

MH Series Reed Relays

Surface Mount Miniature 1 Form C (A+B)

The MH series is a miniature vertical surface mount reed relay that offers a higher contact rating, compact mounting area, and high reliability with its 1 Form C configuration, utilizing our renowned 1 Form A + 1 Form B technology. Its standard magnetic field feature minimizes magnetic interference, making it suitable for high-density boards. This relay is ideal for ATE, measurement equipment, and telecommunications.

- J-Lead Configuration
- 5 Watt Contact Rating, 50 V Switching capable
- 300 x 10⁶ cycle



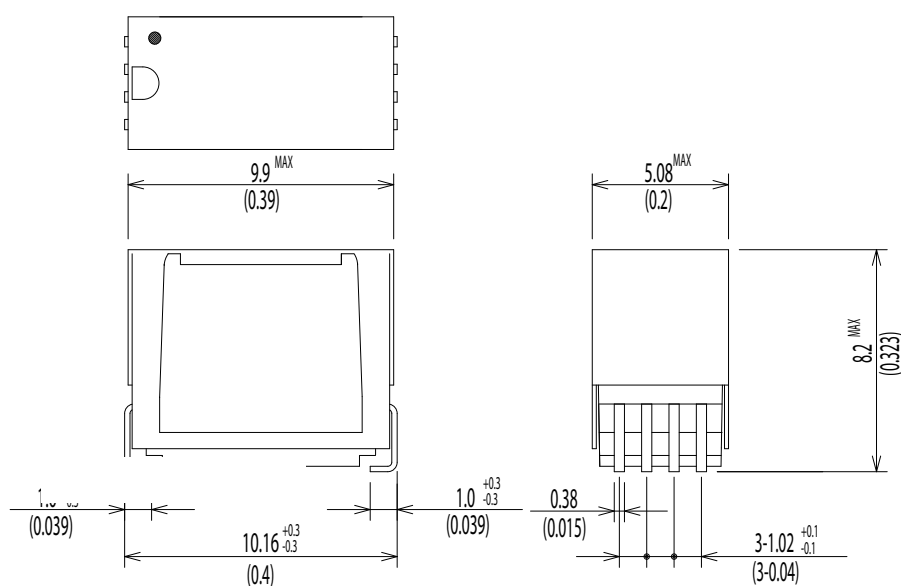
		MH-E1T03JH	MH-E1T05JH	MH-E1T12JH	
Parameters	Units	1 Form C (A+B)			Test Conditions
Coil Specifications					
Nominal Coil Voltage	VDC	3.3	5.0	12.0	±10% @ 20°C @20°C @20°C
Coil Resistance	Ω	70	110	550	
Operate Voltage	VDC Max	2.8	3.75	8.8	
Release Voltage	VDC Min	0.5	0.7	1.2	
Contact Ratings					
Switching Voltage	Volts	100			Max DC/Peak AC resistance
Switching Current	Amps	0.5			Max DC/Peak AC resistance
Carry Current	Amps	1.0			Max DC/Peak AC resistance(@30°C)
Contact Rating	Watts	10			Max DC/Peak AC resistance
Life Expectancy	x10 ⁶ Cycle	300			@ 1V 10mA
Contact Resistance	mΩ	150			Max initial @ operate voltage
Contact Resistance Stability	mΩ	5.0			Max initial @ operate voltage
Relay Specifications					
Insulation Resistance	Ω Min	10 ¹²			Between all isolated pins @ 100V 20°C 65%RH
Dielectric Strength (Static)	VDC Min	200			Between contacts
	VDC Min	1500			Contacts to shield
	VDC Min	1500			Contacts/shield to coil
Operate Time (Including Bounce)	msec Max	0.5			@ nominal coil voltage 100 Hz square wave
Release Time	msec Max	0.5			Diode suppression
Measurement Reference Conditions		Environmental Ratings			
Temp: 15°C to 35°C Humidity: 25% to 75%RH Atmospheric Pressure: 860 to 1060hpa		Storage temp: -40°C to +85°C Operate temp: -20°C to +60°C Vibration: 20G's to 2000Hz Shock: 50G's Processing temp: 260°C max for 60sec. dwell time			

