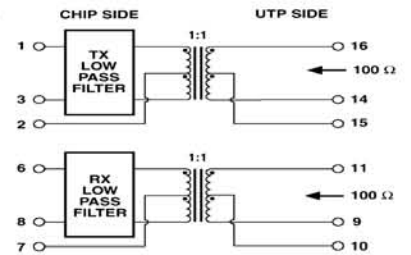
PART NUMBER	Package Type (Pins)	Insertion Loss 1 to 10 MHz (dB MAX)	Attenuation (dB MIN)				Return Loss 1 to 10MHz 100Ω±15Ω (dB MIN)	Crosstalk 1 to 30 MHz (dB MIN)	Common Mode Rejection (dB MIN)	
			30-50 MHz		50-100MHz				50MHz	100MHz
			TX	RX	TX	RX				
10F-01	DIL(16)	-1.0	-32	-20	-25	-25	-15	-30	-25	
12F-01	DIL(16)	-1.0	-30	-15	-35	-20	-15	-30	-30	
14F-01	DIL(16)	-1.0	-30	-15	-35	-20	-15	-30	-30	
50F-02	SIL(10)	-1.0	-25	-10	-27	-30	-15	-30	-45	
50F-01	SIL(10)	-1.0	-37	-15	-40	-40	-15	-40	-45	

MARKINGS AND DIMENSION

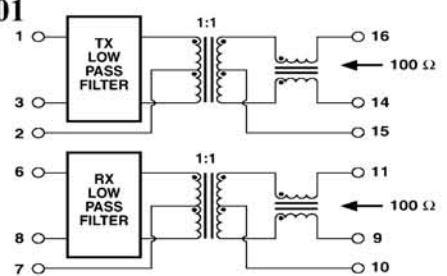


PIN CONNECTION

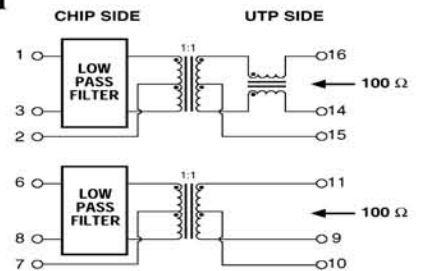
10F-01



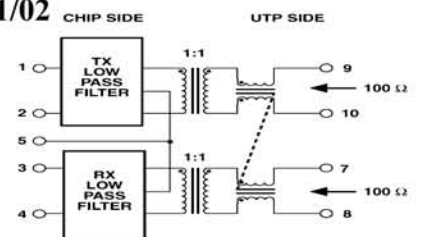
12F-01



14F-01



50F-01/02



Dimensions: inches/mm Unless otherwise specified, all tolerances are ±.010/±0.25

FEATURES

- Low profile surface mount package
- 235°C peak infrared reflow temperature rating.

