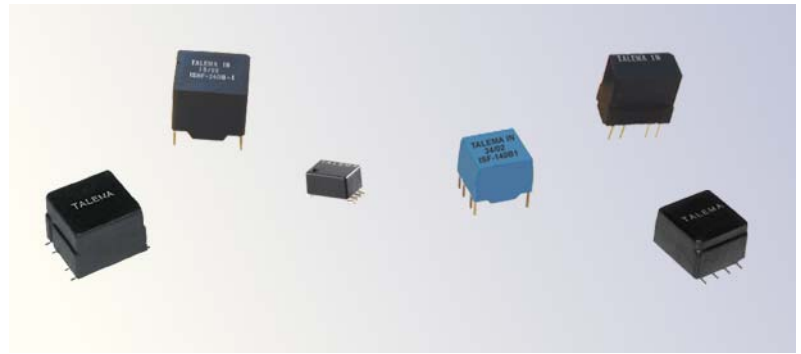




IC - S₀ Single Interface Transformer Selection Guide

Talema manufactures a wide range of transformers for all S₀ ISDN applications. A complete listing of transceiver IC's with recommended Talema transformers is listed on the following cross reference chart.



Performance has been proven in the many design-in's of our products in these applications. Quality and consistency is guaranteed through 100% testing of the specified parameters for Primary Inductance, Leakage Inductance, Turns Ratio, DC resistance and Interwinding Capacitance. This ensures that the Return Loss and Pulse Waveshape requirements for S-Interface can be met. Additionally, all parts are tested for 1500V minimum isolation.

Performance has been proven in the many design-in's of our products in these applications. Quality and consistency is guaranteed through 100% testing of the specified parameters for Primary Inductance, Leakage Inductance, Turns Ratio, DC resistance and Interwinding Capacitance. This ensures that the Return Loss and Pulse Waveshape requirements for S-Interface can be met. Additionally, all parts are tested for 1500V minimum isolation.

Standard Packaging: SMD styles - Tape and Reel; TH T styles - Anti Static tubes.

