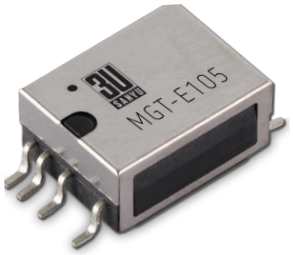
MT Series Reed Relays

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-E203H	MxT-E105H MxT-E205H	MxT-E112H 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	
Coil Resistance	Ω	70	110	550	±10% @ 20°C
Operate Voltage	VDC Max	2.8	3.75	8.8	@ 20°C
Release Voltage	VDC Min	0.5	0.7	1.2	@ 20°C
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	0.5			Shield to coil
Operate Time (Including Bounce)	msec Max	0.5			@ nominal coil voltage 100 Hz square wave
Release Time	msec Max				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

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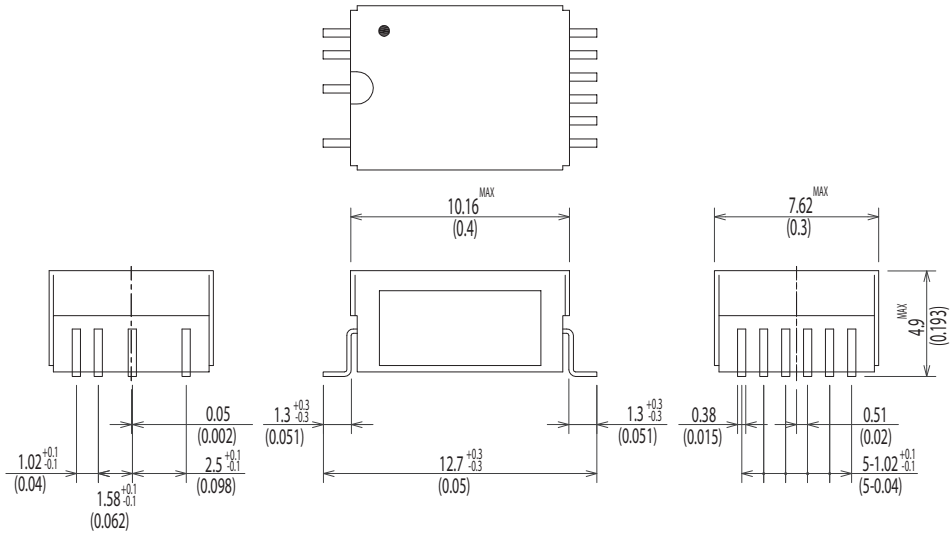
MT Series Reed Relays

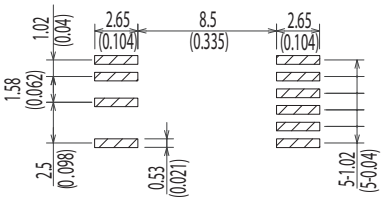
Dimensions

All Dimensions are mm (inch)