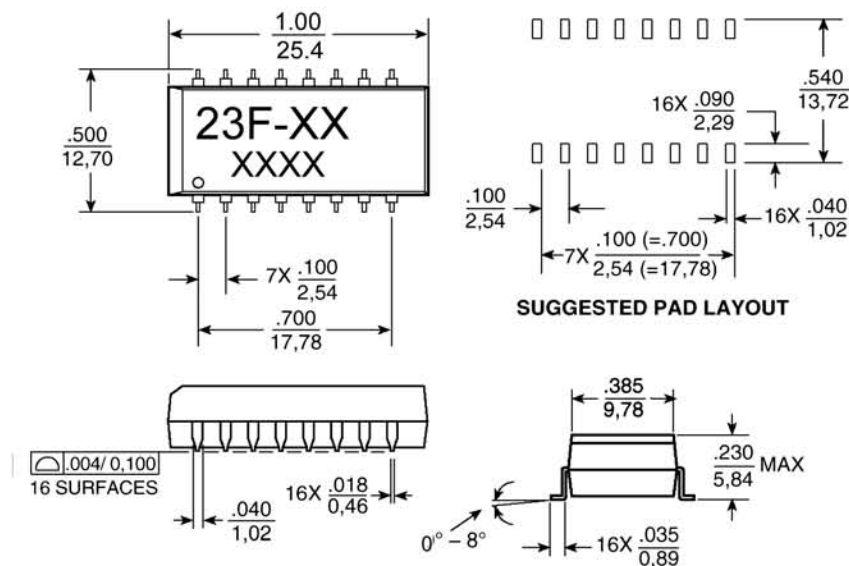


Electrical Specifications @25°C -Operating Temperature 0°C to +70°C

PART NUMBER	Insertion Loss 1 to 10 MHz (dB MAX)	Attenuation (XMIT) (dB MIN)			Return Loss 5 to 10MHz (dB MIN)		Crosstalk (dB MIN)	Common Mode Rejection (dB MIN)					Hi-Pot (Vrms MIN)
		30MHz	40MHz	100MHz	100Ω	98±13Ω		5-10MHz	5MHz	10MHz	50MHz	100MHz	
23F-02	-1.0	-30	-35	-35	-18	-15	-35	-60	-60	-55	-50	-45	1500
23F-03	-6.0	-35	-35	-35	-18	-15	-35	-60	-60	-55	-50	-45	1500
23F-04	-6.5	-35	-35	-35	-18	-15	-35	-60	-60	-55	-50	-45	1500
23F-05	-1.0	-30	-27	-27	-18	-15	-30	-40	-30	-50	-45	-	1500
23F-06	-5.5	-30	-30	-35	-18	-15	-30	-35	-30	-55	-50	-	1500
23F-07	-6.0	-30	-27	-27	-18	-15	-25	-40	-35	-45	-30	-	1500
23F-08	-5.0	-30	-35	-40	-18	-15	-25	-35	-30	-55	-50	-	1500
23F-09	-5.0	-30	-35	-40	-18	-15	-25	-35	-30	-55	-50	-	1500
23F-10	-1.0	-30	-27	-27	-18	-15	-35	-40	-35	-45	-45	-	1500

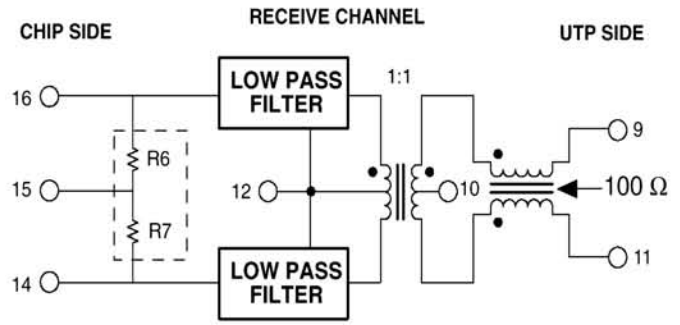
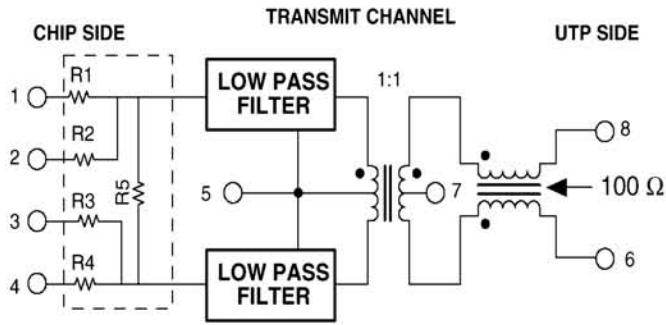
Part Number	IC Manufacturer	R1	R2	R3	R4	R5	R6	R7
23F-02	Various	N/A	N/A	N/A	N/A	N/A	N/A	N/A
23F-03	AMD	TXD(+)=61.9	TXP(+)=422	TXD(-)=61.9	TXP(-)=422	1.2k	RX(+)=49.9	RX(-)=49.9
23F-04	National	TXOD(-)=274	TXO(+)=66.5	TXO(-)=66.5	TXOD(+)=274	806	RX(+)=49.9	RX(-)=49.9
23F-06	National	348.0	53.6	53.6	348.0	806	49.9	49.9
23F-07	AMD	61.9	422.0	61.9	422.0	1,210	49.9	49.9
23F-08	LSI	390.0	63.4	390	63.4	N/A	49.9	49.9
23F-09	Motorola	39.0	N/A	39	N/A	N/A	49.9	49.9