RoHS

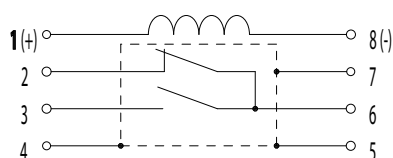
MH Series Reed Relays

Dimensions All Dimensions are mm (inch)

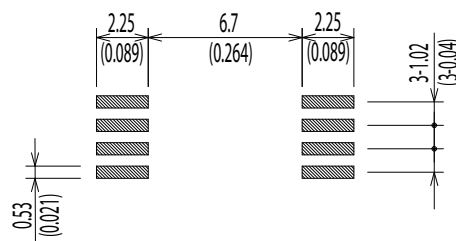
MHJ-E1xxH



Schematic <Top View>

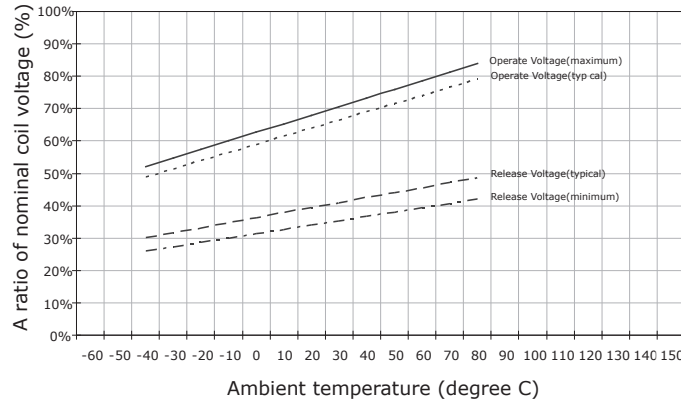


Land Pattern Recommendation

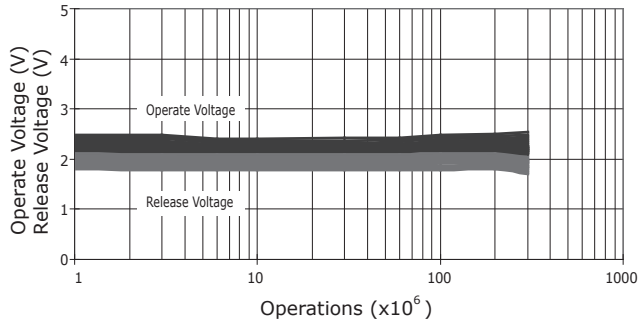


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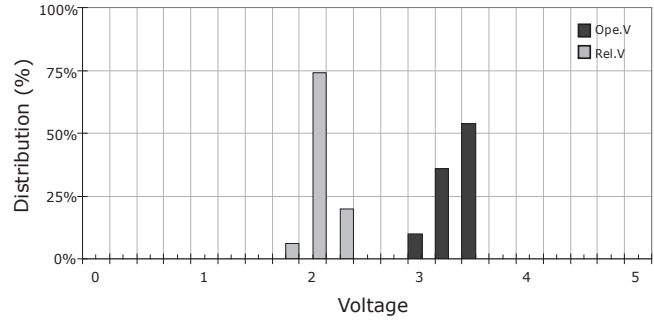
Operate and Release voltage vs. ambient temperature