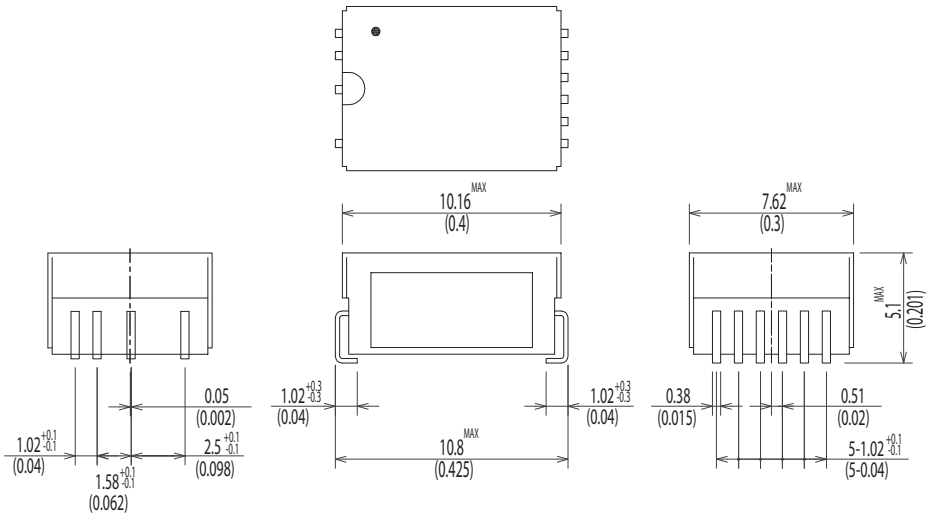
MGT-E103H/ MGT-E105H/ MGT-E112H

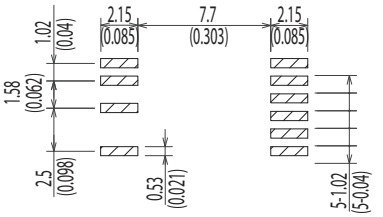


Land Pattern Recommendation



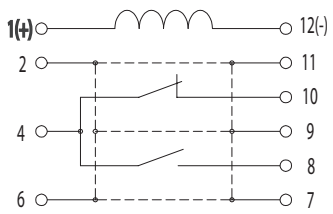
MJT-E103H/ MJT-E105H/ MJT-E112H



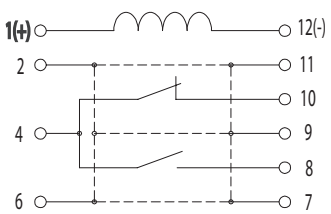


Schematic <Top View>

MGT-E103H/ MGT-E105H/ MGT-E112H



MJT-E103H/ MJT-E105H/ MJT-E112H



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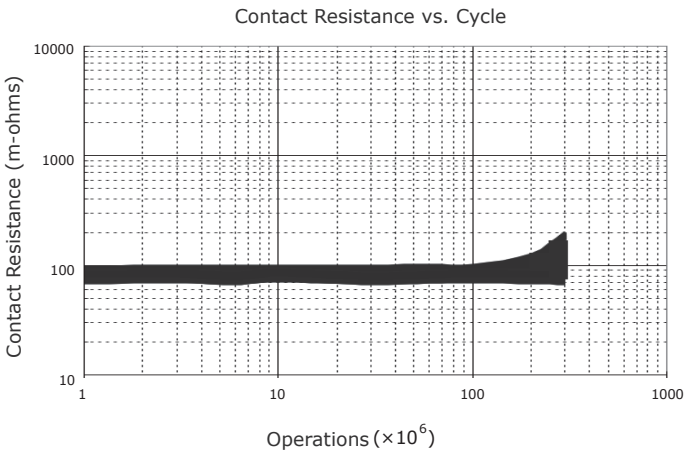
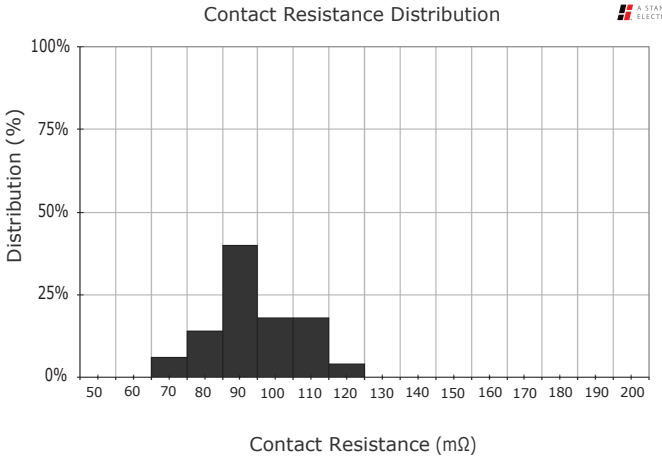
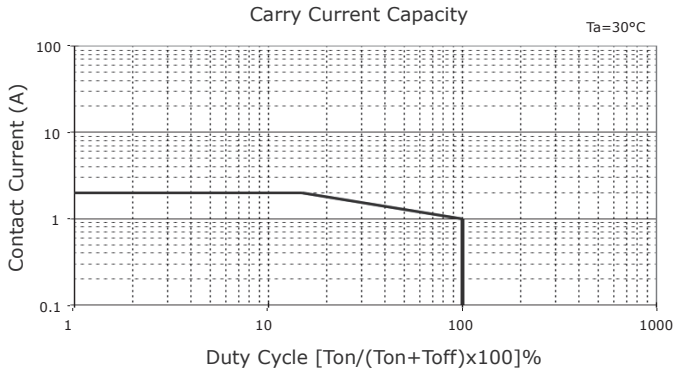
Contact Resistance

