

MT Series Reed Relays

Surface Mount Changeover-like Form

The MT series reed relay is a high density surface mount changeover-like form design. This MT series was engineered specifically for ATE pin-electronics differential applications. These relays are available in a single SMT package with a 25% reduction in assembly space compared to existing Sanyu brand SMT product line. The MT series surface mount 1 and 2 Form C (A+B) offer exceptional performance, reliability, and credibility.

- Coil Voltage 5.0 and 12.0V
- RF Performance up to 4.0GHz
- Reliability 300 Million Over
- Impedance 50Ω



Replace "x" example MJT J for J-lead, G for Gull, A for Axial		MxT-E103H	MxT-E105H	MxT-E112H	
		MxT-E203H	MxT-E205H	MxT-E212H	
Parameters	Units	1 Form C, 2 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 ¹¹			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 to coil
	VDC Min				Shield to coil
Operate Time (Including Bounce)	msec Max	0.5			@ nominal coil voltage
Release Time	msec Max	0.5			100 Hz square wave 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 +80°C Vibration: 20G's to 2000Hz Shock: 50G's Processing temp: 260°C max for 60sec. dwell time			

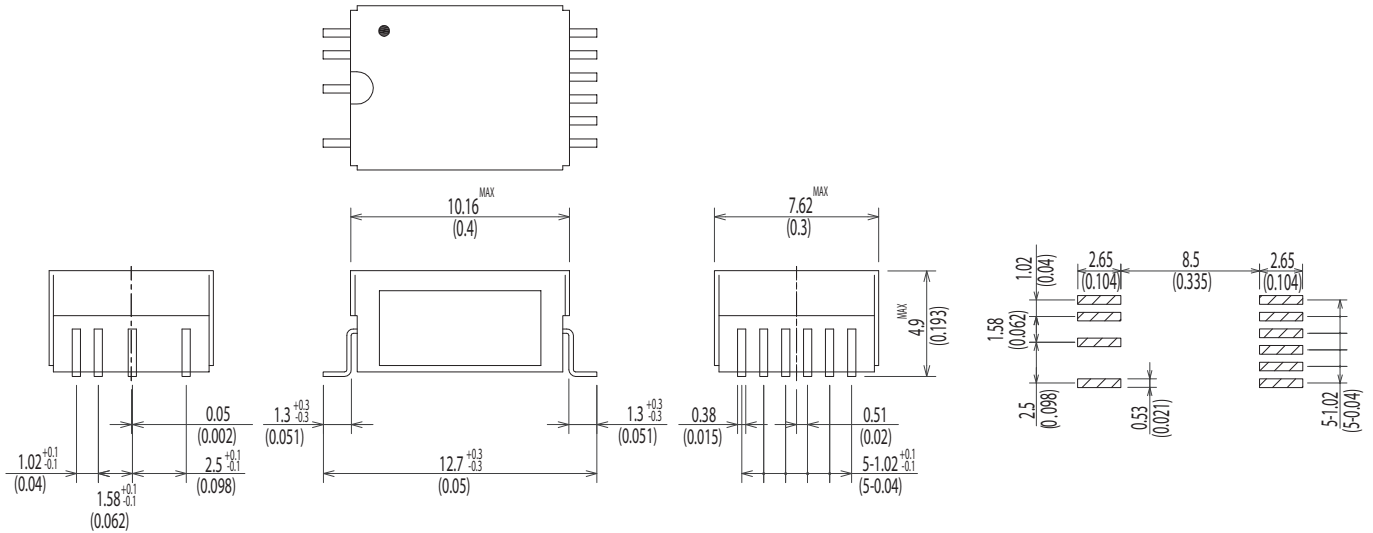
RoHS 

MT Series Reed Relays

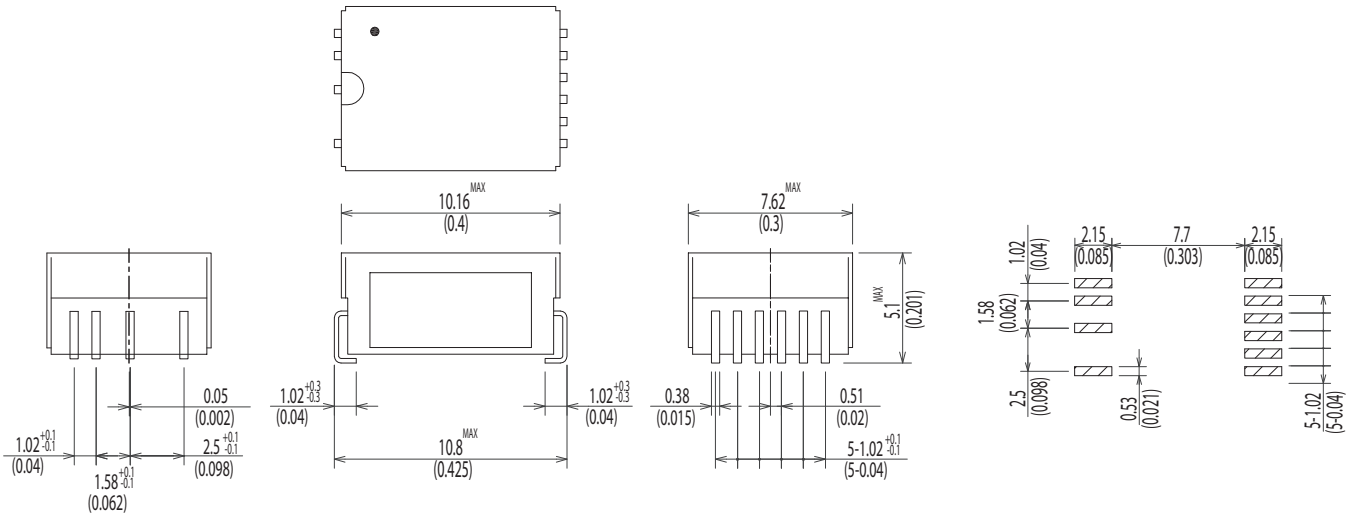
Dimensions All Dimensions are mm (inch)

