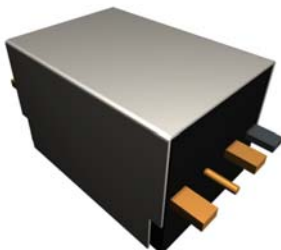


New**150R-1A14A****High Frequency Relay****PRODUCT DESCRIPTIONS**

As a successor to 1D-16A, this relay was developed with 12.8Gb/s signal integrity. High frequency characteristics surpasses all competitors by achieving an Insertion Loss at 3.0dB@20GHz.

In addition to the signal integrity, the mounting space of 20GHz relay achieved 30% shrinkage for high-density mounting. The small mounting space and frequency characteristics are ideal for the wireless communications and other highly demanding markets.

SPECIFICATIONS

150R-1A14A			A: Axial
Parameters	Units	1 Form A	Test Conditions
Coil Specifications			
Nominal Coil Voltage	VDC	5.0	
Coil Resistance	Ω	150	$\pm 10\%$ @ 20°C
Operate Voltage	VDC Max	3.2	15°C to 35°C
Release Voltage	VDC Min	0.5	15°C to 35°C
Contact Ratings			
Switching Voltage	Volts	100	Max DC/Peak AC resistance
Switching Current	Amps	0.25	Max DC/Peak AC resistance
Carry Current	Amps	0.5	Max DC/Peak AC resistance
Contact Rating	Watts	3	Max DC/Peak AC resistance
Life Expectancy	$\times 10^6$ Cycle	100	@ 1V 10mA
Contact Resistance	m Ω	200	Max initial @ operate voltage
Contact Resistance Stability	m Ω	5.0	Max initial @ operate voltage
Relay Specifications			
Insulation Resistance	Ω Min	10^{11}	Between all isolated pins @ 100V 20°C 40%RH
Dielectric Strength	VDC Min	160	Between contacts
	VDC Min	200	Contacts to shield
	VDC Min	200	Contacts/Shield to coil
Operate Time (Including Bounce)	msec Max	0.25	@ nominal coil voltage
Release Time	msec Max	0.25	100Hz square wave Diode suppression
Environmental Ratings			
Measurement Reference Conditions			
Temp: 15°C to 35°C		Storage temp: -40°C to +85°C	
Humidity: 25% to 75%RH		Operate temp: -20°C to +80°C	
Atmospheric Pressure: 860 to 1060hpa		Vibration: 20G's to 2000Hz	
		Shock: 50G's	

New

1D Low Profile Series

**Miniature
Surface Mount**

PRODUCT DESCRIPTIONS

Development philosophy with inherited reliability and assembly capacity of the 1D Series was put into succession of the 1D Low Profile Series. Gull-Wing and J-Lead achieved low height of 3.6mm. This series is already in mass production for the ATE, telecommunications, and other instrument markets with great acceptance for low height and reliability.

SPECIFICATIONS

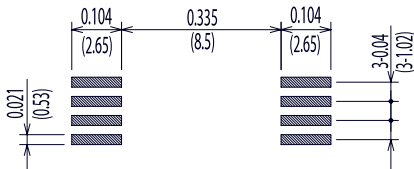
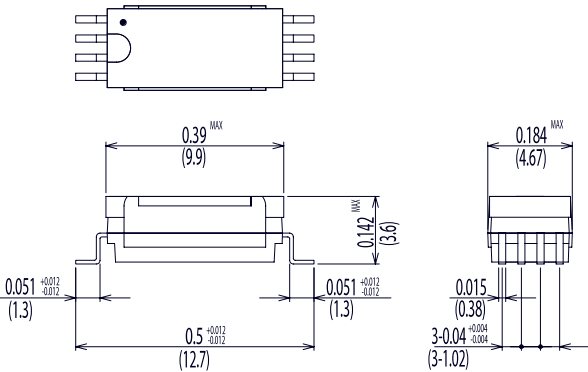