OpeV/RelV vs. Cycle

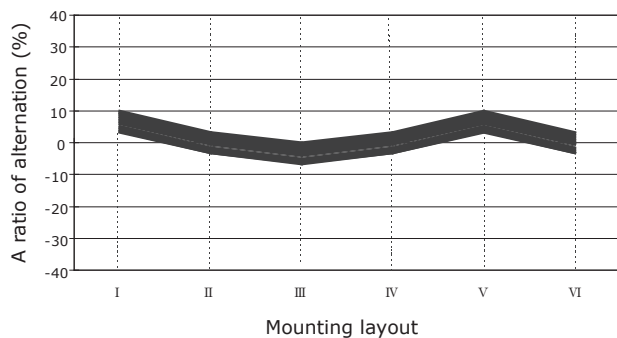


Operate Voltage / Release Voltage

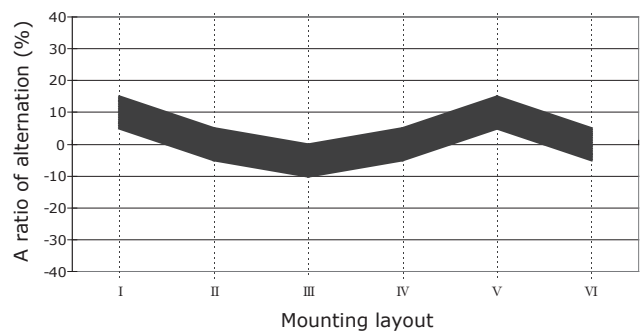


Magnetic Interference

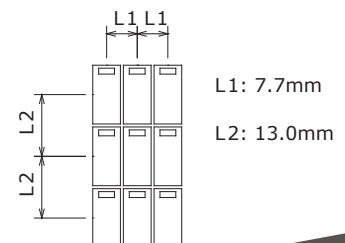
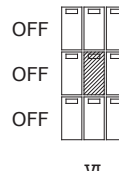
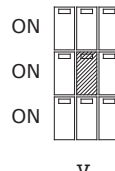
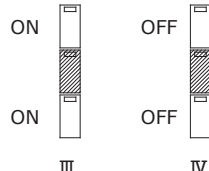
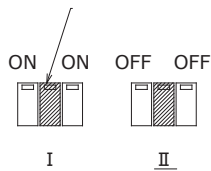
Alternation of operate voltage



Alternation of release voltage

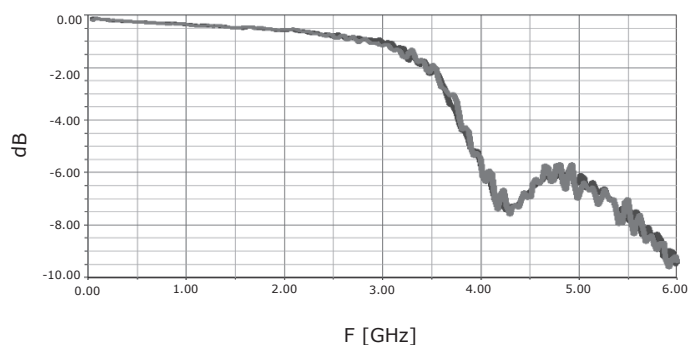


Device under test

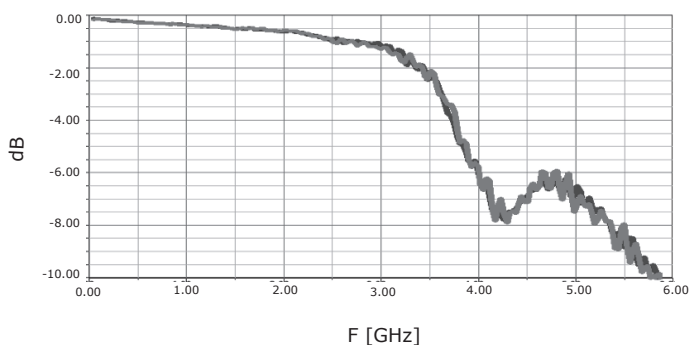


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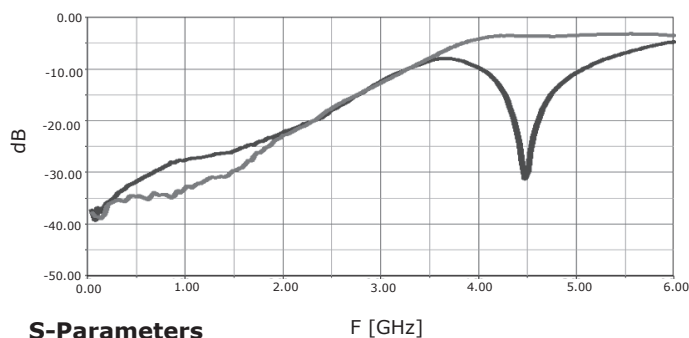
Insertion Loss (pin#4 - pin#8)