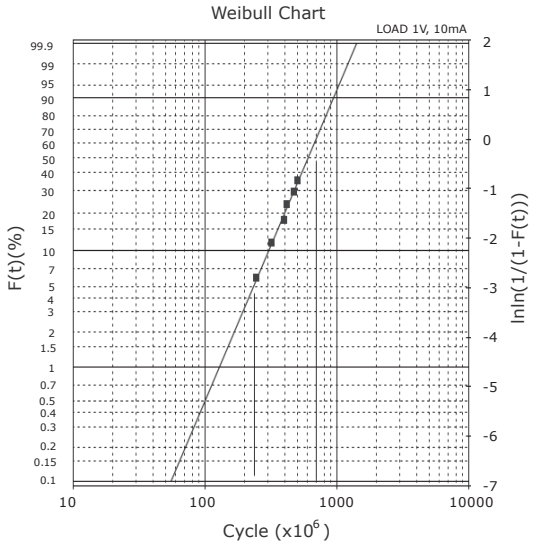




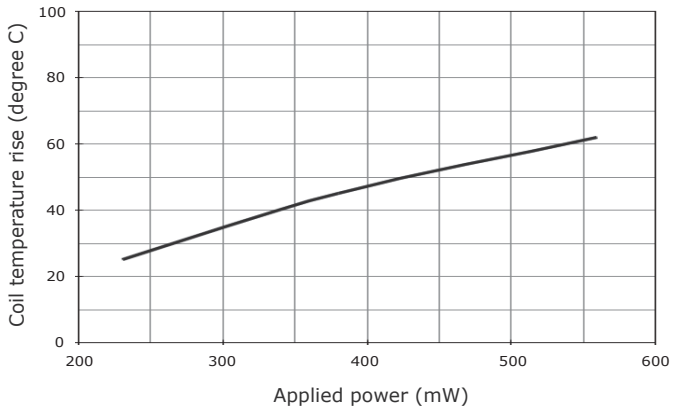
Carry Current

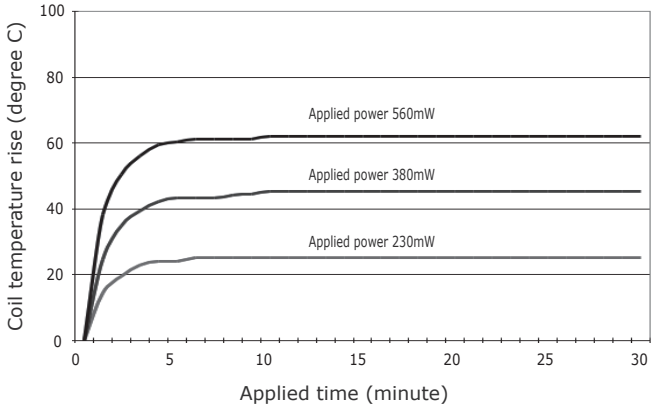


Life



Coil Temperature Rise





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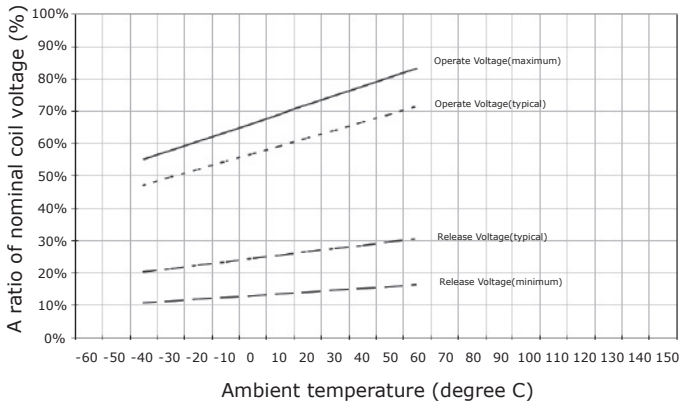
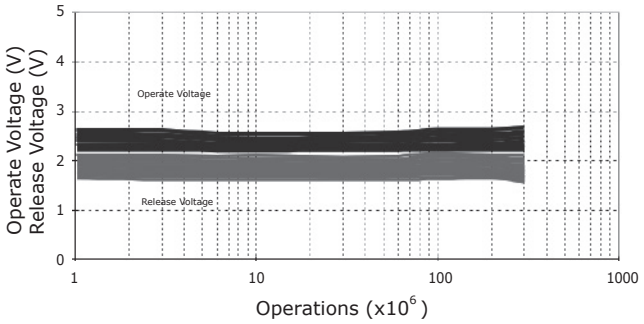
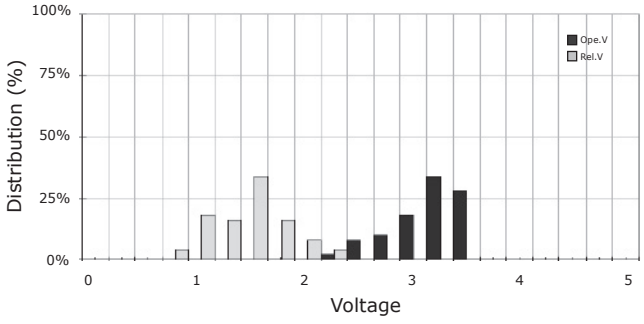
Operate and Release voltage vs. ambient temperature