1D Low Profile Series		1D-14G-71	G: Gull-Wing, J: J-Lead
		1D-14J-71	
Parameters	Units	1 Form A	Test Conditions
Coil Specifications			
Nominal Coil Voltage	VDC	5.0	
Coil Resistance	Ω	150	$\pm 10\%$ @ 20°C
Operate Voltage	VDC Max	3.25	15°C to 35°C
Release Voltage	VDC Min	0.7	15°C to 35°C
Contact Ratings			
Switching Voltage	Volts	50	Max DC/Peak AC resistance
Switching Current	Amps	0.2	Max DC/Peak AC resistance
Carry Current	Amps	0.5	Max DC/Peak AC resistance
Contact Rating	Watts	5	Max DC/Peak AC resistance
Life Expectancy	$\times 10^6$ Cycle	300	@ 1V 10mA
Contact Resistance	m Ω	150	Max initial @ operate voltage
Contact Resistance Stability	m Ω	5.0	Max initial @ operate voltage
Relay Specifications			
Insulation Resistance	Ω Min	10^{11}	Between all isolated pins @ 100V 20°C 40%RH
Dielectric Strength	VDC Min	150	Between contacts
	VDC Min	250	Contacts to shield
	VDC Min	250	Contacts/Shield to coil
Operate Time (Including Bounce)	msec Max	0.3	@ nominal coil voltage
Release Time	msec Max	0.05	100Hz square wave Diode suppression
Environmental Ratings			
Measurement Reference Conditions			
Temp: 15°C to 35°C		Storage temp: -40°C to +85°C	
Humidity: 25% to 75%RH		Operate temp: -20°C to +80°C	
Atmospheric Pressure: 860 to 1060hpa		Vibration: 20G's to 2000Hz	
		Shock: 50G's	

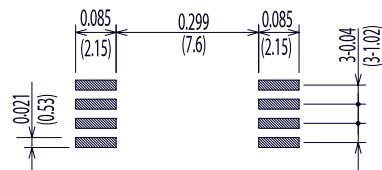
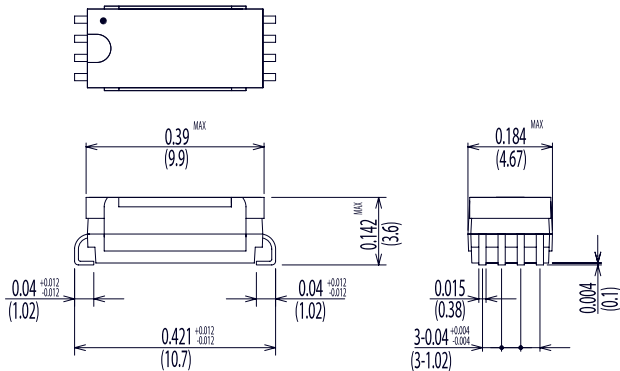
Dimensions All Dimensions are inches (mm)

Land Pattern Recommendation

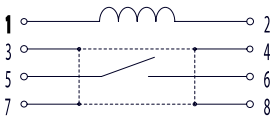
1D-14G-71



1D-14J-71



Schematic <Top View>



New**9D Series****Ultra Density Surface Mount****PRODUCT DESCRIPTIONS**

Development philosophy with inherited reliability and assembly capacity of 1D Series was put into succession of the 9D Series small form factor reed relay.

Compared with 1D-14J, the mounting area for this series achieved 30% shrinkage with the same great reliability. The 9D Series has a long product life that is widely accepted by the ATE, telecommunications and wireless communications markets.

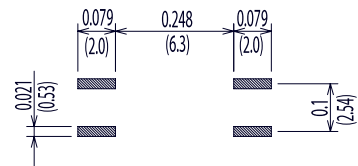
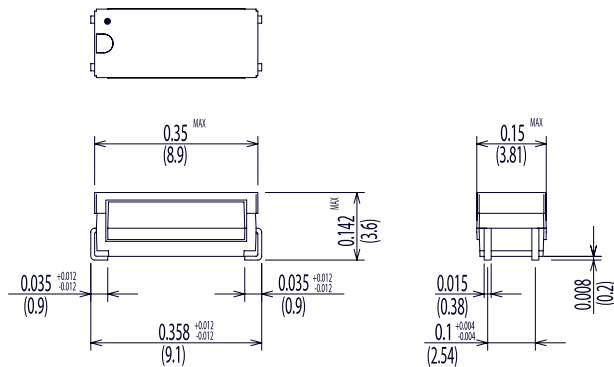
SPECIFICATIONS