Land Pattern Recommendation

MGT-E103H/ MGT-E105H/ MGT-E112H

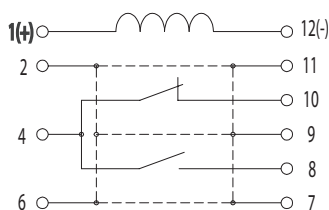


MJT-E103H/ MJT-E105H/ MJT-E112H

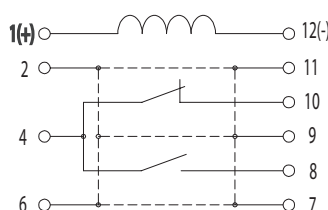


Schematic <Top View>

MGT-E103H/ MGT-E105H/ MGT-E112H

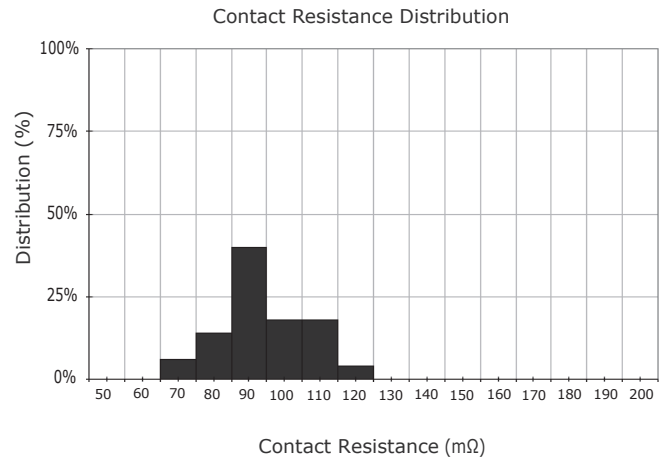
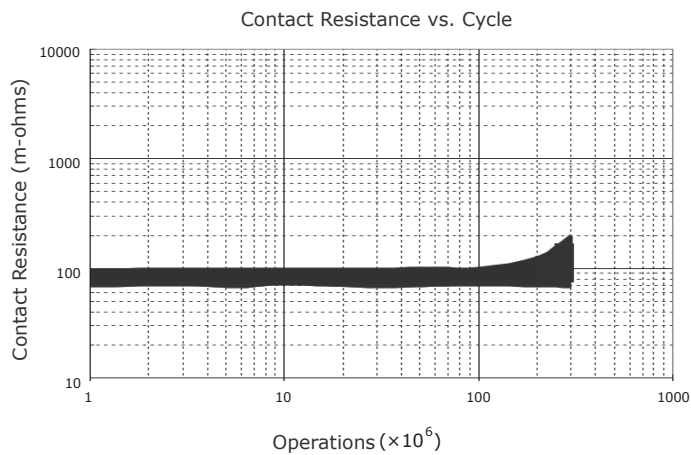


MJT-E103H/ MJT-E105H/ MJT-E112H

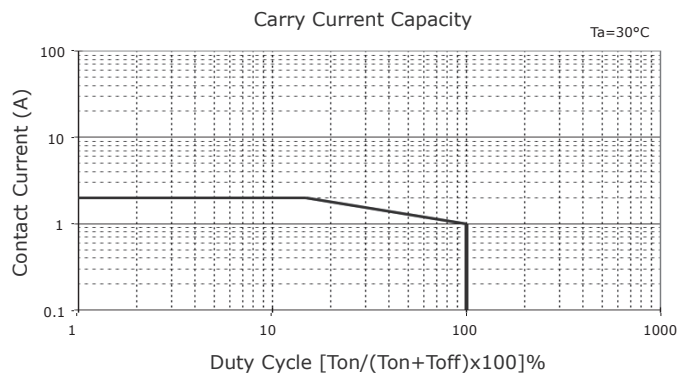


MT Series Reed Relays

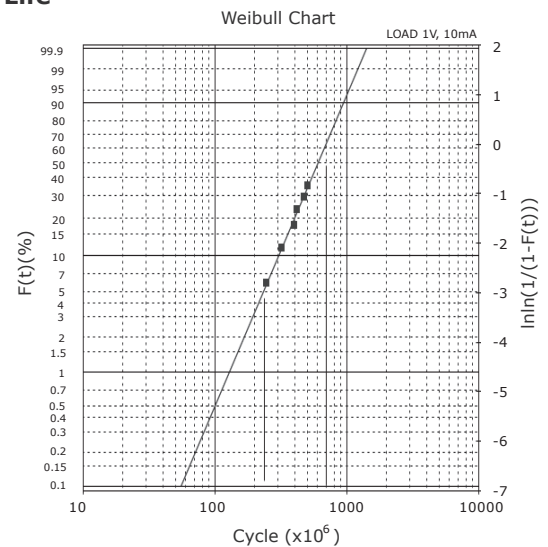
Contact Resistance



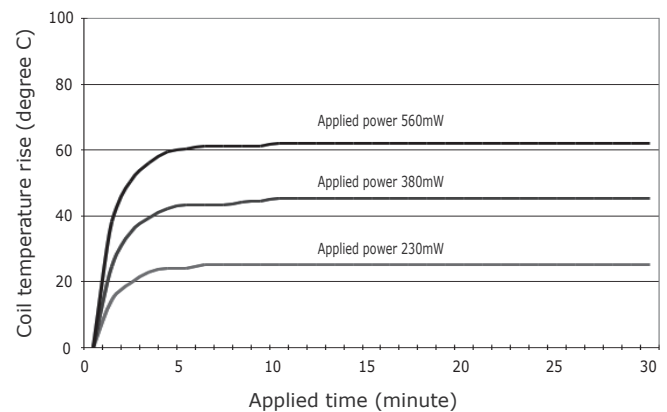
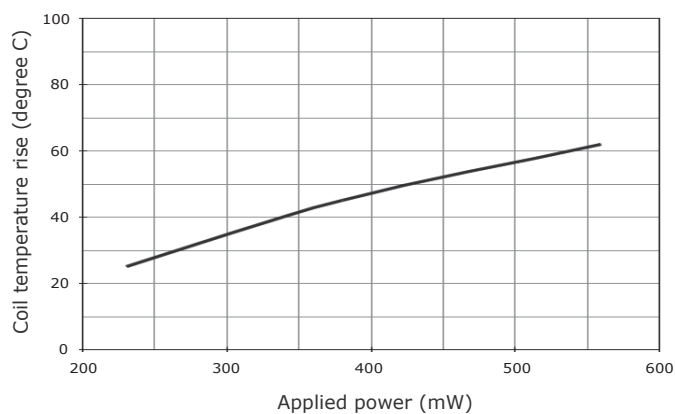
Carry Current