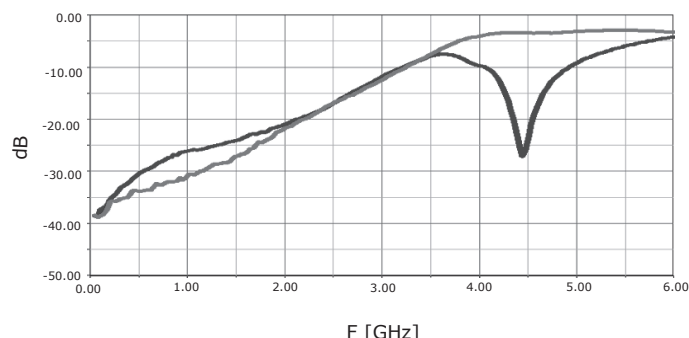
Insertion Loss (pin#4 - pin#10)



Return Loss (pin#4 - pin#8)

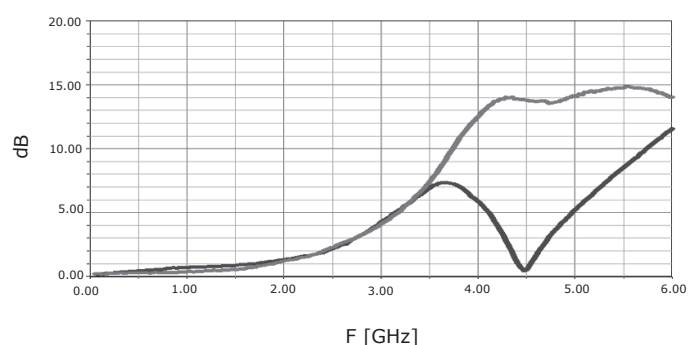


Return Loss (pin#4 - pin#10)

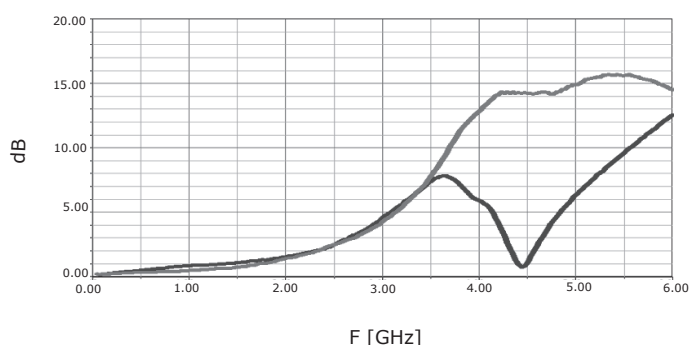


S-Parameters

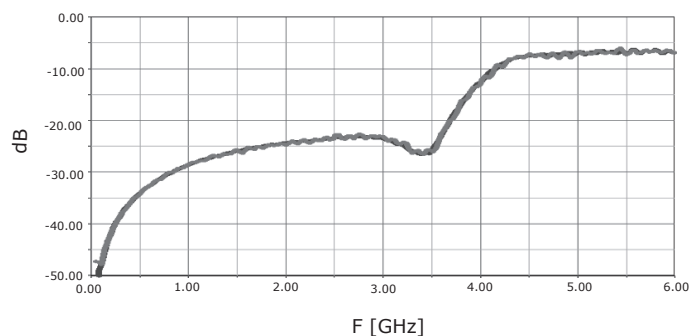
V.S.W.R. (pin#4 - pin#8)



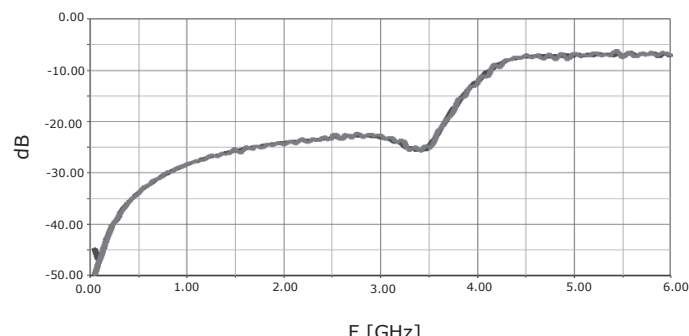
V.S.W.R. (pin#4 - pin#10)



Off Isolation (pin#4 - pin#8)