MARKINGS AND DIMENSION



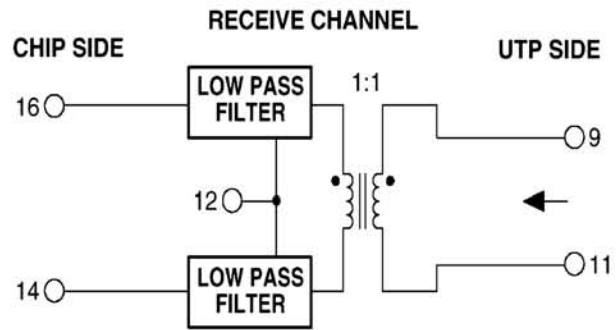
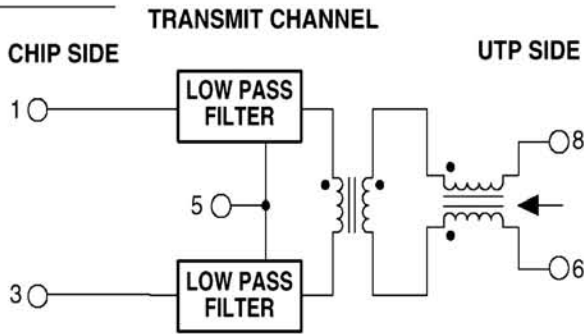
PIN CONNECTION

23F-02,23F-03,23F-04



The 23F-02 does not contain resistors. They are an external configuration.

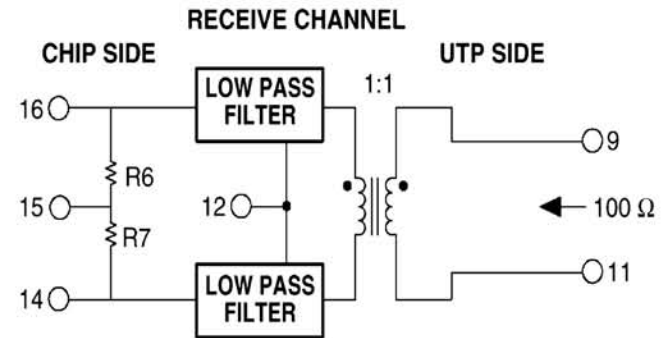
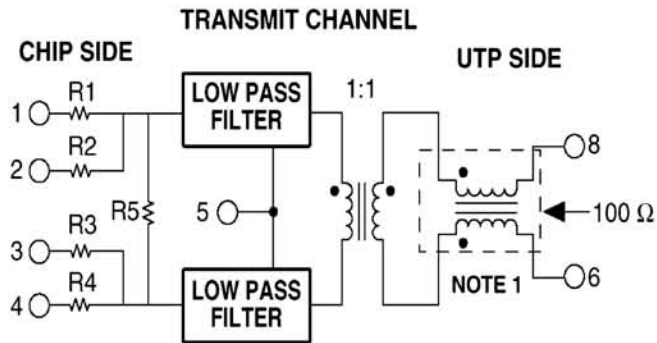
23F-10,23F-05



Turns Ratio for Transmit: 23F-05 is 1:1; 23F-10 is $1:\sqrt{2}$.

NOTE: The 23F-05 is designed for use with most transceivers requiring a turns ratio of 1:1 on transmit. The 23F-10 is designed for use with DEC and most other transceivers requiring a turns ratio of $1:\sqrt{2}$ on transmit.