Life

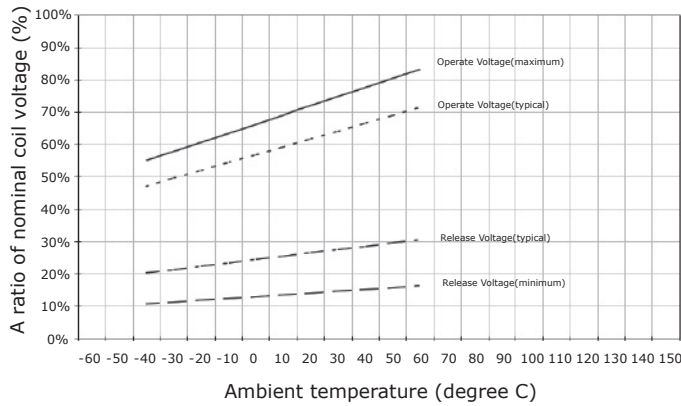


Coil Temperature Rise

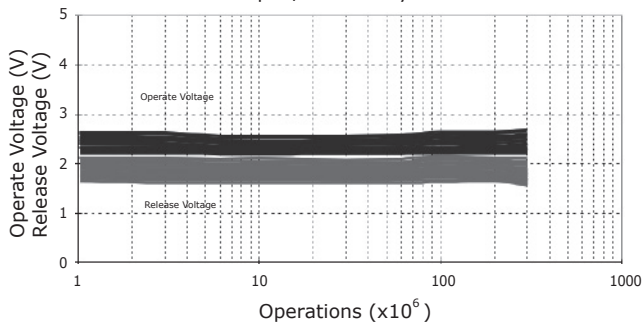


MT Series Reed Relays

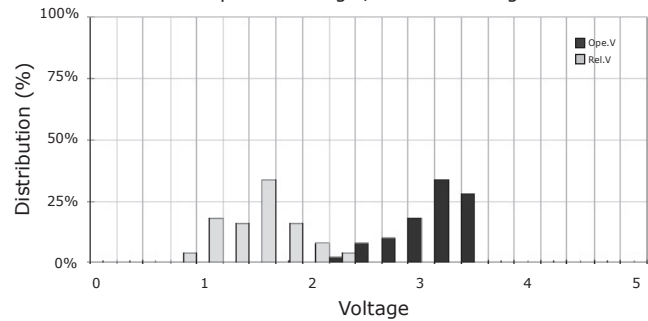
Operate and Release voltage vs. ambient temperature



OpeV/RelV vs. Cycle

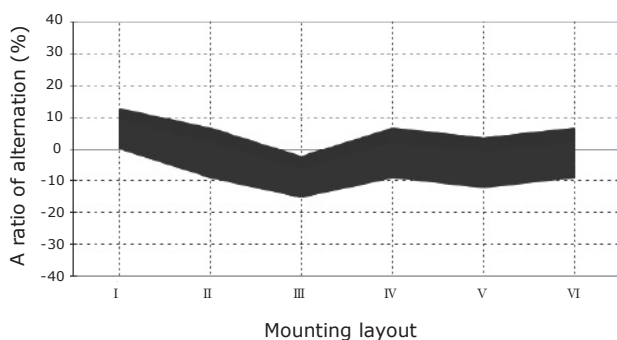


Operate Voltage / Release Voltage

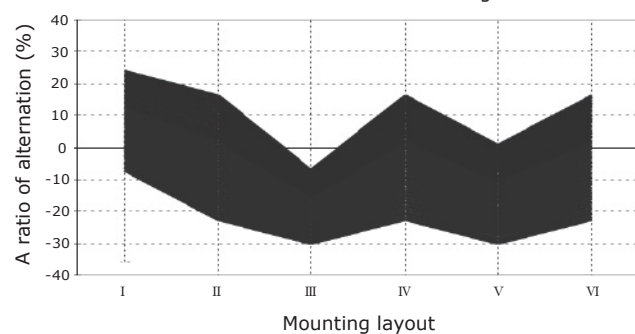


Magnetic Interference

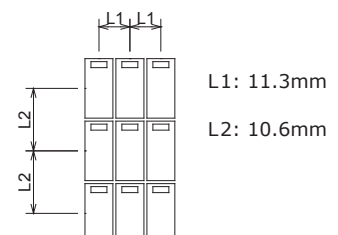
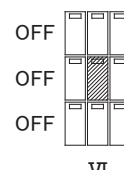
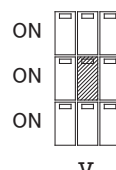
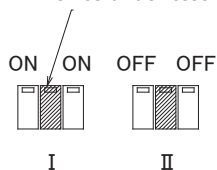
Alternation of operate voltage