OpeV/RelV vs. Cycle

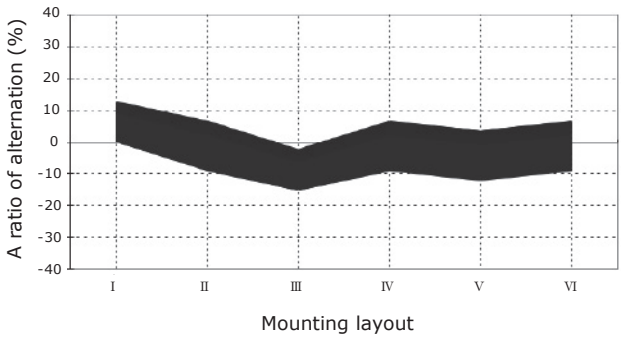


Operate Voltage / Release Voltage

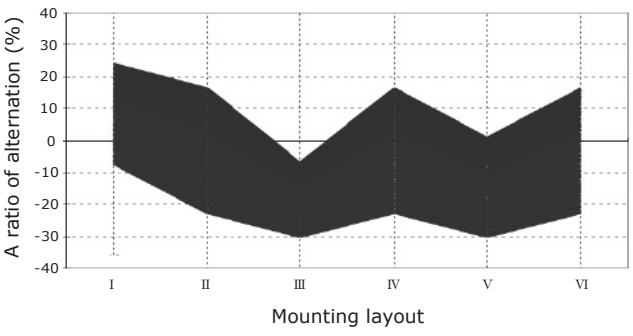


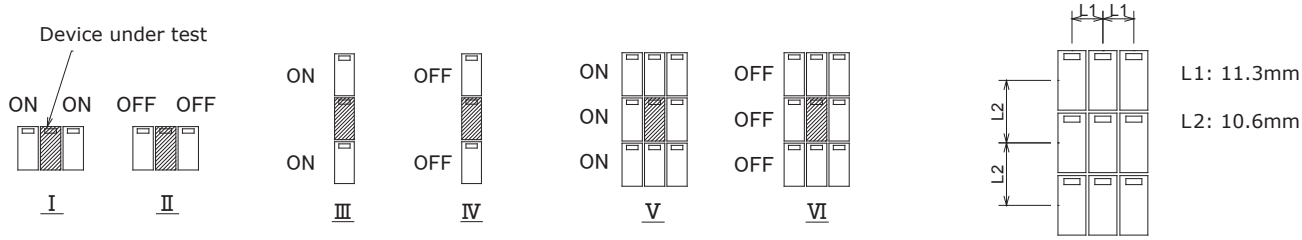
Magnetic Interference

Alternation of operate voltage



Alternation of release voltage





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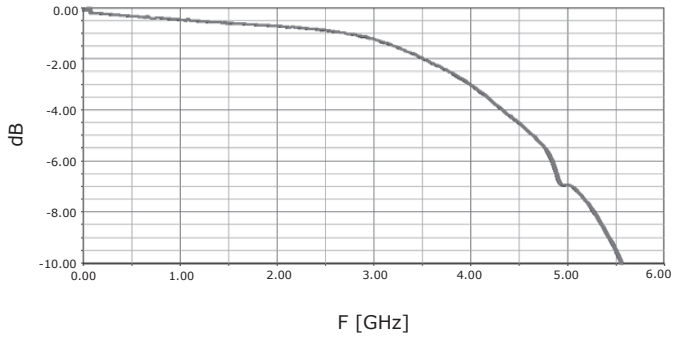
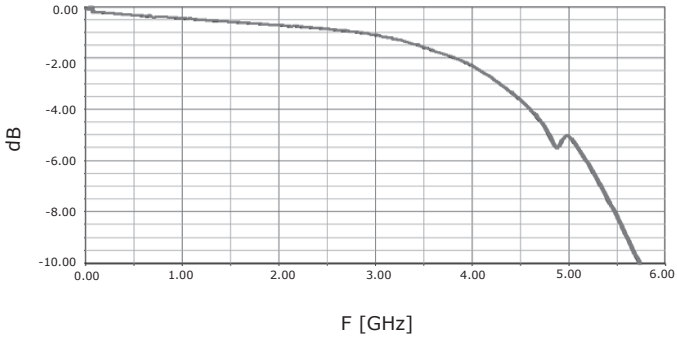
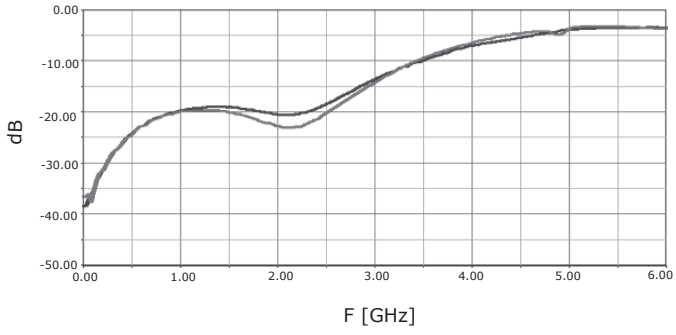
Insertion Loss (pin#4 - pin#18)



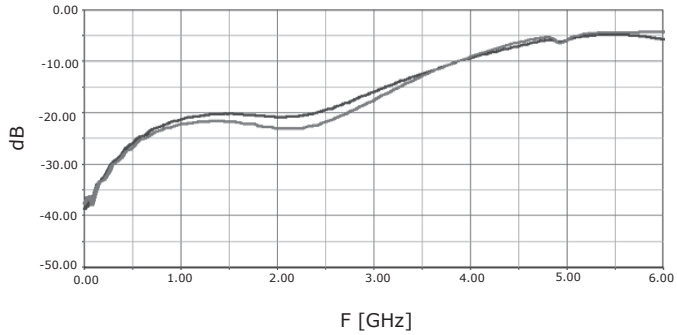
Insertion Loss (pin#4 - pin#16)



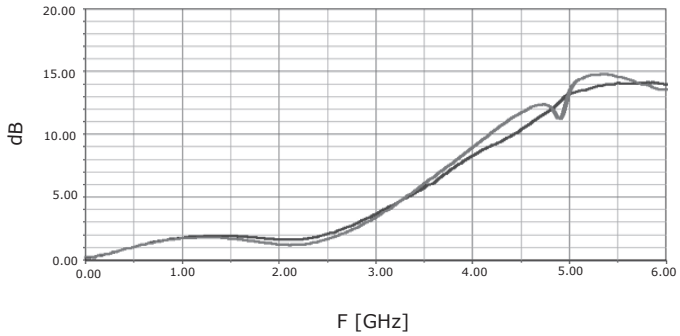
Return Loss (pin#4 - pin#18)



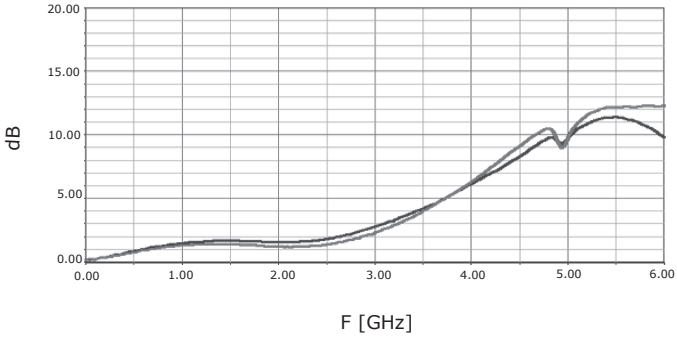
Return Loss (pin#4 - pin#16)



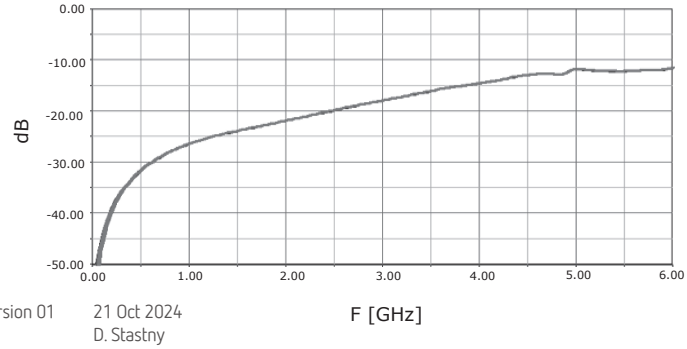
V.S.W.R. (pin#4 - pin#18)



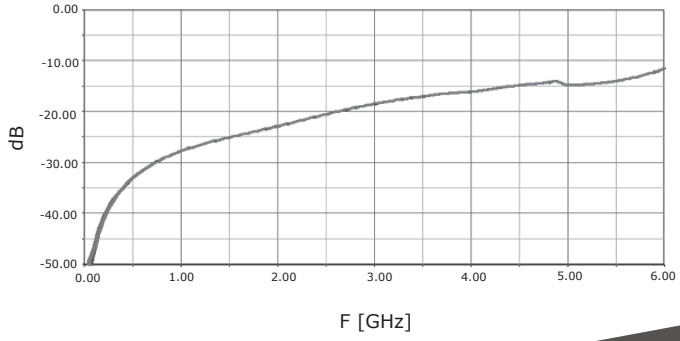
V.S.W.R. (pin#4 - pin#16)



Off Isolation (pin#4 - pin#18)



Off Isolation (pin#4 - pin#16)