ISDN IC - S₀ Interface Transformer Cross Reference Guide

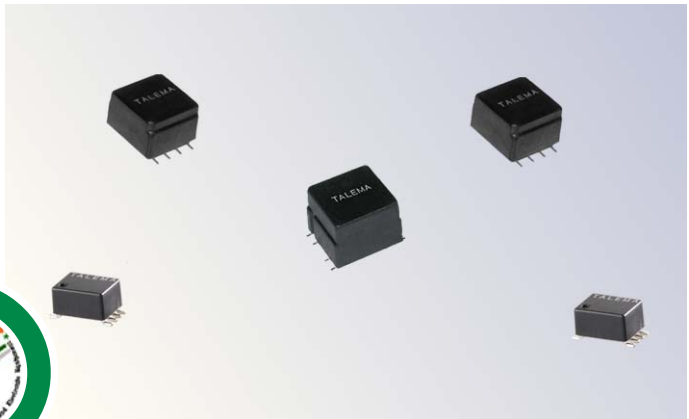
IC Manufacturer	IC Part Number	Talema part Number						
		Through Hole			Surface Mount			
		Flat	Vertical	3kV Flat	Miniature	Compact	Standard	3kV
Alcatel Micro	MTC2028, MTC20276, MTC20277 MTC20279, MTC202172	ISF-120A1	ISV-120A1	ISHF-220A1	ISJ-140B	SMJ-120A	SWJ-140B	SHJ-220A
		ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140D	SMJ-140B	SWJ-140C	SHJ-240B or C
Cologne Chip	HFC-Sxxx Series	ISF-120A1	ISV-120A1	ISHF-220A1	ISJ-140B	SMJ-120A	SWJ-140B	SHJ-220A
		ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140D	SMJ-140B	SWJ-140C	SHJ-240B or C
Legerity (AMD)	AM79C30A, AM79C32A	ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140B	SMJ-140B	SWJ-140B	SHJ-220B
					ISJ-140D		SWJ-140C	SHJ-240C
Lucent	T7234, T7250, T7252, T7254, T7256, T7259, T7340, 79000	ISF-130B1	ISV-130B1	ISHF-230B1		SMJ-130B	SWJ-130B	SHJ-230B
							SWJ-130D	
	T7901, T7903	ISF-120A1	ISV-120A1	ISHF-220A1	ISJ-140B	SMJ-120A	SWJ-140B	SHJ-220A
		ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140D	SMJ-140B	SWJ-140C	SHJ-240B or C
Mietec	MTC-2072	ISF-120A1	ISV-120A1	ISHF-220A1	ISJ-140B	SMJ-120A	SWJ-140B	SHJ-220A
		ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140D	SMJ-140B	SWJ-140C	SHJ-240B or C
Mitel	MT8930, MT8931	ISF-120A1	ISV-120A1	ISHF-220A1	ISJ-140B	SMJ-120A	SWJ-140B	SHJ-220A
		ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140D	SMJ-140B	SWJ-140C	SHJ-240B or C
Motorola	MC145474, 145475	ISF-100B1	ISV-100B1	ISHF-200B1	ISJ-100B	SMJ-100B	SWJ-100B	SHJ-200B
					ISJ-100D		SWJ-100C	SHJ-200C
	MC145574	ISF-130B1	ISV-130B1	ISHF-230B1		SMJ-130B	SWJ-130B	SHJ-230B
							SWJ-130D	SHJ-230C
National	TP3420, TP3421	ISF-120A1	ISV-120A1	ISHF-220A1	ISJ-140B	SMJ-120A	SWJ-140B	SHJ-220A
		ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140D	SMJ-140B	SWJ-140C	SHJ-240B or C
NEC	D98201	ISF-120A1	ISV-120A1	ISHF-220A1	ISJ-140B	SMJ-120A	SWJ-140B	SHJ-220A
		ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140D	SMJ-140B	SWJ-140C	SHJ-240B or C
SGS	ST5420, ST5421	ISF-120A1	ISV-120A1	ISHF-220A1	ISJ-140B	SMJ-120A	SWJ-140B	SHJ-220A
		ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140D	SMJ-140B	SWJ-140C	SHJ-240B or C
Infineon	PEB80900, PEF80912, 80913 PEF81912, 81913, 82912, 82913 PEF81902, 82902	ISF-120A1	ISV-120A1	ISHF-220A1	ISJ-140B	SMJ-120A	SWJ-140B	SHJ-220A
		ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140D	SMJ-140B	SWJ-140C	SHJ-240B or C
	PEB/PEF3081, 3086 PSB/PSF3186, 21150 PSB21381, 21382, 21384	ISF-100B1	ISV-100B1	ISHF-200B1	ISJ-100B	SMJ-100B	SWJ-100B	SHJ-200B
					ISJ-100D		SWJ-100C	SHJ-200C
VLSI	VNS80000	ISF-120A1	ISV-120A1	ISHF-220A1	ISJ-140B	SMJ-120A	SWJ-140B	SHJ-220A
		ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140D	SMJ-140B	SWJ-140C	SHJ-240B or C
Yamaha	YM7505	ISF-120A1	ISV-120A1	ISHF-220A1	ISJ-140B	SMJ-120A	SWJ-140B	SHJ-220A
		ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140D	SMJ-140B	SWJ-140C	SHJ-240B or C
Zarlink	MT8930/8931	ISF-120A1	ISV-120A1	ISHF-220A1	ISJ-140B	SMJ-120A	SWJ-140B	SHJ-220A
		ISF-140B1	ISV-140B1	ISHF-240B1	ISJ-140D	SMJ-140B	SWJ-140C	SHJ-240B or C



ISDN - S₀ SMD Single Interface Transformers

Features

- designed for optimum compatibility with all established interface IC's
- excellent and consistent balance between windings
- compact sizes in through-hole and surface mount packages
- complies fully with CCITT.I.430 recommendations and corresponding national standards for S-Interface
- manufactured in ISO-9001:2000, TS-16949:2002 and ISO-14001:2001 certified Talema facility
- fully RoHS compliant and meets lead free reflow level J-STD-020C
- operating temperature: 0 to 85°C



Electrical Specifications @ 25°C

Turns Ratio: **Bold** = IC side

ISJ, SMJ & SWJ SMD Series comply with Basic Insulation Level EN60950, UL1950 and UL1450

Part Number	L _p (mH min)	Turns Ratio	L _L (μH)	A _{DC} (mA)	C _C (pF Max)	R _{CU_P} (Ohms)	R _{CU_S} (Ohms)	V _P (Vrms)	Schematic
ISJ-100B	25	1:1:1:1	2	--	60	3.8	3.8	1500	B
ISJ-140B	25	1:1: 2:2	2	--	50	4.0	8.0	1500	B
SMJ-100B	30	1:1:1:1	5	4	100	1.65	1.7	1500	B
SMJ-120A	30	1:1:4	5	4	100	1.65	3.4	1500	A
SMJ-130B	30	1:1: 2,5:2,5	5	4	100	1.65	4.4	1500	B
SMJ-140B	30	1:1: 2:2	5	4	100	1.65	3.4	1500	B
SWJ-100B or C	30	1/1:1/1	10	5	150	1.7	2.0	1500	B/C
SWJ-130B	30	1/1: 2,5/2,5	10	5	150	1.7	4.6	1500	B
SWJ-140B or C	30	1/1: 2/2	10	5	150	1.7	4.0	1500	B/C

SHJ Series Interface Transformers comply with Reinforced Insulation Level EN60950 and UL1950 **