9D Series		9D-50J	9D-10J	9D-14J	J: J-Lead
Parameters	Units	1 form A			Test Conditions
Coil Specifications					
Nominal Coil Voltage	VDC	3.3	5.0	5.0	
Coil Resistance	Ω	100	200	200	$\pm 10\%$ @ 20°C
Operate Voltage	VDC Max	2.0	3.1	3.1	15°C to 35°C
Release Voltage	VDC Min	0.7	0.7	0.7	15°C to 35°C
Contact Ratings					
Switching Voltage	Volts	50		50	Max DC/Peak AC resistance
Switching Current	Amps	0.2		0.2	Max DC/Peak AC resistance
Carry Current	Amps	0.5		0.5	Max DC/Peak AC resistance
Contact Rating	Watts	5		5	Max DC/Peak AC resistance
Life Expectancy	$\times 10^6$ Cycle	300		300	@ 1V 10mA
Contact Resistance	m Ω	150		150	Max initial @ operate voltage
Contact Resistance Stability	m Ω	5.0		5.0	Max initial @ operate voltage
Relay Specifications					
Insulation Resistance	Ω Min	10 ¹¹		10 ¹¹	Between all isolated pins @ 100V 20°C 40%RH
Dielectric Strength	VDC Min	150		150	Between contacts
	VDC Min	No shield		250	Contacts to shield
	VDC Min	250		250	Contacts / Shield to coil
Operate Time (Including Bounce)	msec Max	0.3		0.3	@ nominal coil voltage
Release Time	msec Max	0.05		0.05	100Hz square wave Diode suppression
Environmental Ratings					
Measurement Reference Conditions		Storage temp: -40°C to +85°C			
Temp: 15°C to 35°C		Operate temp: -20°C to +80°C			
Humidity: 25% to 75%RH		Vibration: 20G's to 2000Hz			
Atmospheric Pressure: 860 to 1060hpa		Shock: 50G's			

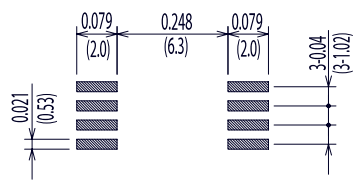
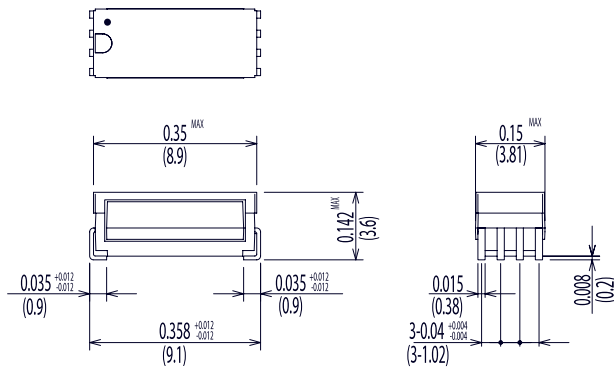
Dimensions All Dimensions are inches (mm)

Land Pattern Recommendation

9D-50J/9D-10J

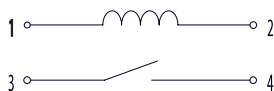


9D-14J

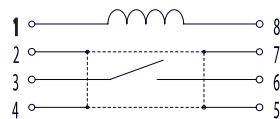


Schematic <Top View>

9D-50J/9D-10J



9D-14J



1D Series

Miniature Surface Mount



PRODUCT DESCRIPTIONS

As a standard for Sanyu SMT relays, the 1D Series has been widely accepted by the ATE, telecommunications, and instrument markets. A variety of package styles such as Axial, Gull-Wing and J-Lead are produced to best suit your application needs.