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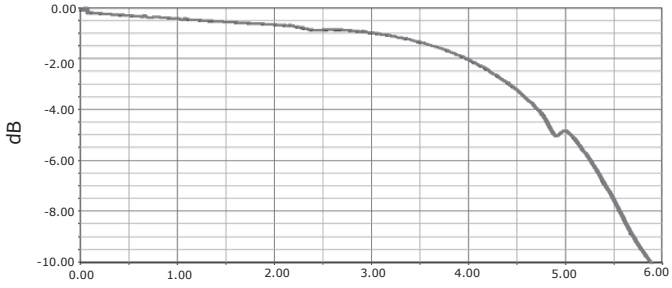
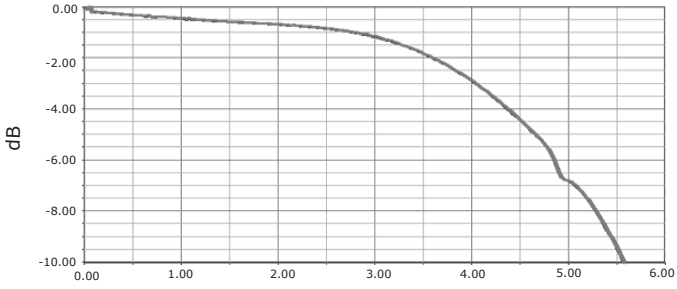
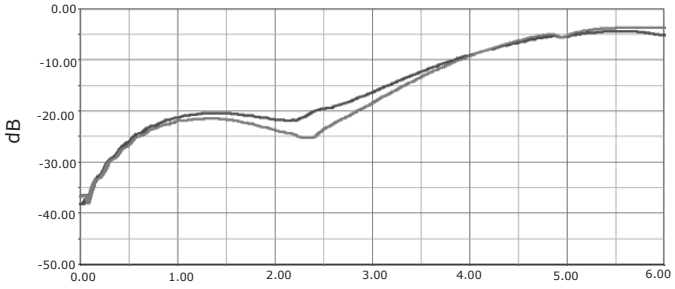
Insertion Loss (pin#8 - pin#14)



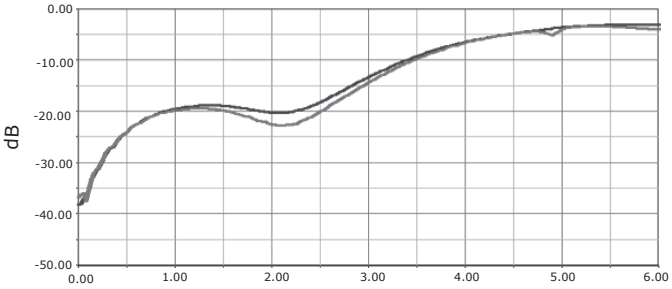
Insertion Loss (pin#8 - pin#12)



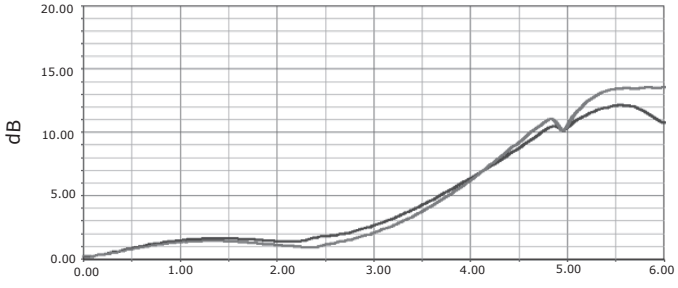
Return Loss (pin#8 - pin#14)



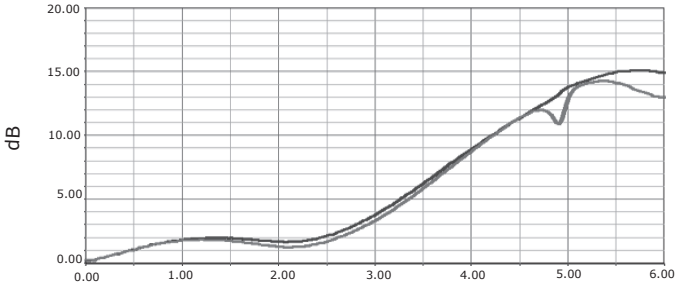
Return Loss (pin#8 - pin#12)



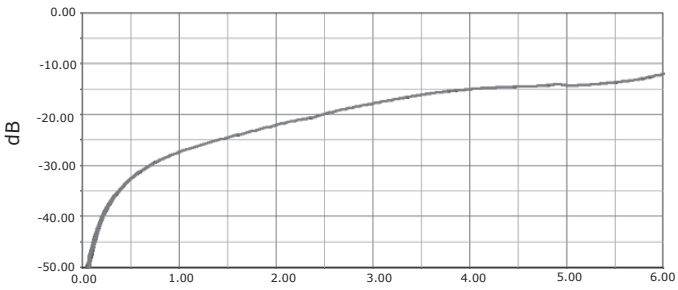
V.S.W.R. (pin#8 - pin#14)



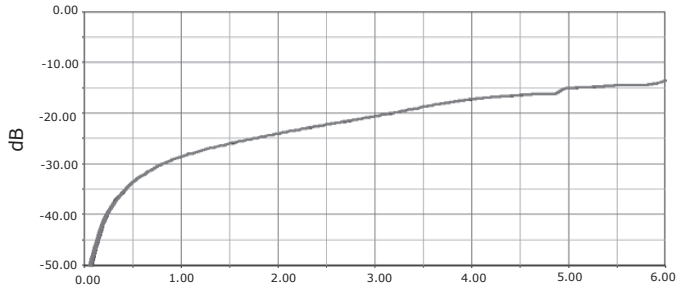
V.S.W.R. (pin#8 - pin#12)



Off Isolation (pin#8 - pin#14)



Off Isolation (pin#8 - pin#12)