SHJ-200B, C or D	30	1:1:1:1	10	5	45	1.7	1.9	3000	B/C/D
SHJ-220A	30	1:1:4	10	5	45	1.7	3.7	3000	A
SHJ-230B, C or D	30	1:1: 2,5:2,5	10	5	45	1.7	4.7	3000	B/C/D
SHJ-240B, C or D	30	1:1: 2:2	10	5	45	1.7	3.7	3000	B/C/D

Test Conditions:

Inductance: Line side windings in series - measurement @ 10kHz, 100mV

Coupling capacitance: IC side windings in series to Line side windings in series - measurement @ 10kHz, 100mV

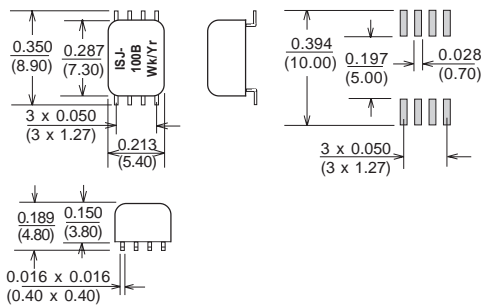
Leakage Inductance: Line side windings in series, IC side windings short circuited - measurement @ 100kHz, 100mV

Test Voltage: 1.5kV for 2 Sec. - Line side windings in series to IC side windings in series.

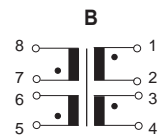
Standard Packaging: Tape and Reel

ISJ

Suggested Pad Layout



Schematic



Surface Coplanarity will be 0.004(0.10)

Dimensions: Inches (Millimeters)

Tolerance: ±0.010 (0.25) unless specified otherwise

Packaging and Dimensions • S₀ Chip Style SMD Single Interface Transformers

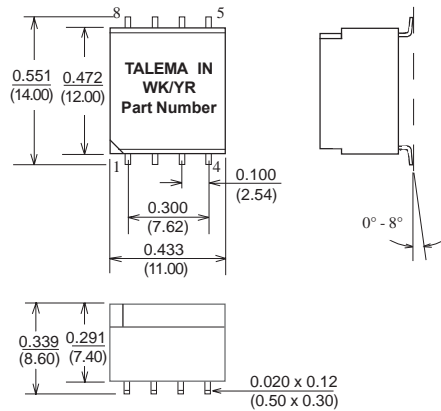
Dimensions: Inches (Millimeters)
Tolerance: ±0.010 (0.25) unless specified otherwise

Surface Coplanarity will be 0.004(0.10) maximum

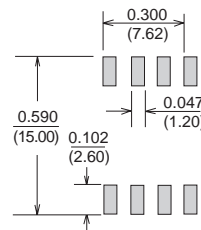
Package Style

Schematic

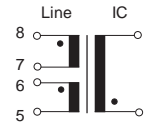
SMJ



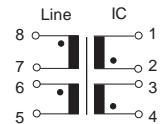
Suggested Pad Layout



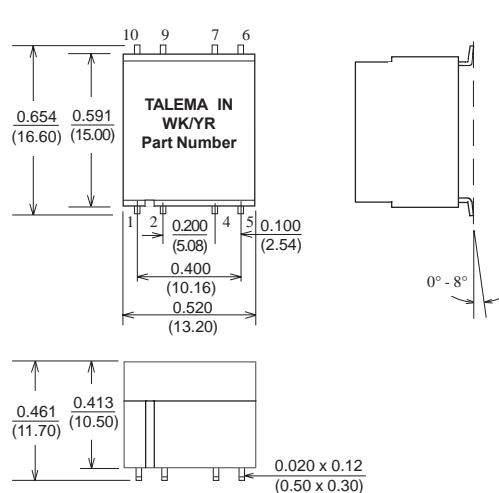
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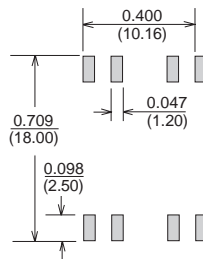
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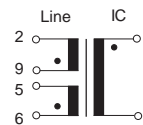
SHJ & SWJ



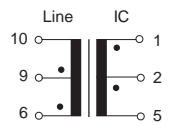
Suggested Pad Layout



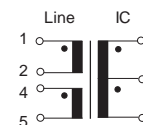
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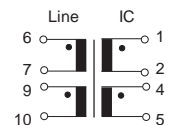
B



