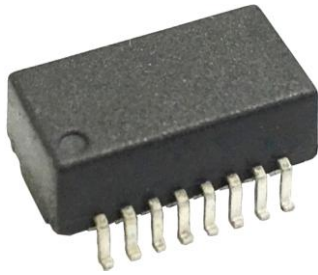


HS Series



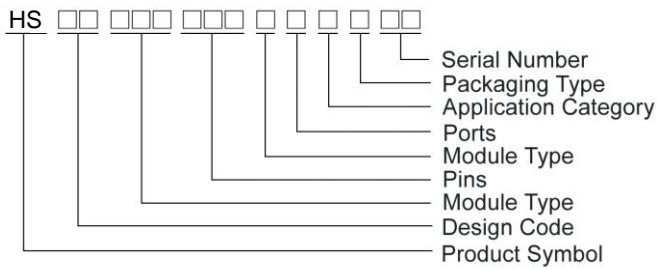
Features

- Compliant and peak reflow temperature rating 245°C
- Meets IEEE802.3 specification
- Comply with ROHS & Halogen Free requirements
- Excellent common mode noise suppression

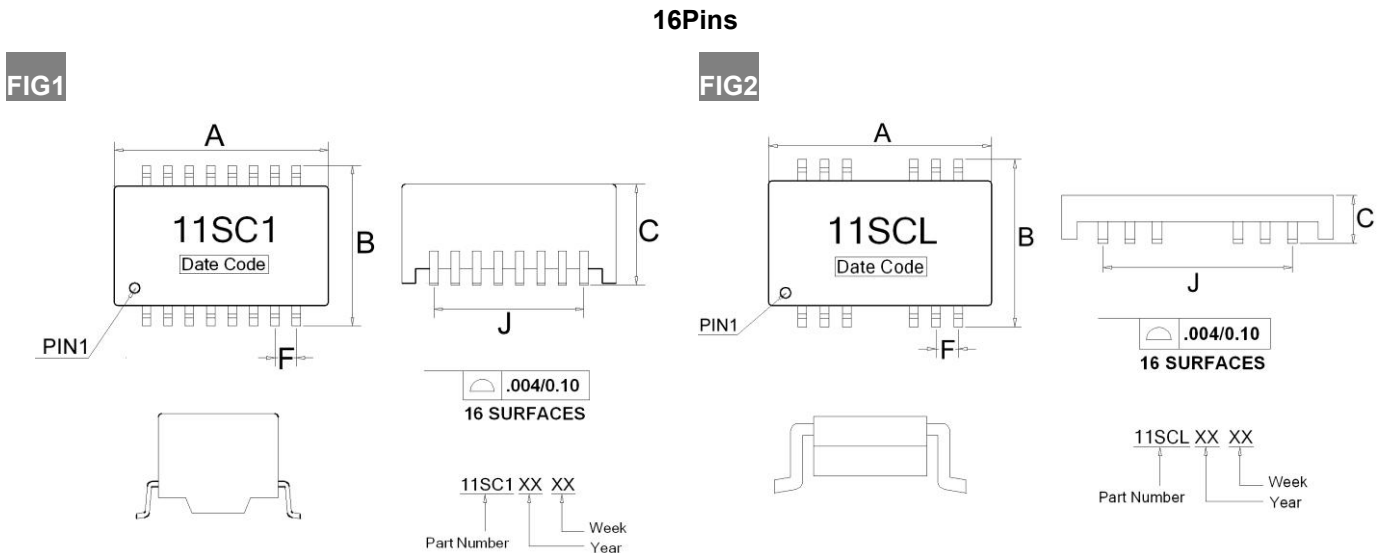
Applications

- Ethernet Application
- Power of Ethernet Application

Product Identification



Mechanical Dimension



Dimensions in mm

TYPE	FIG	A	B	C	F	J
HS00DIS016M1xSCx	1	12.80±0.25	9.30±0.25	5.65±0.25	1.27±0.25	8.89±0.25
HS00DIS016M11SCB	1	12.75±0.25	9.50±0.25	2.05±0.25	1.27±0.25	8.89±0.25
HS00DIS016M11SCL	2	12.75±0.25	9.14±0.25	2.05±0.25	1.27±0.25	8.89±0.25

Ethernet Discrete Lan Transformer Single Port – HS Series

Suggested Land Pattern

FIG1

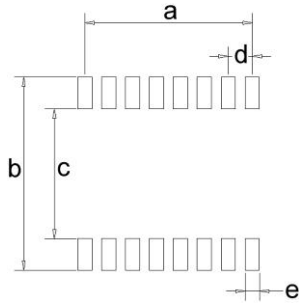
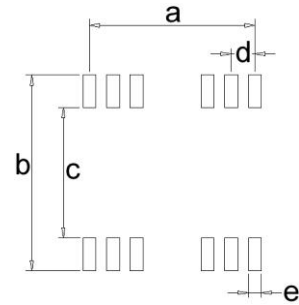