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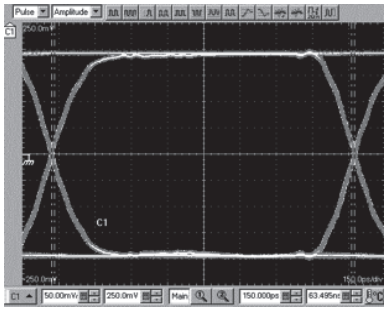
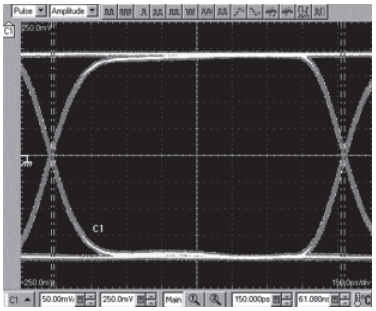
MT Series Reed Relays

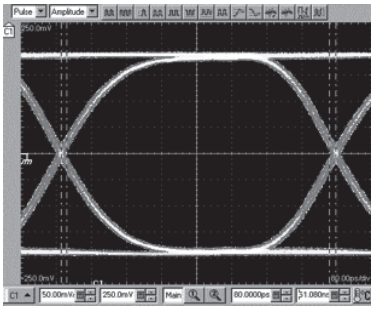
Through Fixture
Rise Time: ≒250ps , Bit Rate: 800Mb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



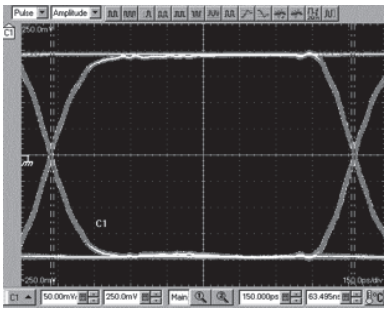
MJT-E205H with Fixture: pin#4-pin#16
Rise Time: ≒250ps , Bit Rate: 800Mb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



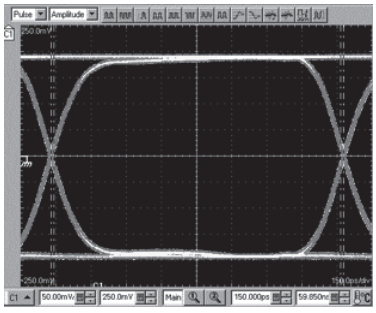
MJT-E205H with Fixture: pin#4-pin#16
Rise Time: ≒250ps , Bit Rate: 1.6Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



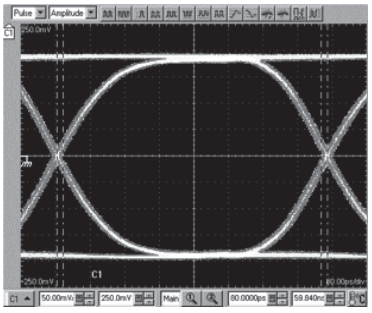
Through Fixture
Rise Time: ≒250ps , Bit Rate: 800Mb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



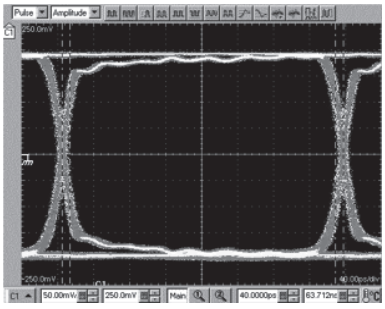
MJT-E205H with Fixture: pin#4-pin#18
Rise Time: ≒250ps , Bit Rate: 800Mb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



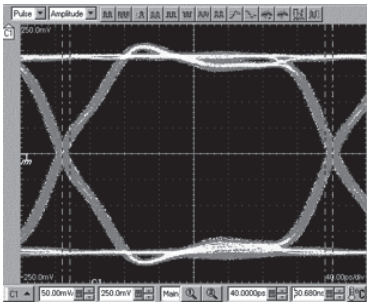
MJT-E205H with Fixture: pin#4-pin#18
Rise Time: ≒250ps , Bit Rate: 1.6Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



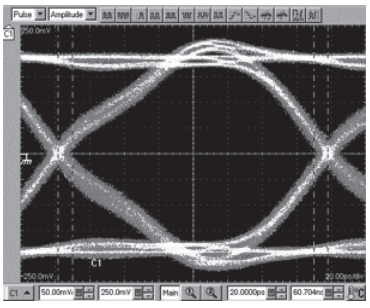
Through Fixture
Rise Time: ≒ 30ps , Bit Rate: 3.2Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



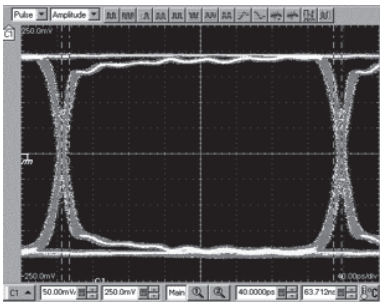
MJT-E205H with Fixture: pin#4-pin#16
Rise Time: ≒ 30ps , Bit Rate: 3.2Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



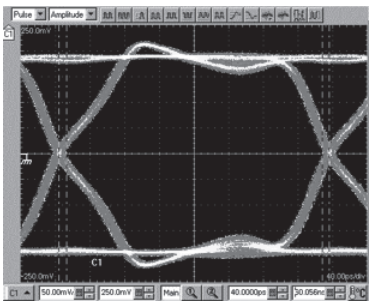
MJT-E205H with Fixture: pin#4-pin#16
Rise Time: ≒ 30 ps , Bit Rate: 6.4Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



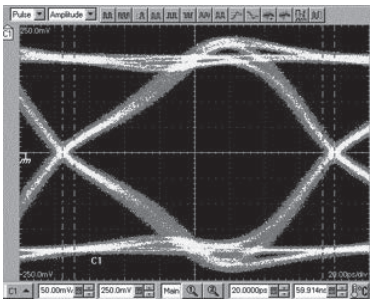
Through Fixture
Rise Time: ≒ 30ps , Bit Rate: 3.2Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