23F-06,23F-07,23F-08,23F-09



Note: Common Mode Choke on transmit channel for 23F-06,23F-07,23F-08



80F SERIES

10BASE-QUAD SMT TRANSFORMER MODULES

FEATURES

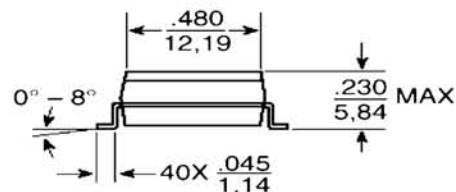
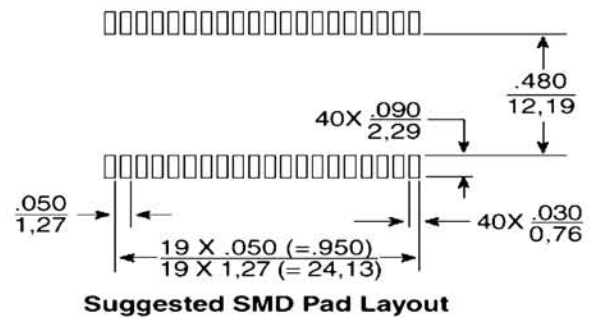
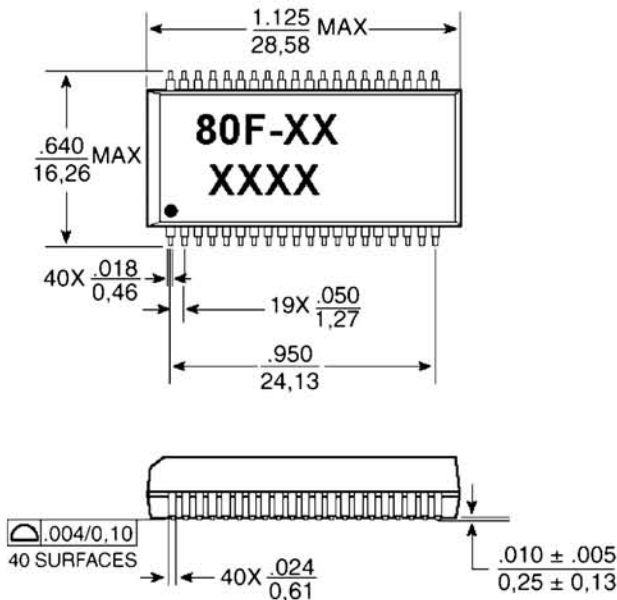
- IC-grade transfer molded package withstands 235°C peak temperature profile.



ELECTRICAL SPECIFICATIONS @25°C-Operating temperature 0°C TO 70°C

Part Number	Transformer Turns Ratio (±2%) Transmit	Sine Wave Inductance OCL (μH min)	Interwinding Capacitance C _{ww} (Pf max)	Leakage Inductance L _{LL} (μH max)	Return Loss 5 to 10 MHz (dB min)		Common Mode Rejection (dB min) XMIT					Hipot (V _{RMS} min)
					100Ω	98±13Ω	5 MHz	10 MHz	50 MHz	100 MHz	200 MHz	
80F-03L	1CT:1CT	150	10	0.30	-20	-15	-60	-50	-35	-25	-20	1500
80F-01L	1CT:1CT	150	10	0.30	-20	-15	-60	-50	-35	-25	-20	1500
80F-07L	1CT:√2CT	150	10	0.30	-20	-15	-60	-50	-30	-25	-20	1500
80F-10L	1CT:√2CT	150	10	0.30	-20	-15	-60	-50	-30	-20	-15	1500
80F-09	1CT:2CT	180	10	0.30	-20	-15	-50	-40	-30	-20	-14	1500
80F-10	1CT:1CT	150	10	0.30	-20	-15	-60	-50	-34	-25	-18	1500

MARKINGS AND DIMENSION

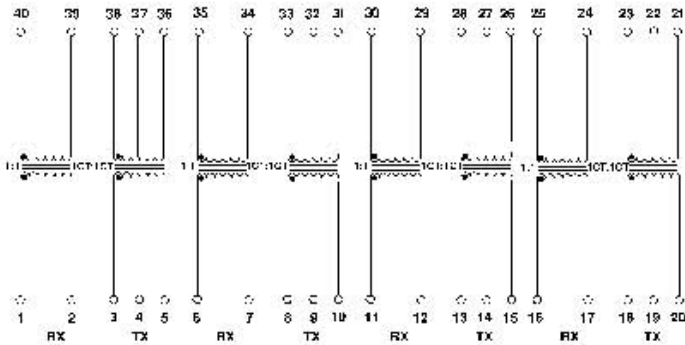


Dimensions: inches/mm

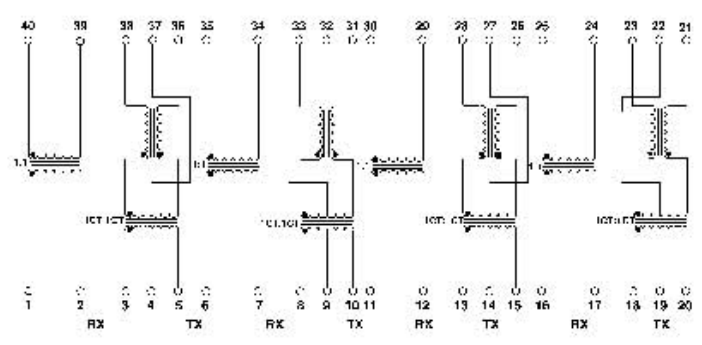
Unless otherwise specified, all tolerances are ±.010/±0.25