FIG2

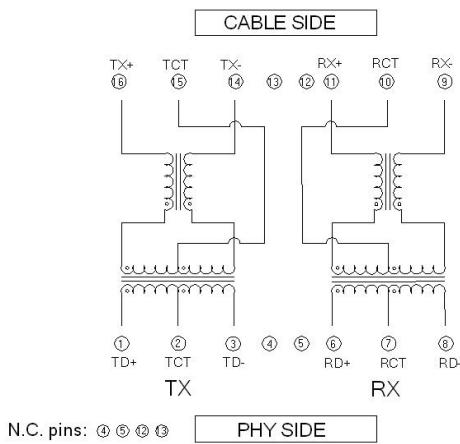


Dimensions in mm

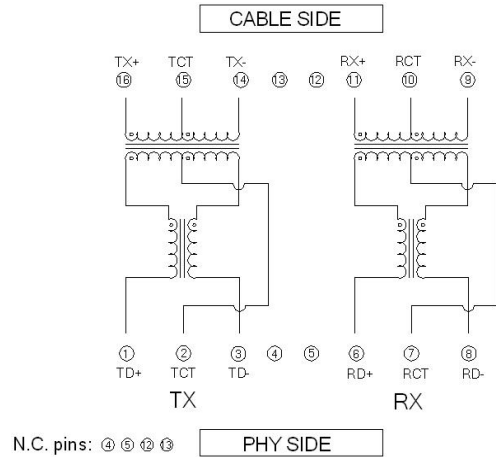
TYPE	FIG	a	b	c	d	e
HS00DIS016M1xSCx	1	8.89	10.2	6.86	1.27	0.76
HS00DIS016M11SCB	1	8.89	10.65	6.83	1.27	0.76
HS00DIS016M11SCL	2	8.89	10.65	6.83	1.27	0.76

Schematics

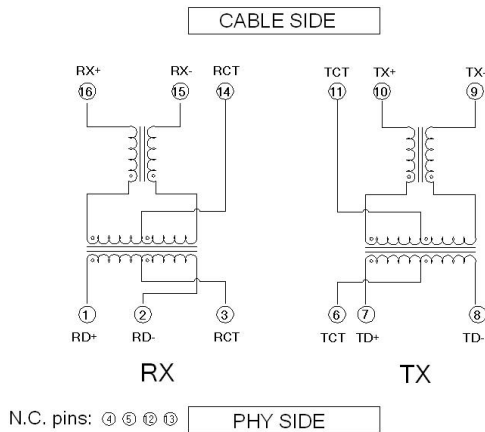
HS00DIS016M11SC1~2、4、6~7、B~G、J~K、M



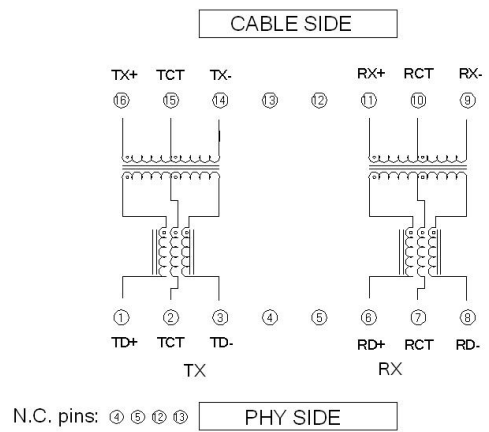
HS00DIS016M11SC3、5、CH



HS00DIS016M11SCL



HS00DIS016M13SC1~2



Ethernet Discrete Lan Transformer Single Port – HS Series

Electrical Characteristics

Inductance @ Phy side (OCL)

100kHz, 0.1V, 8mA DC Bias 350uH Min

Part Number	Turns Ratio		Hipot Vrms, Sec Pri to Sec@60Hz,1mA
	TX	RX	
HS00DIS016M1xSCx	1:1±3%		1500, 60

Part Number	Speed Rated	Insertion Loss dB(Max)	Return Loss dB(Min)							DMCR dB(Min)				Crosstalk dB(Min)		
			1~100	1~30	40	50	60	80	100	30	50	60	100	30	60	100
MHz																
HS00DIS016M11SC1	10/100	-1.1	-18	-14.1	-13.1	-12	-10	-42	-37	-	-33	-45	-40	-35		
HS00DIS016M11SCB	10/100	-1.1	-20	-	-	-14	-11.5	-	-42	-37	-	-33	-45	-40	-35	
HS00DIS016M11SCC	10/100	-1.1	-20	-	-	-14	-11.5	-	-42	-37	-	-33	-45	-40	-35	
HS00DIS016M11SCD	10/100	-1.1	-20	-	-	-14	-11.5	-	-42	-37	-	-33	-45	-40	-35	
HS00DIS016M11SCF	10/100	-1.1	-20	-	-	-14	-11.5	-	-42	-37	-	-33	-45	-40	-35	
HS00DIS016M11SCH	10/100	-1.1	-18	-14.1	-13.1	-12	-10	-42	-37	-	-33	-45	-40	-35		
HS00DIS016M11SCJ	10/100	-1.1	-20	-	-	-14	-11.5	-	-42	-37	-	-33	-45	-40	-35	
HS00DIS016M11SCK	10/100	-1.1	-20	-	-	-14	-11.5	-	-42	-37	-	-33	-45	-40	-35	
HS00DIS016M11SCL	10/100	-1.1	-20	-	-	-14	-11.5	-	-42	-37	-	-33	-45	-40	-35	

- Operating temperature range 0°C ~ 70°C
- Storage temperature range - 25°C ~ 105°C
- Electrical Specification @25°C, Humidity 65% RH