MJT-E205H with Fixture: pin#4-pin#18
Rise Time: ≒ 30ps , Bit Rate: 3.2Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



MJT-E205H with Fixture: pin#4-pin#18
Rise Time: ≒ 30ps , Bit Rate: 6.4Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



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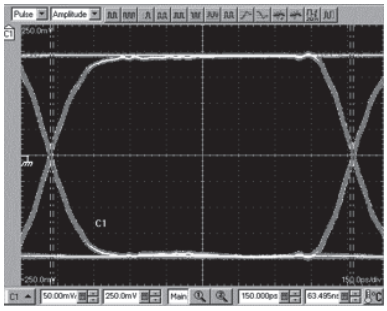
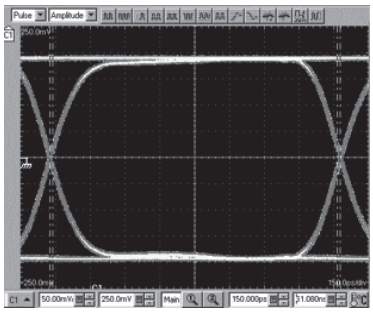
MT Series Reed Relays

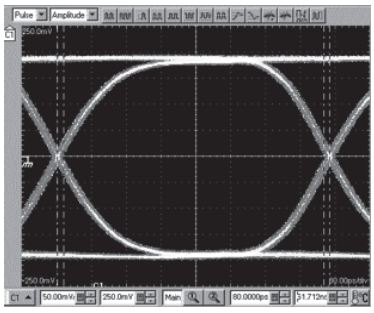
Through Fixture
Rise Time: ≒250ps , Bit Rate: 800Mb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



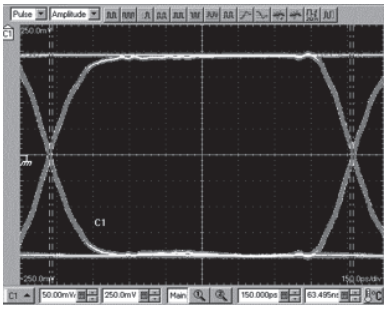
MJT-E205H with Fixture: pin#8-pin#12
Rise Time: ≒250ps , Bit Rate: 800Mb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



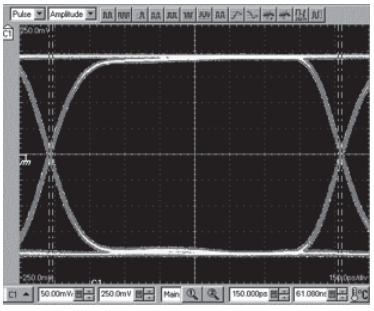
MJT-E205H with Fixture: pin#8-pin#12
Rise Time: ≒250ps , Bit Rate: 1.6Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



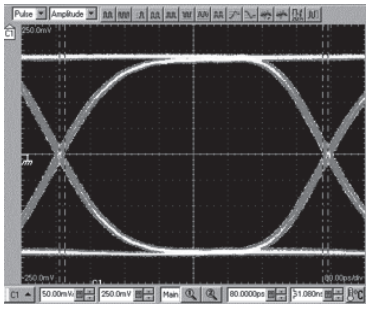
Through Fixture
Rise Time: ≒250ps , Bit Rate: 800Mb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



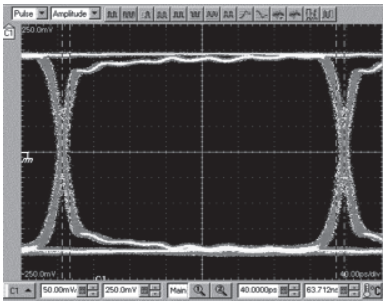
MJT-E205H with Fixture: pin#8-pin#14
Rise Time: ≒250ps , Bit Rate: 800Mb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



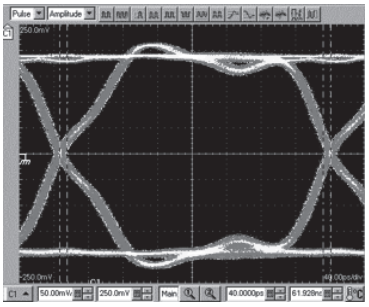
MJT-E205H with Fixture: pin#8-pin#14
Rise Time: ≒250ps , Bit Rate: 1.6Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



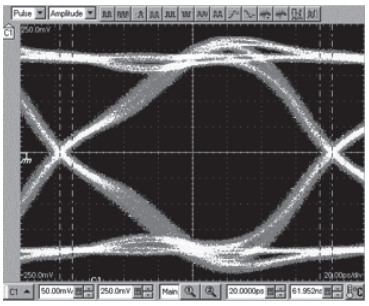
Through Fixture
Rise Time: ≒ 30ps , Bit Rate: 3.2Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



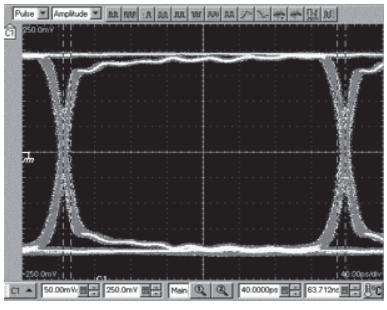
MJT-E205H with Fixture: pin#8-pin#12
Rise Time: ≒ 30ps , Bit Rate: 3.2Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



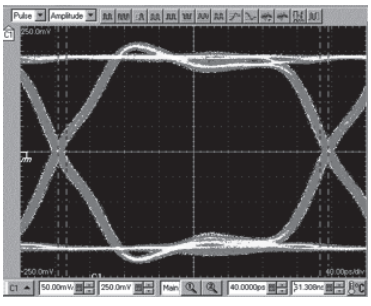
MJT-E205H with Fixture: pin#8-pin#12
Rise Time: ≒ 30 ps , Bit Rate: 6.4Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