SCHEMATICS

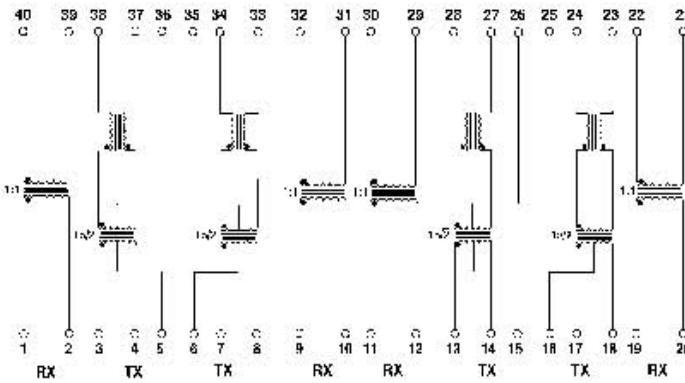
80F-01L



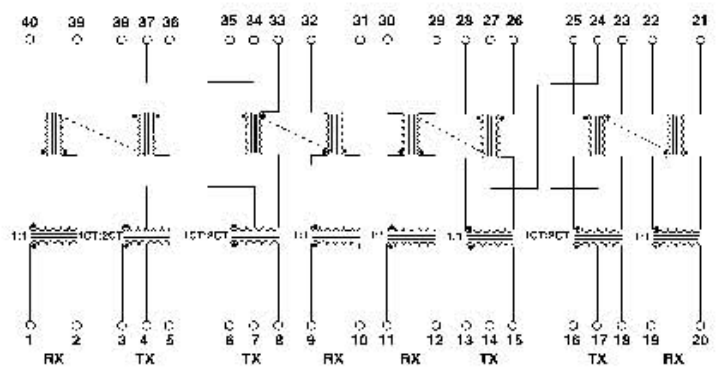
80F-03L



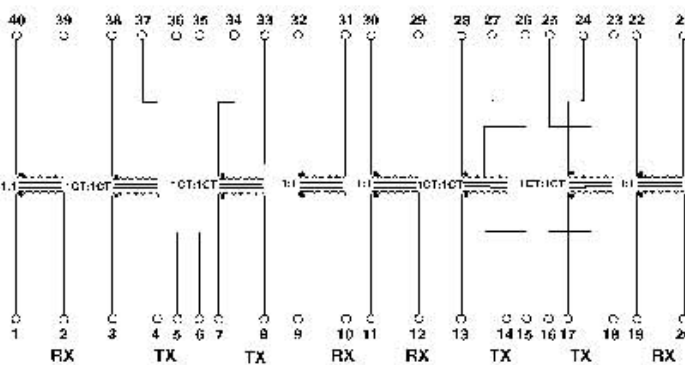
80F-07L



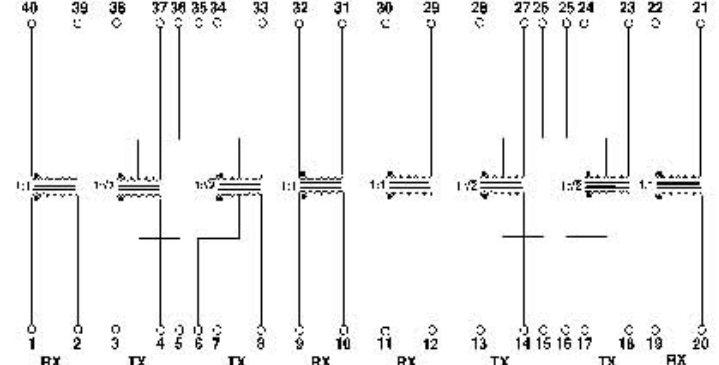
80F-09



80F-10



80F-10L





80F SERIES 10BASE-QUAD SMT TRANSFORMER MODULES

FEATURES

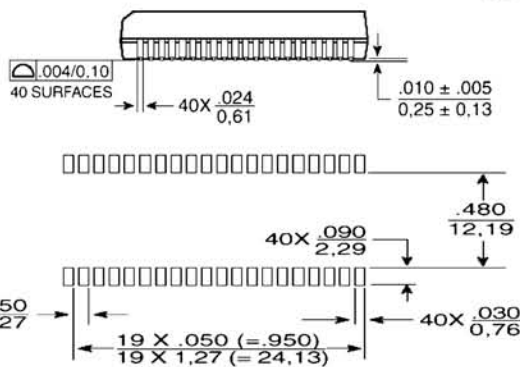
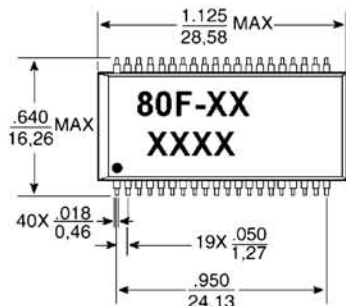
- IC-grade transfer molded package withstands 235°C peak temperature profile.



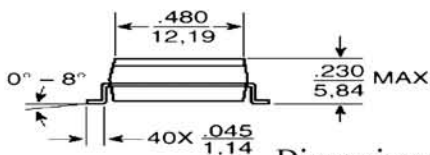
ELECTRICAL SPECIFICATIONS @25°C-Operating temperature 0°C TO 70°C