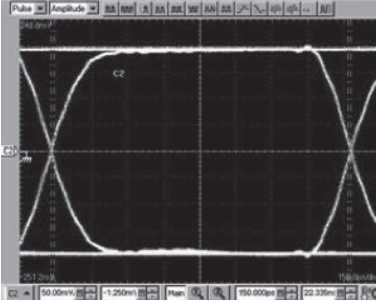


Off Isolation (pin#4 - pin#10)

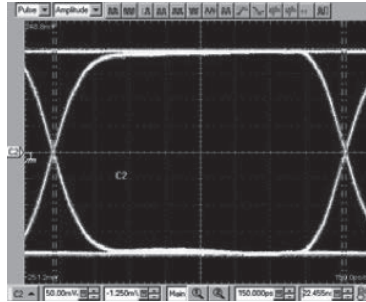


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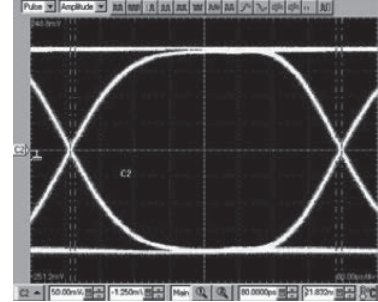
Through Fixture
Rise Time: $\approx 250\text{ps}$, Bit Rate: 800Mb/s
PRBS (Pseudo Random Bit Sequence): $2^{10}-1$



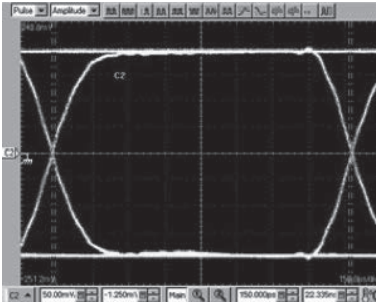
MGT-E105H with Fixture: pin#4-pin#8
Rise Time: $\approx 250\text{ps}$, Bit Rate: 800Mb/s
PRBS (Pseudo Random Bit Sequence): $2^{10}-1$



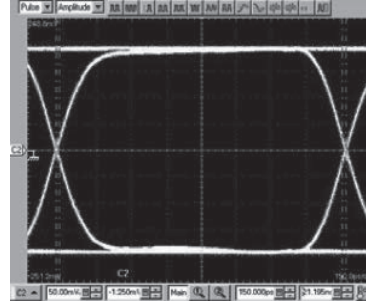
MGT-E105H with Fixture: pin#4-pin#8
Rise Time: $\approx 250\text{ps}$, Bit Rate: 1.6Gb/s
PRBS (Pseudo Random Bit Sequence): $2^{10}-1$



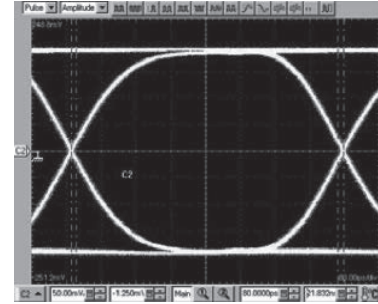
Through Fixture
Rise Time: $\approx 250\text{ps}$, Bit Rate: 800Mb/s
PRBS (Pseudo Random Bit Sequence): $2^{10}-1$



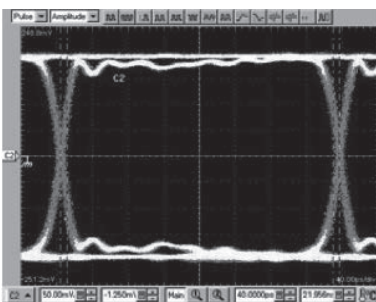
MGT-E105H with Fixture: pin#4-pin#10
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PRBS (Pseudo Random Bit Sequence): $2^{10}-1$



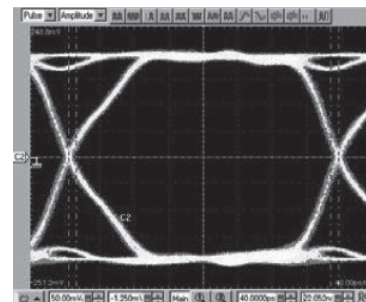
MGT-E105H with Fixture: pin#4-pin#10
Rise Time: $\approx 250\text{ps}$, Bit Rate: 1.6Gb/s
PRBS (Pseudo Random Bit Sequence): $2^{10}-1$