Part Number	Speed Rated	Insertion Loss dB(Max)	Return Loss dB(Min)							DC Current Rating (Max)	DMCR dB(Min)			Crosstalk dB(Min)		
			1~100	1~30	40	50	60	80	100		30	50	100	30	60	100
MHz																
HS00DIS016M11SC2	10/100	-1.1	-20	-	-	-12	-10	-	420mA DC at 57 V	-42	-37	-33	-45	-40	-35	
HS00DIS016M11SC3	10/100	-1.1	-18	-14.1	-13.1	-12	-10	-	-	-42	-37	-33	-45	-40	-35	
HS00DIS016M11SC4	10/100	-1.1	-18	-	-	-12	-10	-	-	-42	-37	-33	-45	-40	-35	
HS00DIS016M11SC5	10/100	-1.1	-18	-14.1	-13.1	-12	-10	-	-	-42	-37	-33	-45	-40	-35	
HS00DIS016M11SC6	10/100	-1.1	-20	-	-	-12	-10	-	420mA DC at 57 V	-42	-37	-33	-45	-40	-35	
HS00DIS016M11SC7	10/100	-1.1	-18	-	-	-12	-10	-	-	-42	-37	-33	-45	-40	-35	
HS00DIS016M11SCG	10/100	-1.1	-20	-	-	-12	-10	-	420mA DC at 57 V	-42	-37	-33	-45	-40	-35	
HS00DIS016M11SCM	10/100	-1.1	-18	-	-	-12	-10	-	-	-42	-37	-33	-45	-40	-35	
HS00DIS016M13SC1	10/100	-1.0	-18	-	-	-14	-12	-10	720mA DC at 57 V	-43	-37	-33	-45	-40	-35	
HS00DIS016M13SC2	10/100	-1.0	-18	-	-	-14	-12	-10	720mA DC at 57 V	-43	-37	-33	-45	-*40	-35	

- Operating temperature range -40°C ~ 85°C
- Storage temperature range - 25°C ~ 105°C
- Electrical Specification @25°C, Humidity 65% RH

Ethernet Discrete Lan Transformer Single Port – HS Series

Mechanical Dimension

24Pins

FIG1

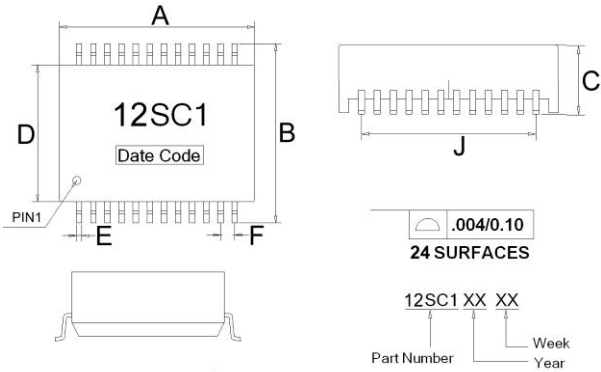


FIG2

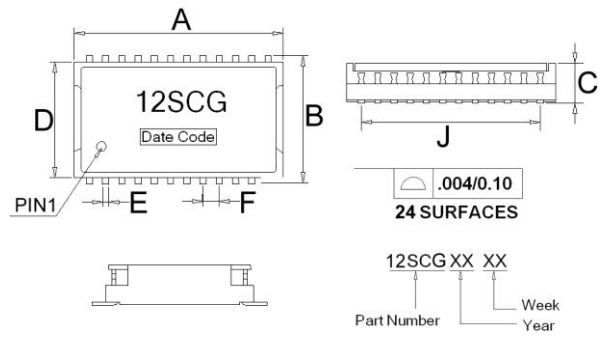


FIG3

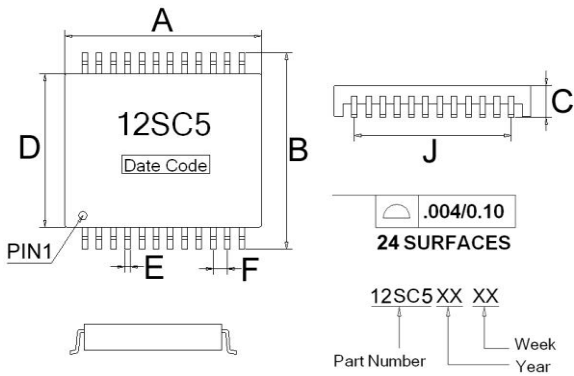
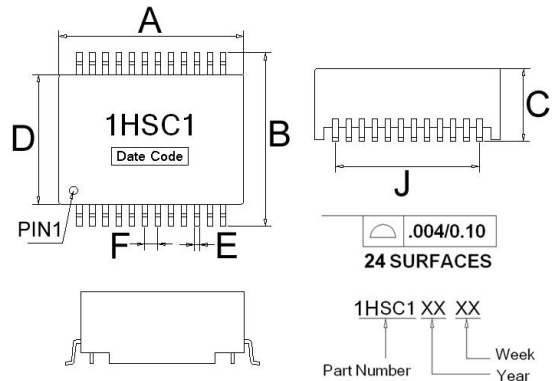


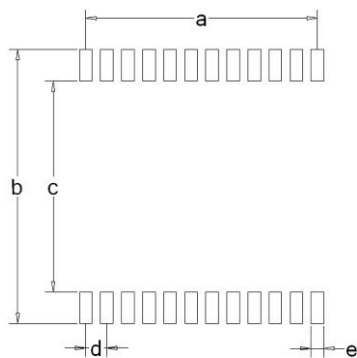
FIG4



Dimensions in mm

TYPE	FIG	A	B	C	D	E	F	J
HS00DIS024M12SCB~F	1	15.1±0.25	10±0.25	4±0.25	7.1±0.25	0.38±0.13	1.0±0.13	11±0.13
HS00DIS024M12SCG	2	15.6±0.25	9.47±0.25	2.3±0.1	8.5±0.25	0.45±0.13	1.27±0.25	13.97±0.13
HS00DIS024M1xSCx	1	17.55±0.25	15.9±0.25	6±0.25	12.2±0.25	0.46±0.13	1.27±0.25	13.97±0.25
HS00DIS024M12SC4~9	1	17.55±0.25	16±0.25	5.7±0.25	12.2±0.25	0.46±0.13	1.27±0.25	13.97±0.25
HS00DIS024M14SC1~8								
HS00DIS024M1HSC1	4	13.6±0.15	15±0.2	6±0.15	12±0.15	0.41±0.05	0.99±0.05	10.9±0.25