Alternation of release voltage

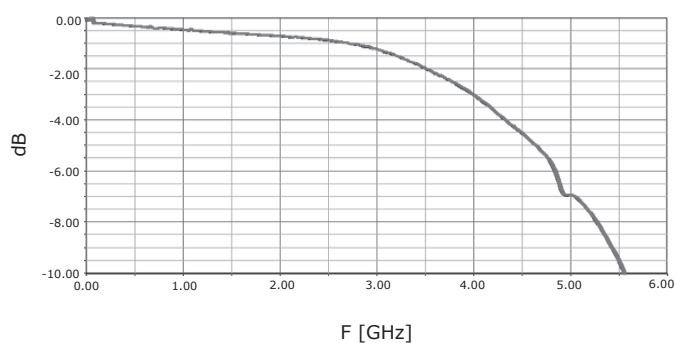


Device under test

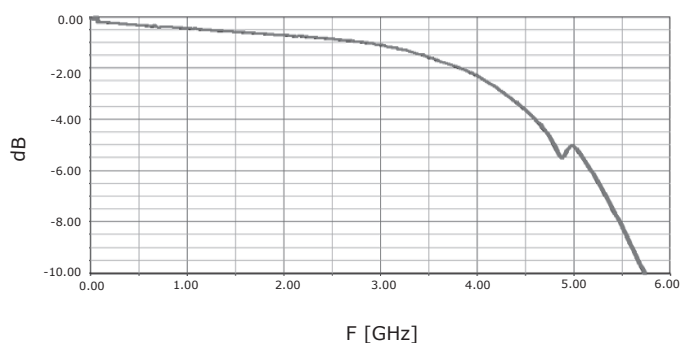


MT Series Reed Relays

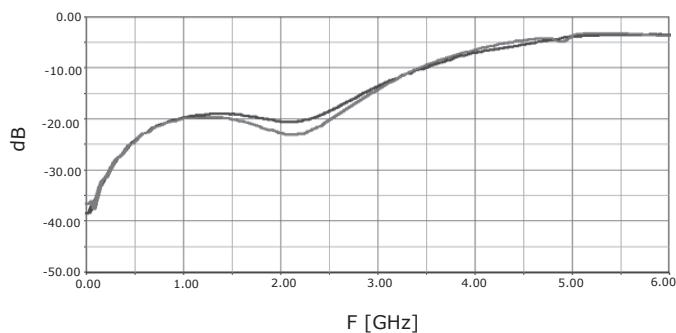
Insertion Loss (pin#4 - pin#18)



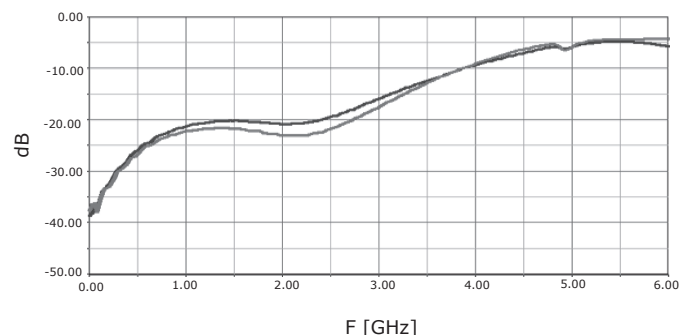
Insertion Loss (pin#4 - pin#16)



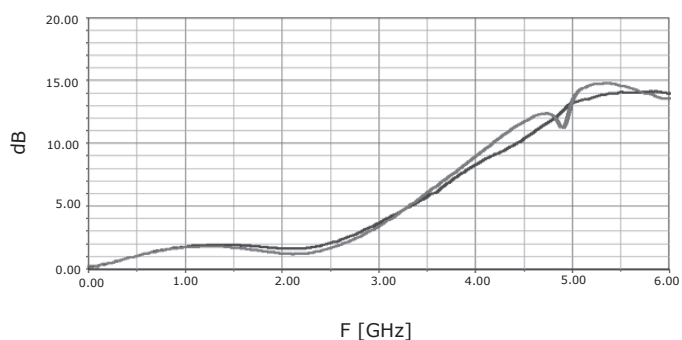
Return Loss (pin#4 - pin#18)



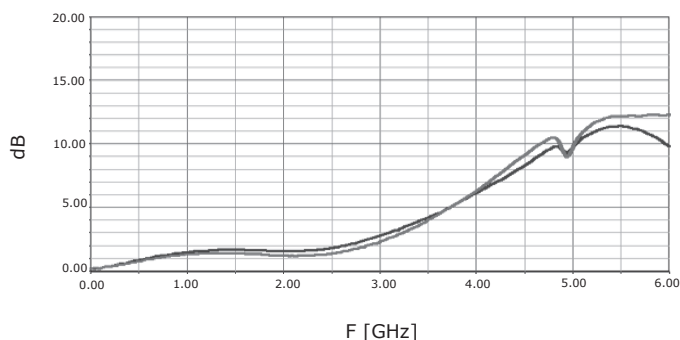
Return Loss (pin#4 - pin#16)



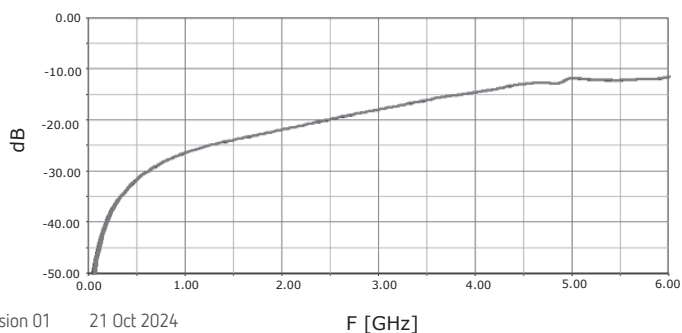
V.S.W.R. (pin#4 - pin#18)



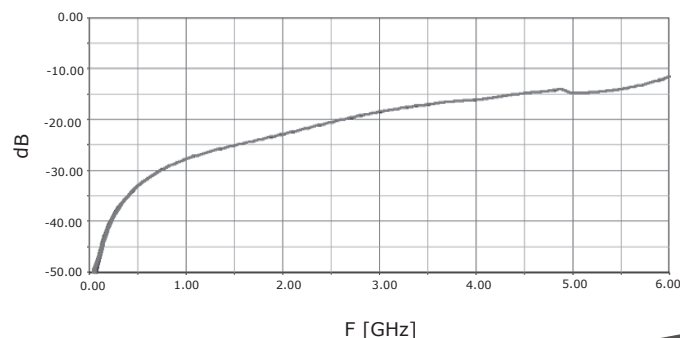
V.S.W.R. (pin#4 - pin#16)