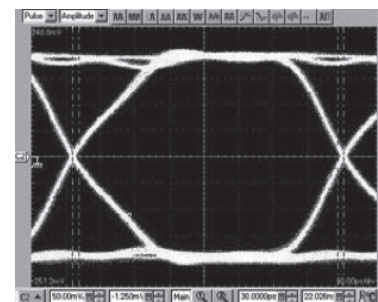
Through Fixture
Rise Time: $\approx 30\text{ps}$, Bit Rate: 3.2Gb/s
PRBS (Pseudo Random Bit Sequence): $2^{10}-1$



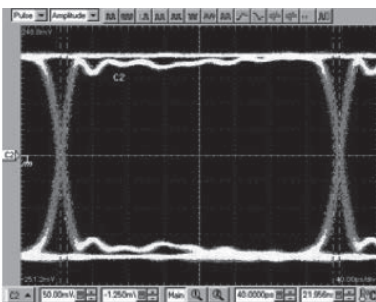
MGT-E105H with Fixture: pin#4-pin#8
Rise Time: $\approx 30\text{ps}$, Bit Rate: 3.2Gb/s
PRBS (Pseudo Random Bit Sequence): $2^{10}-1$



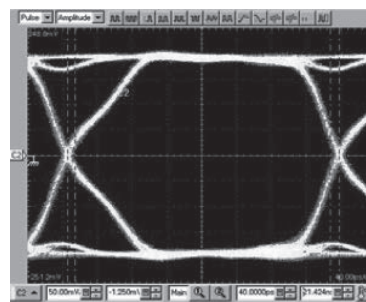
MGT-E105H with Fixture: pin#4-pin#8
Rise Time: $\approx 30\text{ps}$, Bit Rate: 4.25Gb/s
PRBS (Pseudo Random Bit Sequence): $2^{10}-1$



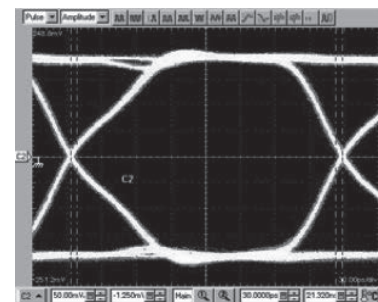
Through Fixture
Rise Time: $\approx 30\text{ps}$, Bit Rate: 3.2Gb/s
PRBS (Pseudo Random Bit Sequence): $2^{10}-1$