Suggested Land Pattern



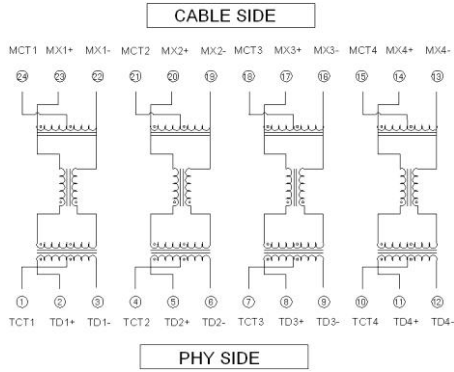
Dimensions in mm

TYPE	a	b	c	d	e
HS00DIS024M1HSC1	10.9	16.5	13.5	0.99	0.6
HS00DIS024M12SCB~F	11	10.7	8	1	0.6
HS00DIS024M1xSCx	13.97	17	11.92	1.27	0.76
HS00DIS024M12SCG	13.97	10.5	7.4	1.27	0.8

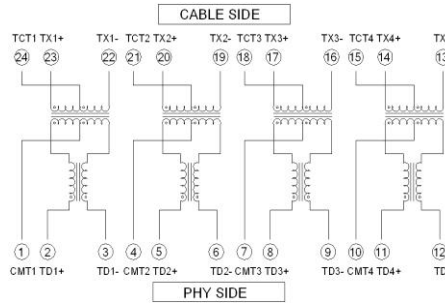
Ethernet Discrete Lan Transformer Single Port – HS Series

Schematics

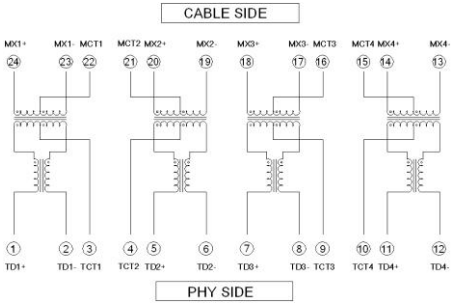
HS00DIS024M12SC1~3



HS00DIS024M12SCB~C、14SC1

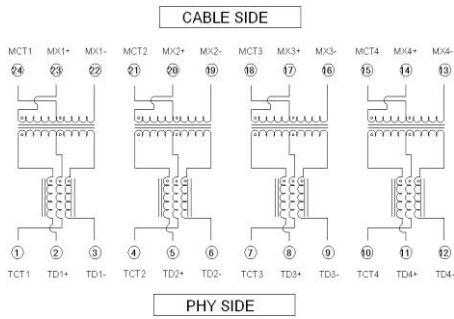


HS00DIS024M12SCG



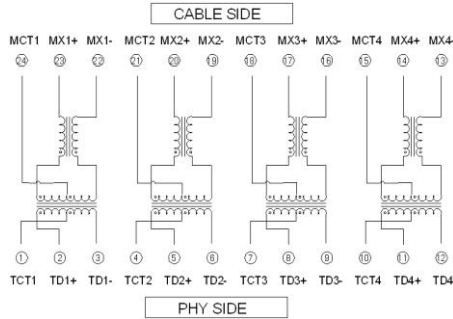
HS00DIS024M14SC4~6

HS00DIS024M1ASC1、1HSC1



HS00DIS024M12SC4、6~9、D~F

HS00DIS024M14SC2~3、8、1ASC2~4、1C(D、G)SC1



Ethernet Discrete Lan Transformer Single Port – HS Series

Electrical Characteristics

Inductance @ Phy side (OCL)

100kHz, 0.1V, 8mA DC Bias 350uH Min

Part Number	Turns Ratio	Hipot Vrms, Sec Pri to Sec@60Hz,1mA
	±3%	
HS00DIS024M1xSxx	1:1	1500, 60

Part Number	Speed Rated	Insertion Loss dB(Max)			Return Loss dB(Min)						DMCR dB(Min)				Crosstalk dB(Min)			
		0.1	1~100	125	1~30	40	50	60	80	100	2	30	60	100	1	30	60	100
	Base-T	MHz																
HS00DIS024M12SC2	1000	-	-1.0	-	-18	-14	-13	-12	-10	-	-43	-37	-33	-	-43	-37	-33	
HS00DIS024M12SC3	1000	-	-1.0	-	-18	-14	-13	-12	-10	-	-43	-37	-33	-	-43	-37	-33	
HS00DIS024M12SC4	1000	-	-1.0	-	-18	-14	-13	-12	-10	-	-43	-37	-33	-	-43	-37	-33	
HS00DIS024M12SC6	1000	-	-1.0	-	-18	-14	-13	-12	-10	-	-43	-37	-33	-	-43	-37	-33	
HS00DIS024M12SC9	1000	-	-1.0	-	-18	-14	-13	-12	-10	-	-43	-37	-33	-	-43	-37	-33	
HS00DIS024M12SCB	1000	-	-1.0	-	-18	-14	-13	-12	-10	-	-43	-37	-33	-	-42	-35	-32	
HS00DIS024M12SCC	1000	-	-1.0	-	-18	-14	-13	-12	-10	-	-43	-37	-33	-	-42	-35	-32	
HS00DIS024M12SCD	1000	-	-1.0	-	-18	-14	-13	-12	-10	-	-43	-37	-33	-	-42	-35	-32	
HS00DIS024M12SCF	1000	-	-1.0	-	-18	-14	-13	-12	-10	-	-43	-37	-33	-	-42	-35	-32	
HS00DIS024M12SCG	1000	-	-1.0	-	-16	-16	-16	-12	-10	-	-43	-37	-33	-	-45	-40	-35	
HS00DIS024M14SC5	1000	-	-1.0	-	-18	-	-	-14	-12	-10	-	-43	-37	-33	-	-45	-40	-35

- Operating temperature range 0°C ~ 70°C
- Storage temperature range - 25°C ~ 105°C
- Electrical Specification @25°C, Humidity 65% RH