Off Isolation (pin#4 - pin#18)

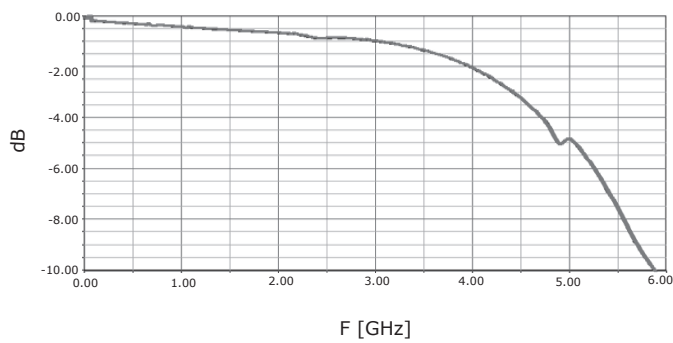


Off Isolation (pin#4 - pin#16)

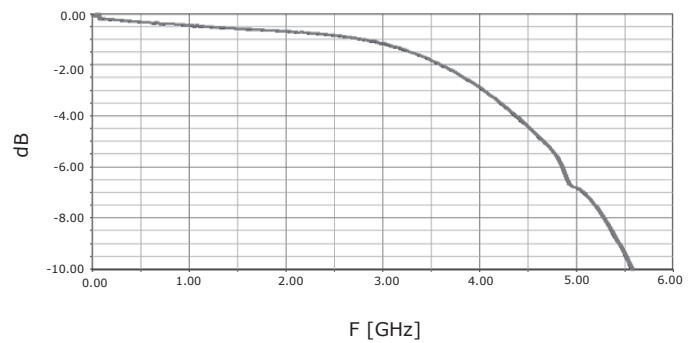


MT Series Reed Relays

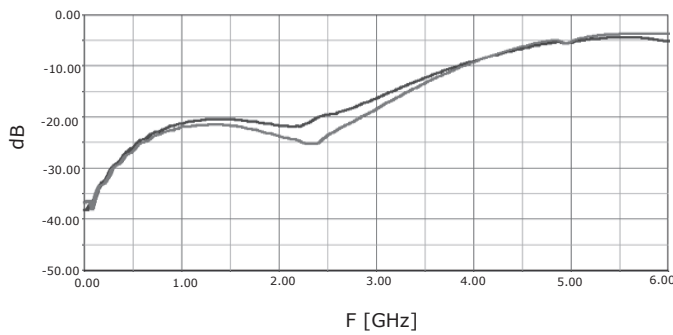
Insertion Loss (pin#8 - pin#14)



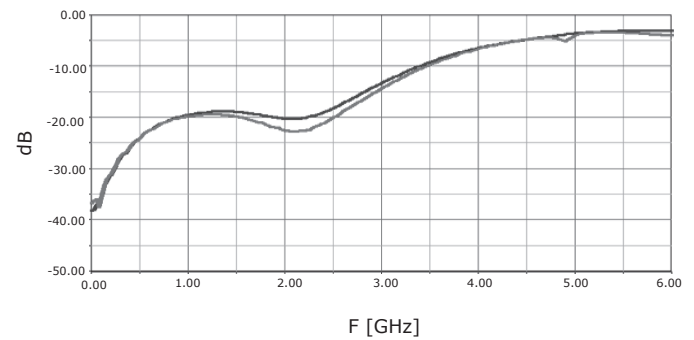
Insertion Loss (pin#8 - pin#12)



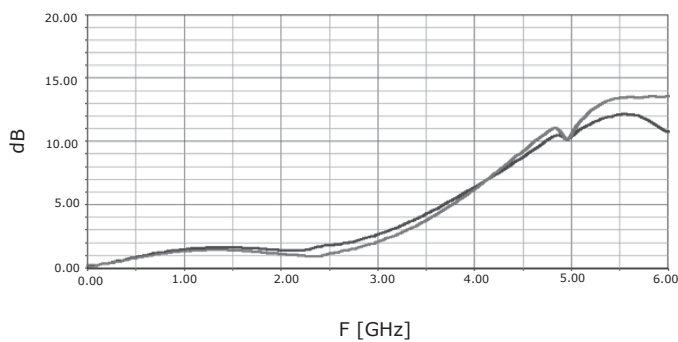
Return Loss (pin#8 - pin#14)



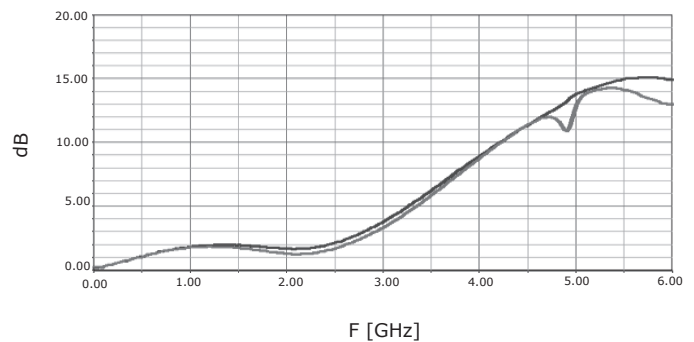
Return Loss (pin#8 - pin#12)



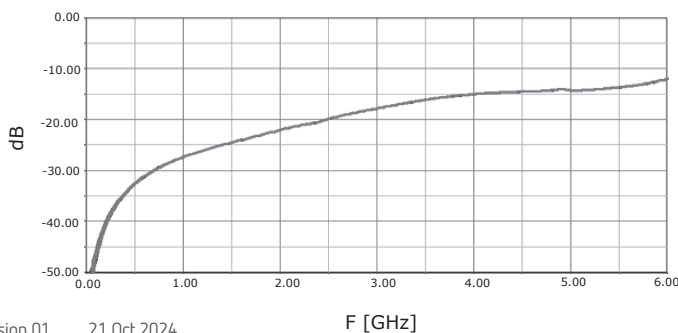
V.S.W.R. (pin#8 - pin#14)