C



D



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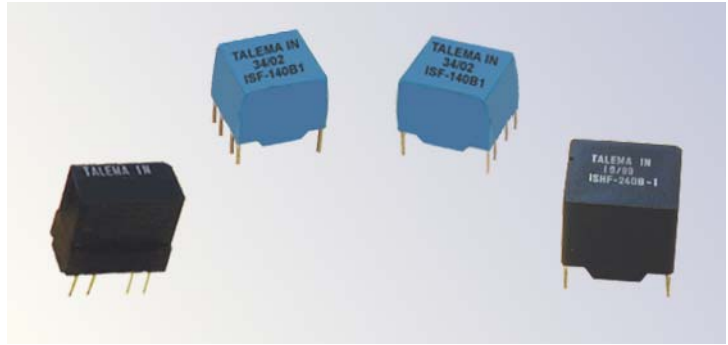
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ISDN S₀ DIL Style Through Hole Interface Transformers

Features

- designed for optimum compatibility with all established interface IC's
- excellent and consistent balance between windings
- complies fully with CCITT.I.430 recommendations and corresponding national standards for S-Interface
- manufactured in ISO-9001:2000, TS-16949:2002 and ISO-14001:2001 certified Talema facility
- fully RoHS compliant and meets lead free reflow level J-STD-020C
- operating temperature: 0 to 85°C



Electrical Specifications @ 25°C

Turns Ratio: **Bold** = IC side windings

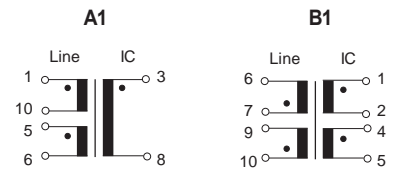
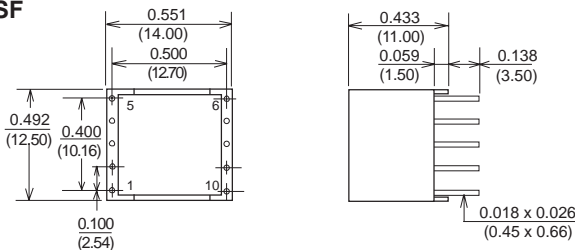
ISF & ISV Series comply with Supplementary Insulation Level EN60950, UL1950 and UL1450

Part Number	L _p (mH Min)	Turns Ratio	L _L (μH)	I _{DC} (mA)	C _C (pF Max)	R _{CU} P (Ohms)	R _{CU} S (Ohms)	V _P (Vrms)	Schematic
ISF / ISV-100B1	30	1:1:1:1	10	5	150	1.7	2.0	1500	B1
ISF / ISV-120A1	30	1:1:4	10	5	150	1.7	4.0	1500	A1
ISF / ISV-130B1	30	1:1: 2,5:2,5	10	5	150	1.7	4.5	1500	B1
ISF / ISV-140B1	30	1:1: 2:2	10	5	150	1.7	4.0	1500	B1
ISHF Series Interface Transformers comply with Reinforced Insulation Level EN60950-1:2001									
ISHF-200B1	30	1:1:1:1	15	5	45	2.4	2.0	3000	B1
ISHF-220A1	30	1:1:4	15	5	45	2.4	5.6	3000	A1
ISHF-230B1	30	1:1: 2,5:2,5	15	5	45	2.4	6.8	3000	B1
ISHF-240B1	30	1:1: 2:2	15	5	45	2.4	5.6	3000	B1

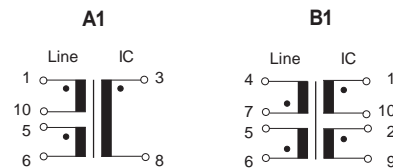
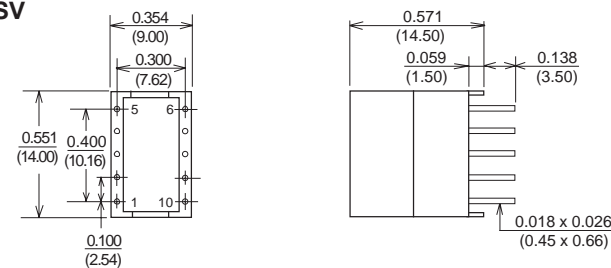
Package Style

Schematic

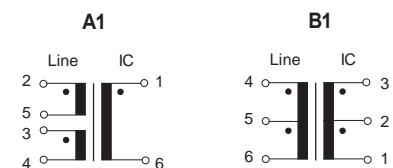
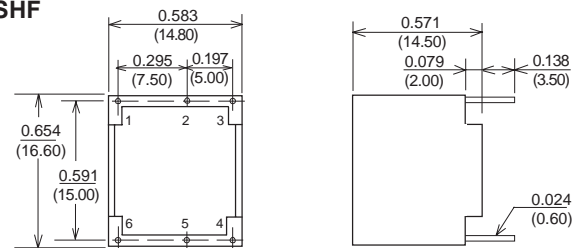
ISF



ISV



ISHF



Dimensions: Inches (Millimeters)

Tolerance: ±0.010 (0.25) unless specified otherwise