Part Number	Speed Rated	Insertion Loss dB(Max)	Return Loss dB(Min)						DC Current Rating (Max)	DMCR dB(Min)				Crosstalk dB(Min)			
			1~100	1~30	40	50	60	80		100	30	50	60	100	30	60	100
	Base-T	MHz															
HS00DIS024M12SC1	1000	-1.0	-18	-14	-13	-12	-10		-43	-	-37	-33	-43	-37	-33		
HS00DIS024M12SC7	1000	-1.0	-18	-14	-13	-12	-10		-43	-	-37	-33	-43	-37	-33		
HS00DIS024M14SC1	1000	-1.0	-18	-	-	-14	-12	-10	720mA DC at 57V	-43	-	-37	-33	-45	-40	-35	
HS00DIS024M14SC2	1000	-1.0	-18	-	-	-14	-12	-10	720mA DC at 57V	-43	-	-37	-33	-45	-40	-35	
HS00DIS024M14SC3	1000	-1.0	-18	-14.4	-13.1	-12	-10	720mA DC at 57V	-43	-	-37	-33	-45	-40	-35		
HS00DIS024M14SC4	1000	-1.0	-18	-	-	-14	-12	-10	720mA DC at 57V	-43	-	-37	-33	-45	-40	-35	
HS00DIS024M14SC6	1000	-1.0	-18	-	-	-14	-12	-10	720mA DC at 57V	-43	-	-37	-33	-45	-40	-35	
HS00DIS024M14SC8	1000	-1.0	-18	-	-	-14	-12	-10	720mA DC at 57V	-43	-	-37	-33	-45	-40	-35	

- Operating temperature range -40°C ~ 85°C
- Storage temperature range - 25°C ~ 105°C
- Electrical Specification @25°C, Humidity 65% RH

Ethernet Discrete Lan Transformer Single Port – HS Series

Electrical Characteristics

Inductance @ Phy side (OCL)

100kHz, 0.1V, DC Bias 180uH Min

Part Number	Turns Ratio	Hipot Phy To Cable
	3%	
HS00DIS024M1xSCx	1:1	1500Vac, 60s

Part Number	Speed Rated	Insertion Loss dB(Max)			Return Loss dB(Min)		DC Current Rating (Max)	DMCR dB(Min)	Crosstalk dB(Min)	
	Base-T	1~50	50~125	125~200	1~40	40~200		1-200	1~150	150~200
MHz										
HS00DIS024M1ASC2	2.5G	-0.5	-1.0	-1.5	-20	-20+12.5*log ₁₀ (f/40)	720mA DC at 57V	-45+f/35	-30	-20

- Operating temperature range 0°C ~ 70°C
- Storage temperature range - 25°C ~ 105°C
- Electrical Specification @25°C, Humidity 65% RH

Part Number	Speed Rated	Insertion Loss dB(Max)						Return Loss dB(Min)				
	Base-T	1~50	50~125	125~200	125~250	1~100	100~400	400~500	1~40	40~200	250	500
MHz												
HS00DIS024M1ASC1	2.5G	-0.5	-1.0	-1.5	-	-	-	-	-20	-20+12.5*log ₁₀ (f/40)	-	-
HS00DIS024M1ASC3	2.5G	-0.5	-1.0	-1.5	-	-	-	-	-20	-20+12.5*log ₁₀ (f/40)	-	-
HS00DIS024M1ASC4	2.5G	-0.5	-1.0	-1.5	-	-	-	-	-20	-20+12.5*log ₁₀ (f/40)	-	-
HS00DIS024M1CSC1	5G	-0.5	-1.0	-	1.5	-	-	-	-20	-20+12.5*log ₁₀ (f/40)	-	-
HS00DIS024M1DSC1	5G	-0.5	-1.0	-	1.5	-	-	-	-20	-20+12.5*log ₁₀ (f/40)	-	-
HS00DIS024M1GSC1	10G	-	-	-	-	-1.0	-1.5	-1.8	-20	-20+10*log(f/40)	-	-
HS00DIS024M1HSC1	10G	-	-	-	-	-1.0	-1.5	-1.8	-20	-20+10*log(f/40)	-	-

Part Number	Speed Rated	DC Current Rating (Max)	DMCR dB(Min)				Crosstalk dB(Min)				
	Base-T		1~100	1~200	1~250	100~300	300~500	1~150	150~200	150~250	150~500
MHz											
HS00DIS024M1ASC1	2.5G	720mA DC at 57V	-45+f/35	-	-	-	-	-30	-20	-	-
HS00DIS024M1ASC3	2.5G	720mA DC at 57V	-45+f/35	-	-	-	-	-30	-20	-	-
HS00DIS024M1ASC4	2.5G	420mA DC at 57V	-45+f/35	-	-	-	-	-30	-20	-	-
HS00DIS024M1CSC1	5G	-	-(45-20*log ₁₀ (f/50))			-	-	-30	-	-20	-
HS00DIS024M1DSC1	5G	720mA DC at 57V	-45+f/35			-	-	-30	-	-20	-
HS00DIS024M1GSC1	10G	-	-40	-	-	-30	-25	-30	-	-	-20
HS00DIS024M1HSC1	10G	720mA DC at 57V	-40	-	-	-30	-25	-30	-	-	-20