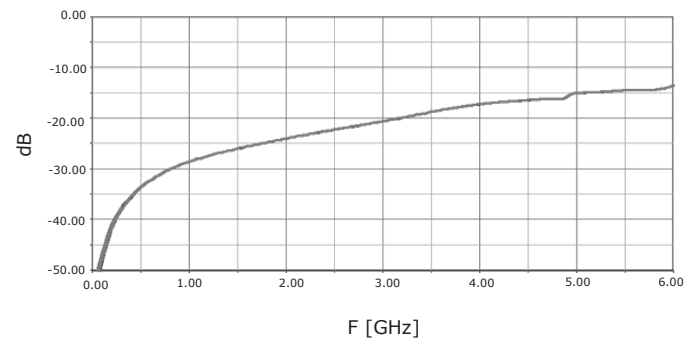
V.S.W.R. (pin#8 - pin#12)



Off Isolation (pin#8 - pin#14)



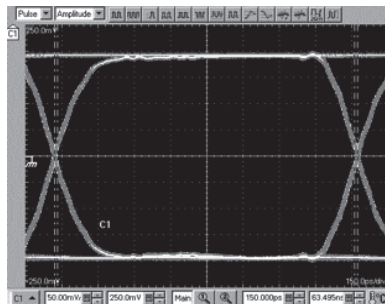
Off Isolation (pin#8 - pin#12)



MT Series Reed Relays

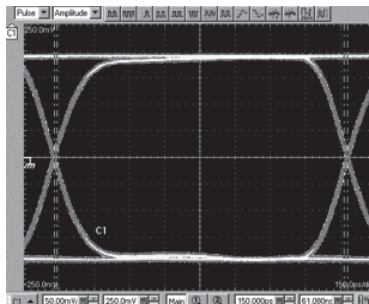
Through Fixture

Rise Time: ≈ 250 ps, Bit Rate: 800Mb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


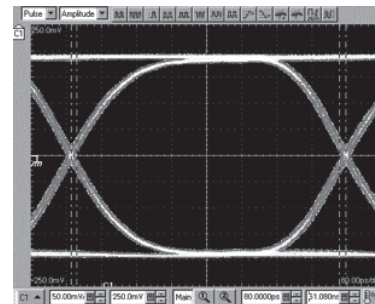
MJT-E205H with Fixture: pin#4-pin#16

Rise Time: ≈ 250 ps, Bit Rate: 800Mb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


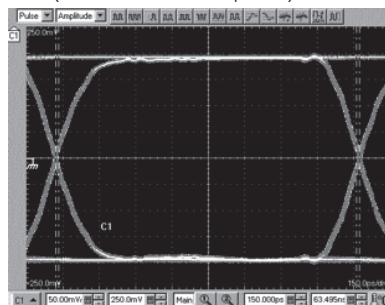
MJT-E205H with Fixture: pin#4-pin#16

Rise Time: ≈ 250 ps, Bit Rate: 1.6Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


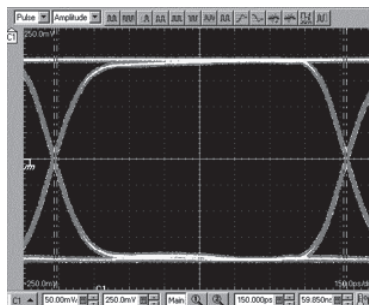
Through Fixture

Rise Time: ≈ 250 ps, Bit Rate: 800Mb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


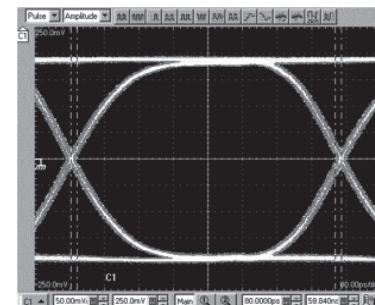
MJT-E205H with Fixture: pin#4-pin#18

Rise Time: ≈ 250 ps, Bit Rate: 800Mb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


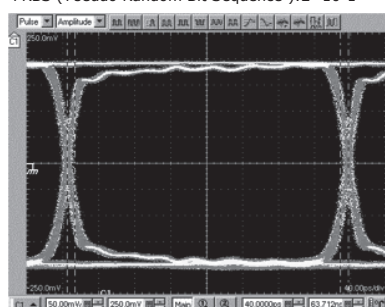
MJT-E205H with Fixture: pin#4-pin#18

Rise Time: ≈ 250 ps, Bit Rate: 1.6Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


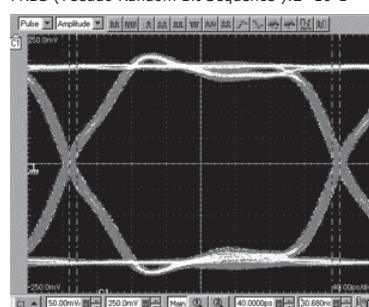
Through Fixture

Rise Time: ≈ 30 ps, Bit Rate: 3.2Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


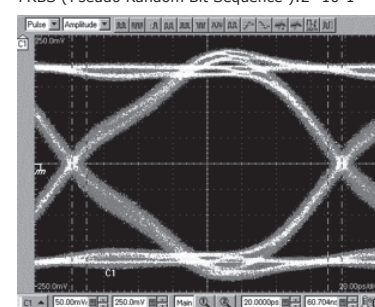
MJT-E205H with Fixture: pin#4-pin#16

Rise Time: ≈ 30 ps, Bit Rate: 3.2Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


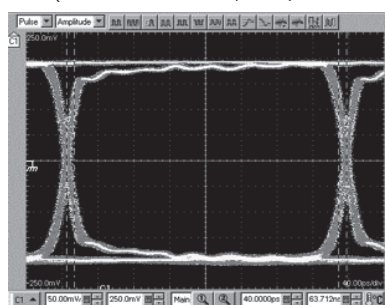
MJT-E205H with Fixture: pin#4-pin#16

Rise Time: ≈ 30 ps, Bit Rate: 6.4Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