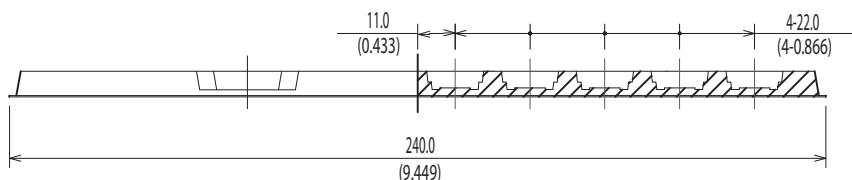
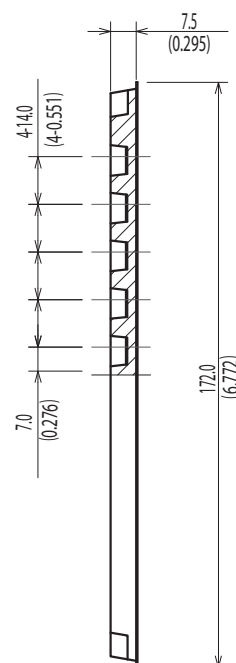
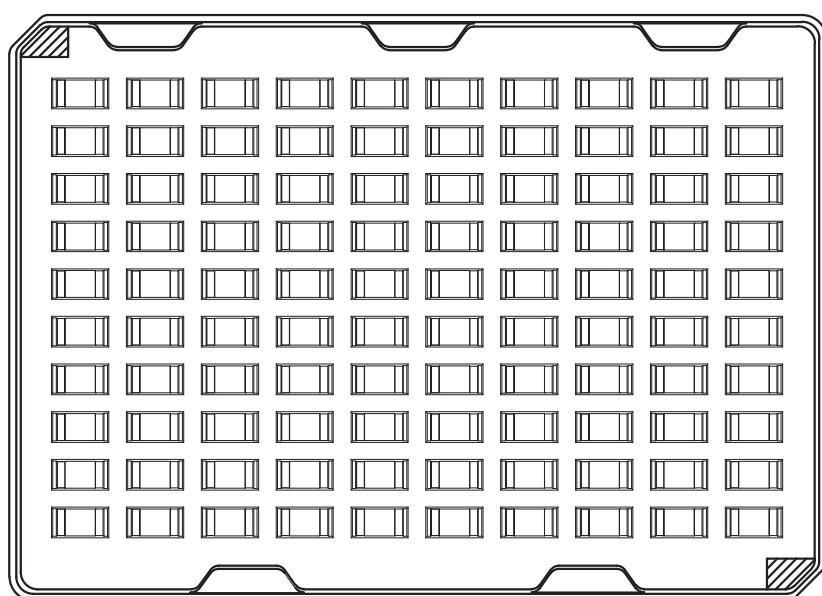
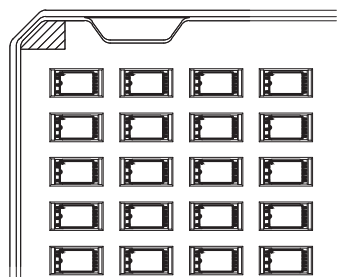
MGT-E105H with Fixture: pin#4-pin#10
Rise Time: $\approx 30\text{ps}$, Bit Rate: 3.2Gb/s
PRBS (Pseudo Random Bit Sequence): $2^{10}-1$



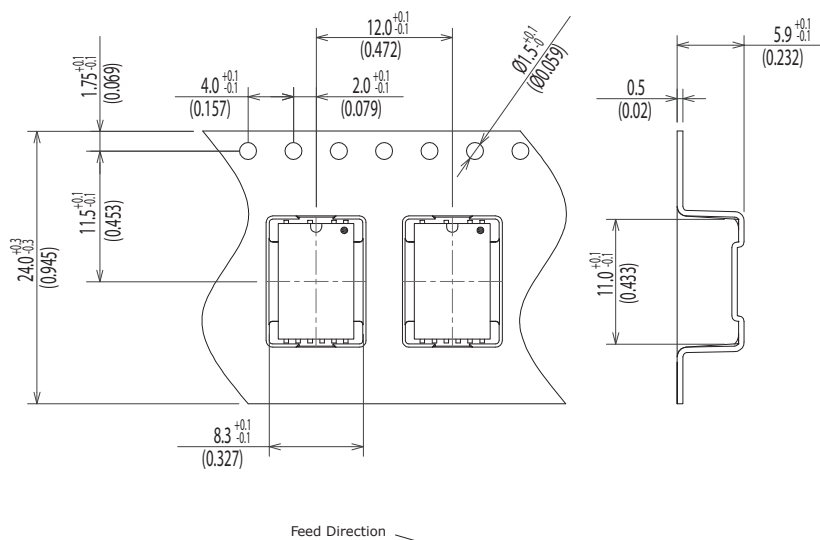
MGT-E105H with Fixture: pin#4-pin#10
Rise Time: $\approx 30\text{ps}$, Bit Rate: 4.25Gb/s
PRBS (Pseudo Random Bit Sequence): $2^{10}-1$



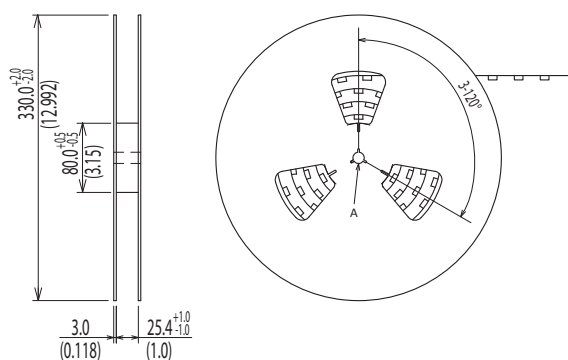
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MHJ-E1xxH



Details of the part A