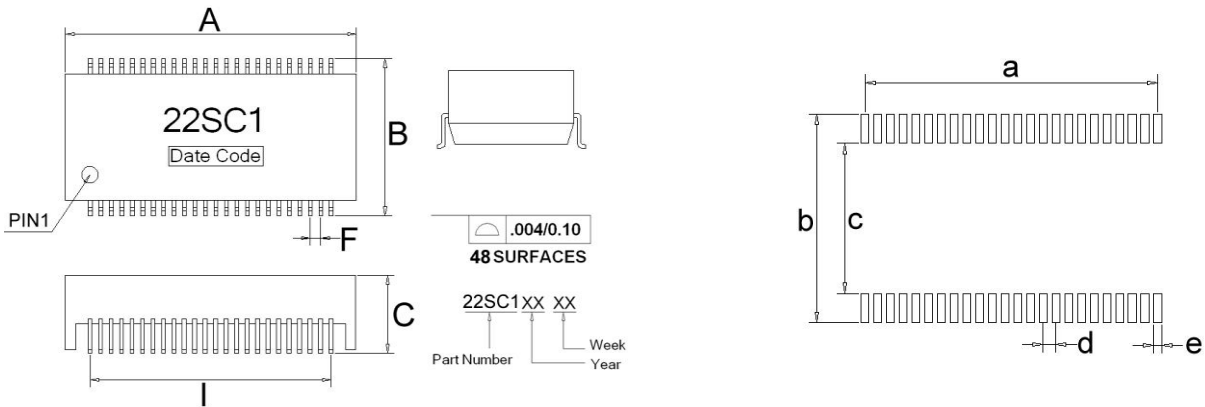
- Operating temperature range -40°C ~ 85°C
- Storage temperature range - 25°C ~ 105°C
- Electrical Specification @25°C, Humidity 65% RH

Ethernet Discrete Lan Transformer Single Port – HS Series

Mechanical Dimension

Suggested Land Pattern

48Pins



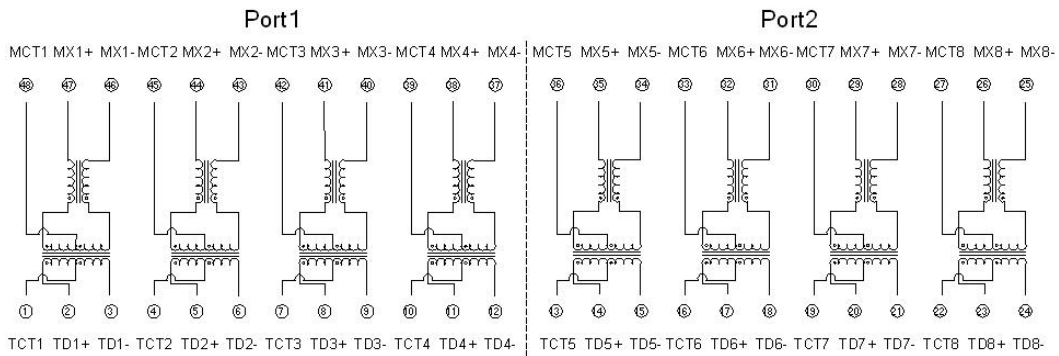
Dimensions in mm

TYPE	A	B	C	F	I	a	b	c	d	e
HS00DIS048M22SCx	27.8±0.51	15.2±0.25	7.25±0.25	1.02±0.25	23.46±0.25	23.46	15.9	12.5	1.02	0.64

Schematics

HS00DIS048M22SC1~3

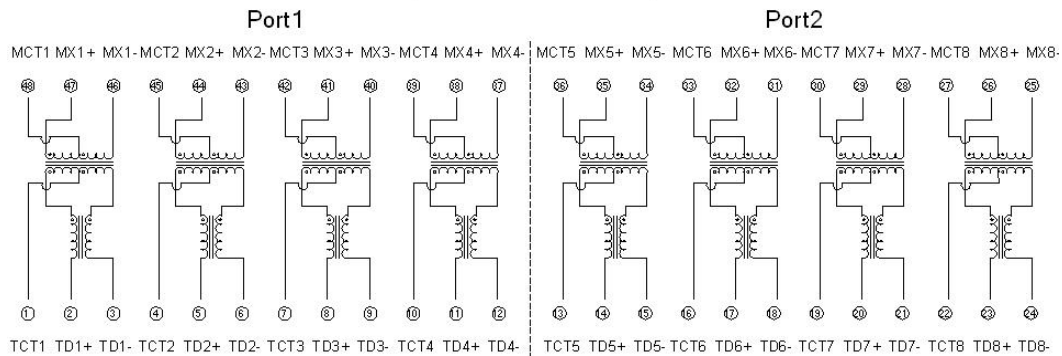
CABLE SIDE



PHY SIDE

HS00DIS048M22SC4

CABLE SIDE

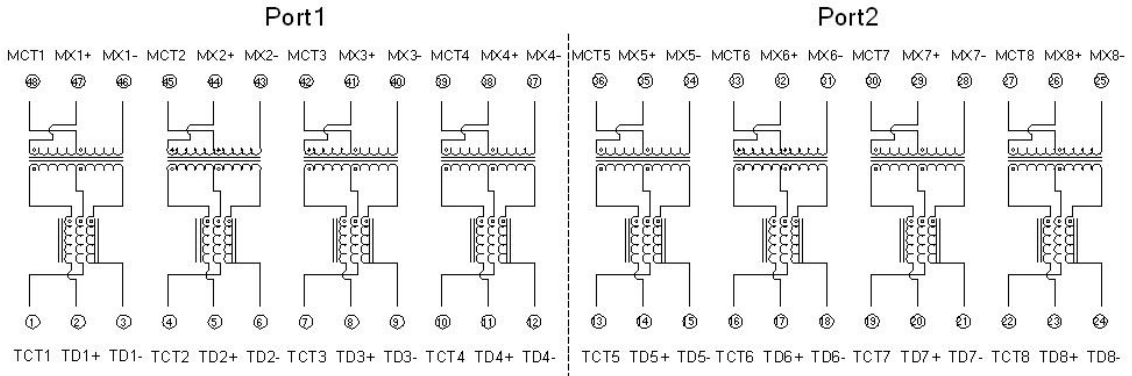


PHY SIDE

Ethernet Discrete Lan Transformer Single Port – HS Series

HS00DIS048M22SC6-7

CABLE SIDE



PHY SIDE

Ethernet Discrete Lan Transformer Single Port – HS Series

Electrical Characteristics

Inductance @ Phy side (OCL)