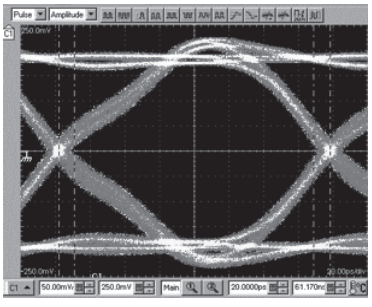
Through Fixture
Rise Time: ≒ 30ps , Bit Rate: 3.2Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



MJT-E205H with Fixture: pin#8-pin#14
Rise Time: ≒ 30ps , Bit Rate: 3.2Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



MJT-E205H with Fixture: pin#8-pin#14
Rise Time: ≒ 30ps , Bit Rate: 6.4Gb/s
PRBS (Pseudo Random Bit Sequence):2^10-1



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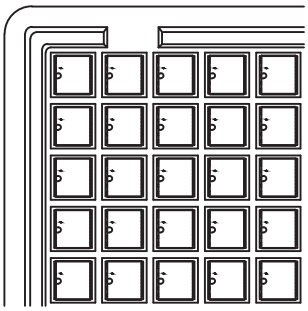
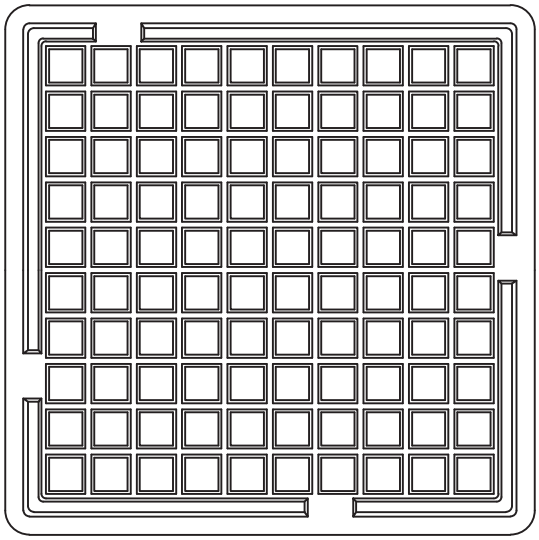
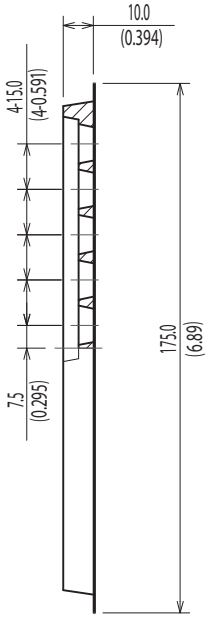
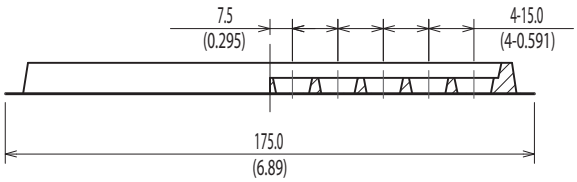
MT Series Reed Relays









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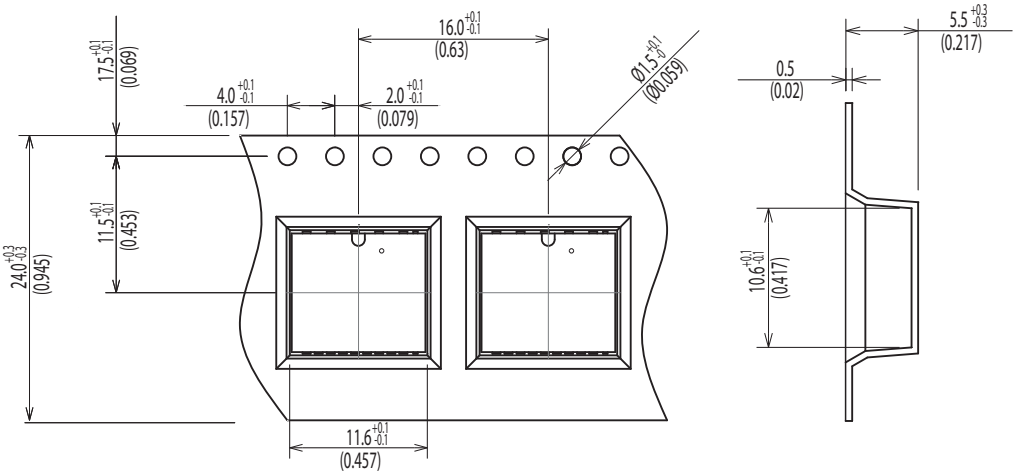
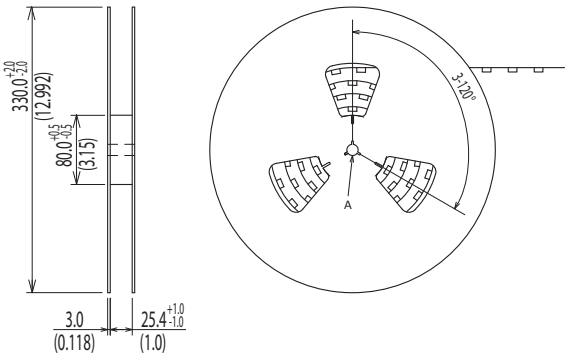
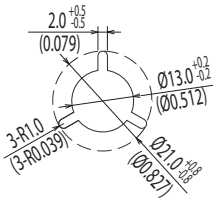
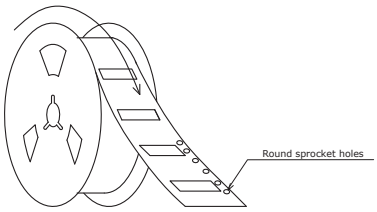


Feed Direction



Details of the part A





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