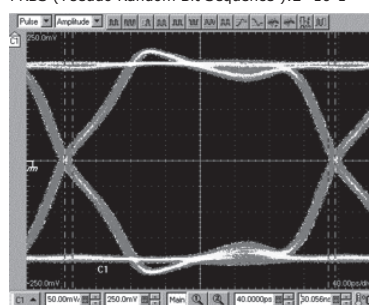
Through Fixture

Rise Time: ≈ 30 ps, Bit Rate: 3.2Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


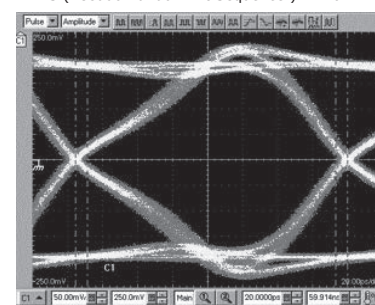
MJT-E205H with Fixture: pin#4-pin#18

Rise Time: ≈ 30 ps, Bit Rate: 3.2Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


MJT-E205H with Fixture: pin#4-pin#18

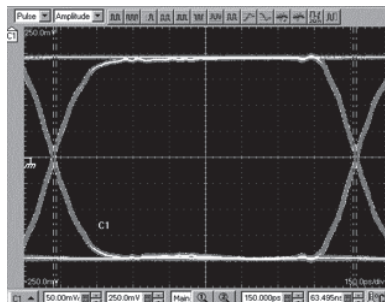
Rise Time: ≈ 30 ps, Bit Rate: 6.4Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


MT Series Reed Relays

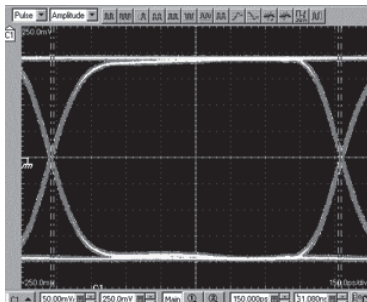
Through Fixture

Rise Time: $\approx 250\text{ps}$, Bit Rate: 800Mb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


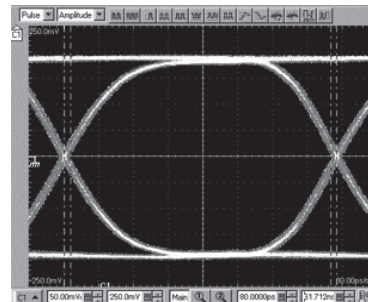
MJT-E205H with Fixture: pin#8-pin#12

Rise Time: $\approx 250\text{ps}$, Bit Rate: 800Mb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


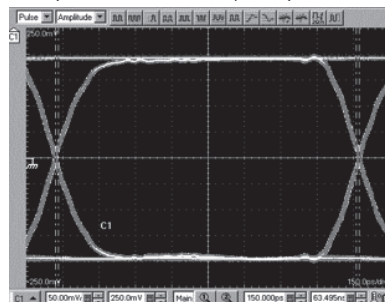
MJT-E205H with Fixture: pin#8-pin#12

Rise Time: $\approx 250\text{ps}$, Bit Rate: 1.6Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


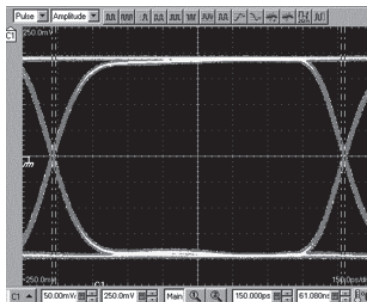
Through Fixture

Rise Time: $\approx 250\text{ps}$, Bit Rate: 800Mb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


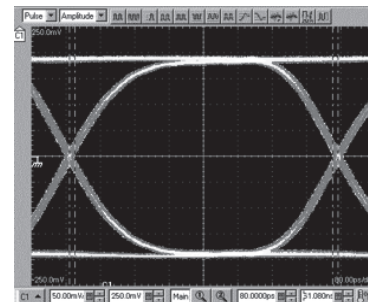
MJT-E205H with Fixture: pin#8-pin#14

Rise Time: $\approx 250\text{ps}$, Bit Rate: 800Mb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


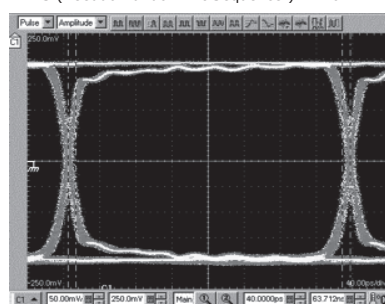
MJT-E205H with Fixture: pin#8-pin#14

Rise Time: $\approx 250\text{ps}$, Bit Rate: 1.6Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


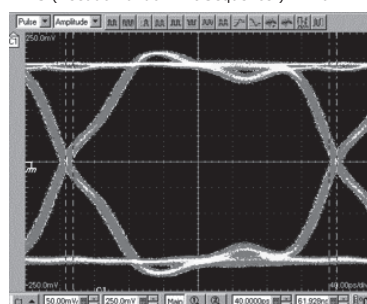
Through Fixture

Rise Time: $\approx 30\text{ps}$, Bit Rate: 3.2Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


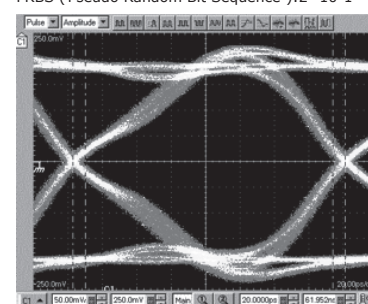
MJT-E205H with Fixture: pin#8-pin#12

Rise Time: $\approx 30\text{ps}$, Bit Rate: 3.2Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


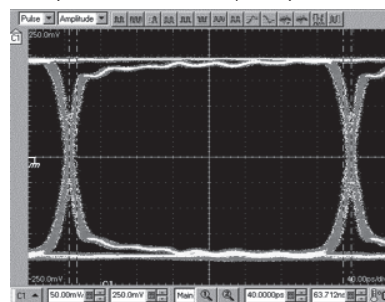
MJT-E205H with Fixture: pin#8-pin#12

Rise Time: $\approx 30\text{ps}$, Bit Rate: 6.4Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