100kHz, 0.1V, 8mA DC Bias 350uH Min

Part Number	Turns Ratio	Hipot Vrms, Sec Pri To Sec
	3%	
HS00DIS048M22SCx	1:1	1500, 60

Part Number	Speed Rated	Insertion Loss dB(Max)	Return Loss dB(Min)						DMCR dB(Min)			Crosstalk dB(Min)		
			1~100	1~30	40	50	60	80	100	30	60	100	30	60
	Base-T	MHz												
HS00DIS048M22SC2	1000	-1.1	-20	-14.4	-13.1	-12	-10	-45	-40	-35	-40	-35	-33	
HS00DIS048M22SC3	1000	-1.0	-18	-14.4	-13.1	-12	-10	-45	-40	-35	-40	-35	-33	
HS00DIS048M22SC4	1000	-1.0	-18	-14.4	-13.1	-12	-10	-43	-37	-33	-40	-35	-33	
HS00DIS048M22SC6	1000	-1.1	-20	-	-	-14	-12	-10	-42	-37	-32	-45	-40	-35

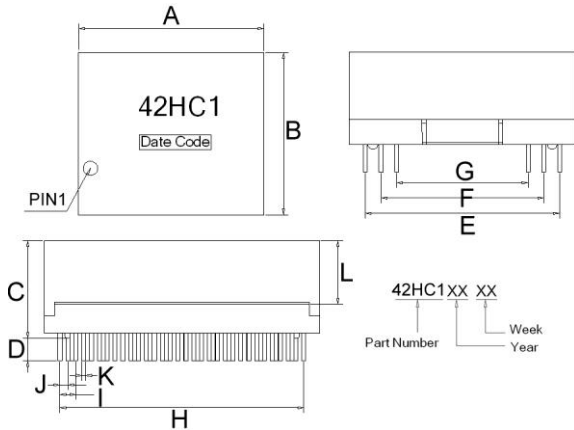
- Operating temperature range 0°C ~ 70°C
- Storage temperature range - 25°C ~ 105°C
- Electrical Specification @25°C, Humidity 65% RH

Part Number	Speed Rated	Insertion Loss dB(Max)	Return Loss dB(Min)						DC Current Rating (Max)	DMCR dB(Min)			Crosstalk dB(Min)		
			1~100	1~30	40	50	60	80		100	30	60	100	30	60
	Base-T	MHz													
HS00DIS048M22SC1	1000	-1.0	-18	-14.4	-13.1	-12	-10	-	-45	-40	-35	-40	-35	-33	
HS00DIS048M22SC7	1000	-1.1	-20	-	-	-14	-12	-10	420mA DC at 57V	-42	-37	-32	-45	-40	-35

- Operating temperature range -40°C ~ 85°C
- Storage temperature range - 25°C ~ 105°C
- Electrical Specification @25°C, Humidity 65% RH

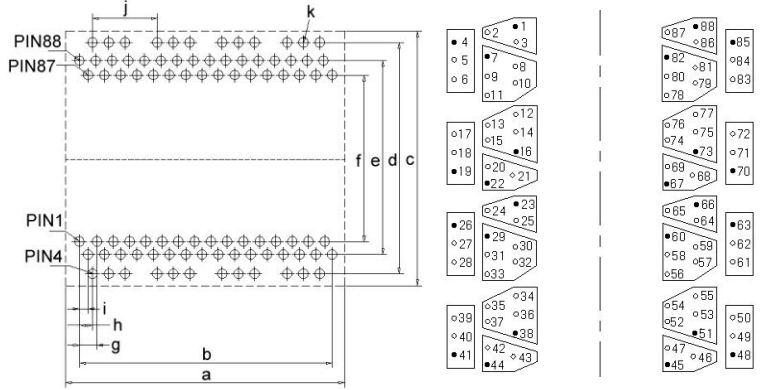
Ethernet Discrete Lan Transformer Single Port – HS Series