Part Number	Transformer Turns Ratio (±2%)		Sine Wave Inductance OCL (μH min)	Interwinding Capacitance C _{ww} (Pf max)	Leakage Inductance L _L (μH max)	Return Loss 5 to 10 MHz (dB min)		Common Mode Rejection (dB min) XMIT					Hipot (V _{RMS} min)
	RCV	XMIT				100Ω	98±13Ω	5 MHz	10 MHz	50 MHz	100 MHz	200 MHz	
80F-11	1:1	1CT:1CT	180	10	0.30	-20	-15	-40	-30	-20	-15	-10	1500
80F-12	1:1	1CT:1CT	150	10	0.30	-20	-15	-60	-50	-30	-20	-15	1500
80F-13	1:1	1CT:1CT	150	10	0.30	-20	-15	-60	-60	-40	-30	-20	1500

MARKINGS AND DIMENSION



Suggested SMD Pad Layout

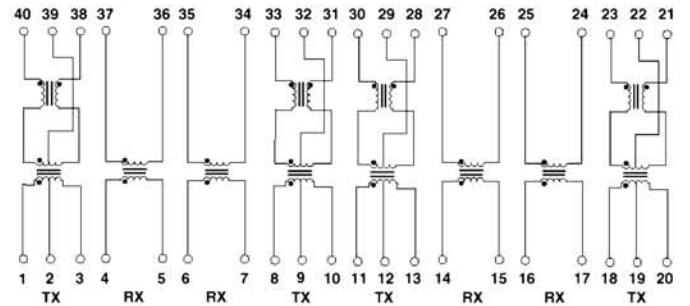


Dimensions: inches/mm

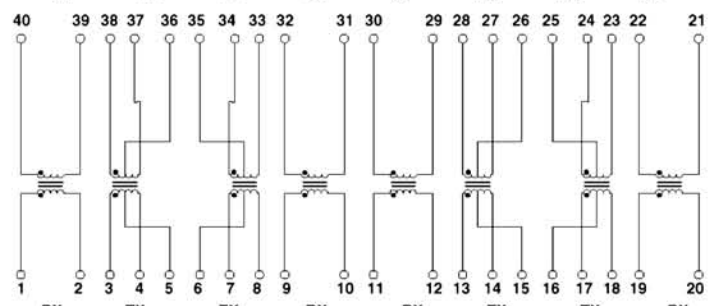
Unless otherwise specified, all tolerances are ±.010/±0.25

SCHEMATIC

80F-11



80F-12



80F-13