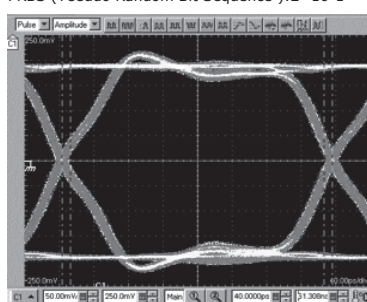
Through Fixture

Rise Time: $\approx 30\text{ps}$, Bit Rate: 3.2Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


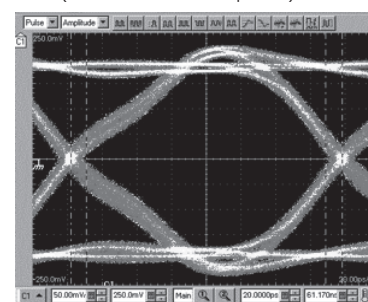
MJT-E205H with Fixture: pin#8-pin#14

Rise Time: $\approx 30\text{ps}$, Bit Rate: 3.2Gb/s

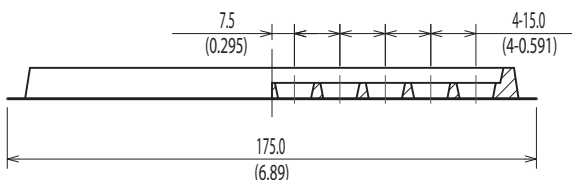
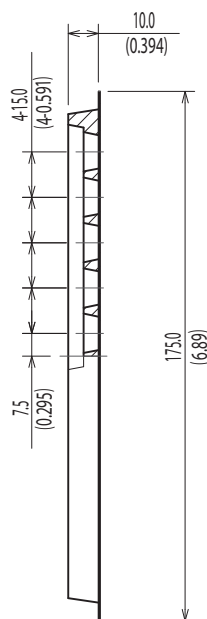
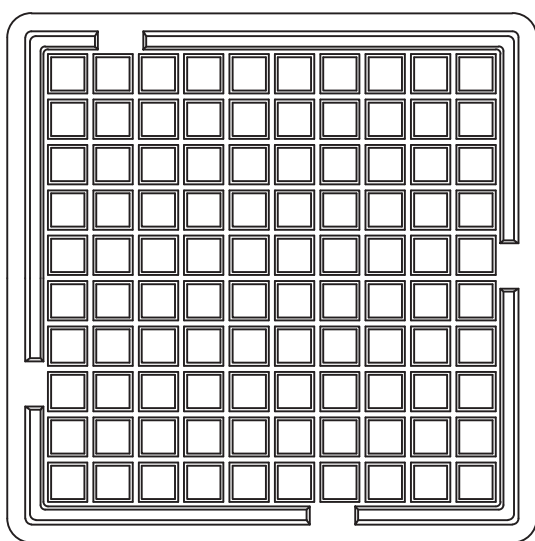
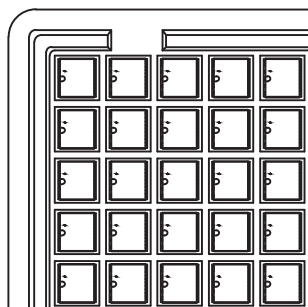
PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


MJT-E205H with Fixture: pin#8-pin#14

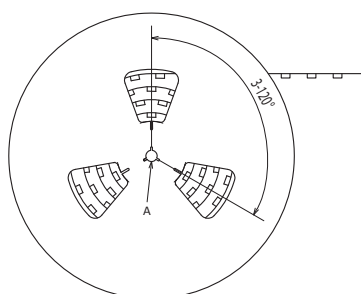
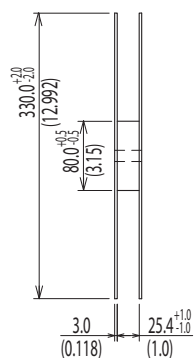
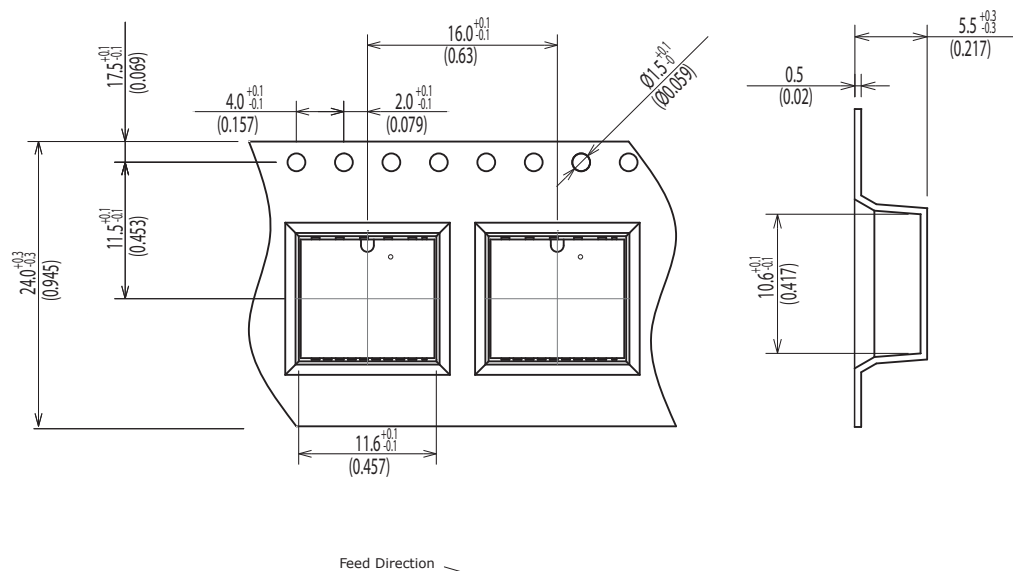
Rise Time: $\approx 30\text{ps}$, Bit Rate: 6.4Gb/s

PRBS (Pseudo Random Bit Sequence): $2^{10}-1$


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Details of the part A

