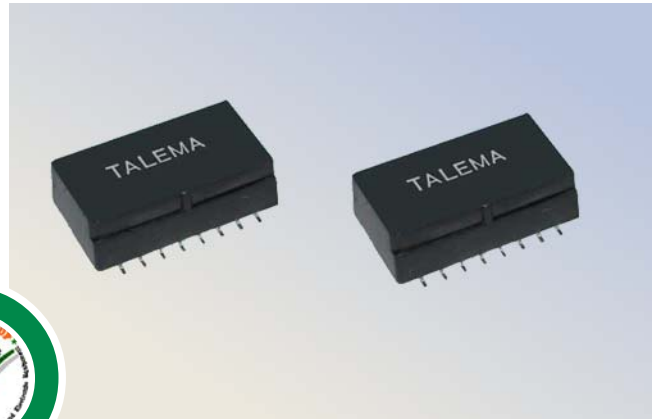




# MHJ Series S<sub>0</sub> 3kV Interface Transformer Modules

## Features

- excellent output characteristics ensure compliance with CCITT.I.430 pulse waveform template when used with recommended IC pairing
- SMD modules are designed for pick and place compatibility
- excellent and consistent balance between windings
- modular design maximizes suppression effectivity and transmission properties
- full compatibility with all common IC's
- 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: -40° to 85°C
- storage temperature: -40 to +125°C



## Electrical Specifications @ 25°C

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

### 3kV Modules comply with Reinforced Insulation Level EN60950

Part Number	L <sub>P</sub> (mH Min)	Turns Ratio ±1%	L <sub>L</sub> (μH Max)	ΔI <sub>DC</sub> (mA)	C <sub>C</sub> (pF Max)	R <sub>CU</sub> P (Ohms)	R <sub>CU</sub> S (Ohms)	V <sub>P</sub> (Vrms)	Schematic
MHJ-200B1-XXX	30	1:1:1:1	10	4	75	1.7	1.9	3000	A
MHJ-240B1-XXX	30	1:1: <b>2:2</b>	10	4	75	1.7	3.7	3000	A
MHJ-230B1-XXX	30	1:1: <b>2.5:2.5</b>	10	4	75	1.7	4.4	3000	A

### Common Mode Quad Choke

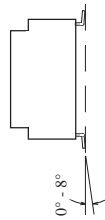
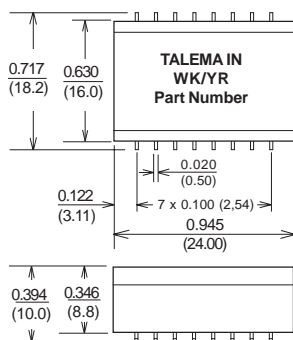
Basic P/N + Suffix (Example: MHJ-240B1-502)	L <sub>N</sub> (μH)	R <sub>CU</sub> (Ohms)
-000	No Choke	
-470	47	0.4
-101	100	0.6
-501	500	0.4
-502	5000	1.1
-123	12000	1.8

S<sub>0</sub> Transformer modules comply with Reinforced Insulation Level EN60950:1992/A4: 1997, para. 2.9.4.4 when tested in accordance with 6.4.1

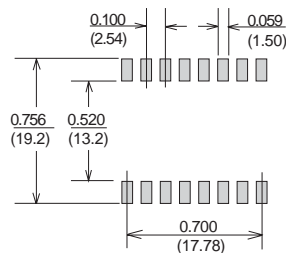
## Test Conditions:

1. Polarity and Turns Ratio: **w1** : **w2** : w3 : w4 ±1%
  2. Inductance: 30mH Minimum, line side windings (w3+w4) in series @ 10kHz, 100mV
  3. Leakage Inductance: 10μH Max. @ 100kHz, 100mV
  4. Quad Choke Inductance: 100kHz, 20mV
  5. Winding Capacitance: C<sub>w</sub> 150pF Max. (w3+w4)
  6. Coupling Capacitance: C<sub>c</sub> 75pF Max. (w3+w4 to w1+w2) @ 10kHz, 100mV
  7. High Voltage Test: 3kV, 1 minute U(w3+w4 to w1+w2)
- High Voltage Pulse Test: U<sub>PULSE</sub> (w3+w4 to w1+w2); 10kV<sub>OP</sub> for 1,2μs/50μs wave form  
U<sub>PULSE</sub> (w3+w4 to w1+w2); 10kV<sub>OP</sub> for 10μs/700μs wave form

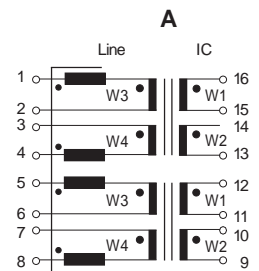
## MHJ Module



## Suggested Pad Layout



## Schematic



Pins - 0.012 x 0.020 (0.3 x 0.5)

Surface Coplanarity will be 0.004(0.10) maximum

Dimensions: Inches (Millimeters)

Tolerance: ±0.010 (0.25) unless specified otherwise