Mechanical Dimension



Suggested Land Pattern

88Pins

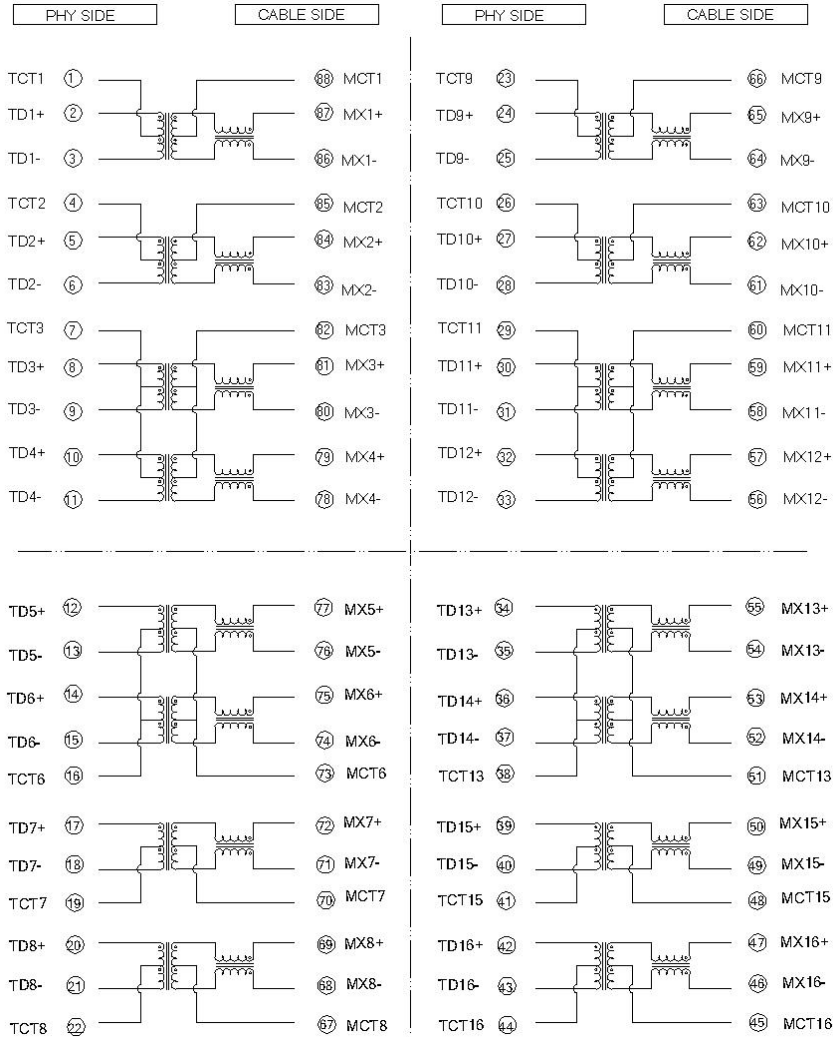


Dimensions in mm

TYPE	A	B	C	D	E	F	G	H	I	J	K	L
HS00DIS088M4xHCx	29.1	26.5	13.0	2.8	24.1	19.5	15.5	25.58	1.65	0.825	\varnothing 0.4	12.5
	± 0.25	± 0.25	± 0.25	± 0.25	± 0.25	± 0.25	± 0.25	± 0.25	± 0.25	± 0.05		± 0.25
	a	b	c	d	e	f	g	h	i	j	k	
	29.1	25.58	26.5	24.1	19.5	15.5	1.65	1.238	0.825	6.6	\varnothing 0.9	

Schematics

HS00DIS088M4xHCx



Ethernet Discrete Lan Transformer Single Port – HS Series

Electrical Characteristics

Inductance @ Phy side (OCL)
100kHz, 0.1V, 8mA DC Bias 350uH Min

Part Number	Turns Ratio 100kHz		Hipot Vrms, Sec Phy To Cable
	TX	RX	
HS00DIS088M4xHC1	1:1±5%		1500, 60

Part Number	Speed Rated	Insertion Loss dB(Max)	Return Loss dB(Min)					DMCR dB(Min)			Crosstalk dB(Min)		
			1~100	1~30	40	50	60~80	100	30	50	100	30	60
MHz													
HS00DIS088M42HC1	1000	-1.0	-18	-16	-14.08	-12.5	-10	-43	-37	-33	-40	-35	-30
HS00DIS088M44HC1	1000	-1.0	-18	-16	-14.08	-12.5	-10	-43	-37	-33	-40	-35	-30

Part Number	Speed Rated	DC Resistance (mΩ)Max	DC Current Rating
		1/2 Winding at Cable Side	(Max)
HS00DIS088M42HC1	1000	-	-
HS00DIS088M44HC1	1000	1200	720mA DC at 57V

- Operating temperature range -40°C ~ 85°C
- Storage temperature range - 25°C ~ 105°C
- Electrical Specification @25°C, Humidity 65% RH

Ethernet Discrete Lan Transformer Single Port – HS Series

Electrical Characteristics

Inductance @ Phy side (OCL)
100kHz, 0.1V, 10.8mA DC Bias 150uH Min

Part Number	Turns Ratio 100kHz	Hipot Vrms, Sec Phy To Cable
	±2%	
HS00DIS088M4xHCx	1:1	1500, 60

Part Number	Speed Rated	Insertion Loss dB(Max)			Return Loss dB(Min)		DMCR dB(Min)	CMRR dB(Min)	Crosstalk dB(Min)	
		1~50	50~125	125~200	1~40	40~200			1~150	150~200
	Base-T	MHz								
HS00DIS088M47HC1	2.5G	-0.5	-1.0	-1.5	-20	$-20+12.5*\log_{10}(f/40)$	$-45+f/35$	-30	-30	-20

- Operating temperature range 0°C ~ 70°C
- Storage temperature range - 25°C ~ 105°C
- Electrical Specification @25°C, Humidity 65% RH

Part Number	Speed Rated	Insertion Loss dB(Max)			Return Loss dB(Min)		DMCR dB(Min)	CMRR dB(Min)	Crosstalk dB(Min)	
		1~50	50~125	125~200	1~40	40~200			1~150	150~200
	Base-T	MHz								
HS00DIS088M47HC2	2.5G	-0.5	-1.0	-1.5	-20	$-20+12.5*\log_{10}(f/40)$	$-45+f/35$	-30	-30	-20
HS00DIS088M4AHC1	2.5G	-0.5	-1.0	-1.5	-20	$-20+12.5*\log_{10}(f/40)$	$-45+f/35$	-30	-30	-20
HS00DIS088M4AHC2	2.5G	-0.5	-1.0	-1.5	-20	$-20+12.5*\log_{10}(f/40)$	$-45+f/35$	-30	-30	-20

Part Number	Speed Rated	DC Current Rating
	Base-T	(Max)
HS00DIS088M47HC2	2.5G	-
HS00DIS088M4AHC1	2.5G	420mA DC at 57V
HS00DIS088M4AHC2	2.5G	420mA DC at 57V

- Operating temperature range -40°C ~ 85°C
- Storage temperature range - 25°C ~ 105°C
- Electrical Specification @25°C, Humidity 65% RH