- RF Performance up to 4GHz
- Impedance 50Ω
- UL Certified

SPECIFICATIONS

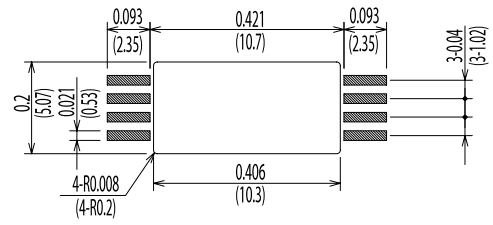
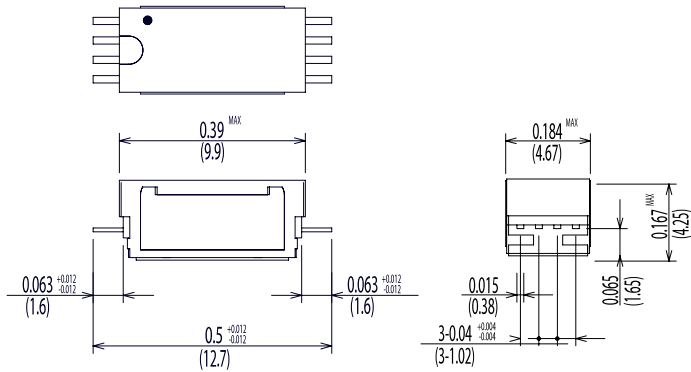


1D Series		1D-54A	1D-14A	1D-24A	A: Axial, G: Gull-Wing, J: J-Lead
		1D-54G	1D-14G	1D-24G	
		1D-54J	1D-14J	1D-24J	
Parameters	Units	1 form A			Test Conditions
Coil Specifications					
Nominal Coil Voltage	VDC	3.3	5.0	12.0	±10% @ 20°C 15°C to 35°C 15°C to 35°C
Coil Resistance	Ω	80	150	500	
Operate Voltage	VDC Max	2.15	3.25	8.1	
Release Voltage	VDC Min	0.5	0.7	1.2	
Contact Ratings					
Switching Voltage	Volts	50			Max DC/Peak AC resistance Max DC/Peak AC resistance Max DC/Peak AC resistance Max DC/Peak AC resistance @ 1V 10mA Max initial @ operate voltage Max initial @ operate voltage
Switching Current	Amps	0.2			
Carry Current	Amps	0.5			
Contact Rating	Watts	5			
Life Expectancy	x10 ⁶ Cycle	300			
Contact Resistance	mΩ	150			
Contact Resistance Stability	mΩ	5.0			
Relay Specifications					
Insulation Resistance	Ω Min	10 ¹¹			Between all isolated pins @ 100V 20°C 40%RH Between contacts Contacts to shield Contacts / Shield to coil @ nominal coil voltage 100Hz square wave Diode suppression
Dielectric Strength	VDC Min	150			
	VDC Min	250			
	VDC Min	250			
Operate Time (Including Bounce)	msec Max	0.3			
Release Time	msec Max	0.05			
Environmental Ratings					
Measurement Reference Conditions		Storage temp: -40°C to +85°C Operate temp: -20°C to +80°C Vibration: 20G's to 2000Hz Shock: 50G's			
Temp: 15°C to 35°C Humidity: 25% to 75%RH Atmospheric Pressure: 860 to 1060hpa					

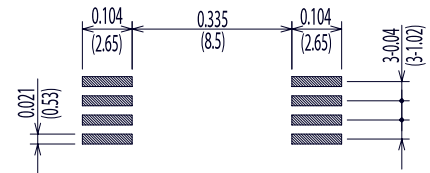
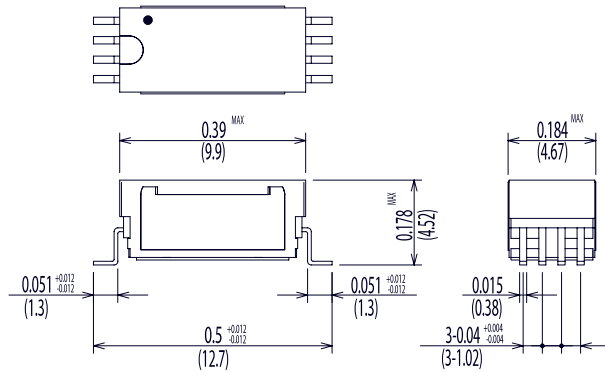
Dimensions All Dimensions are inches (mm)

Land Pattern Recommendation

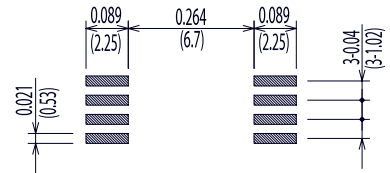
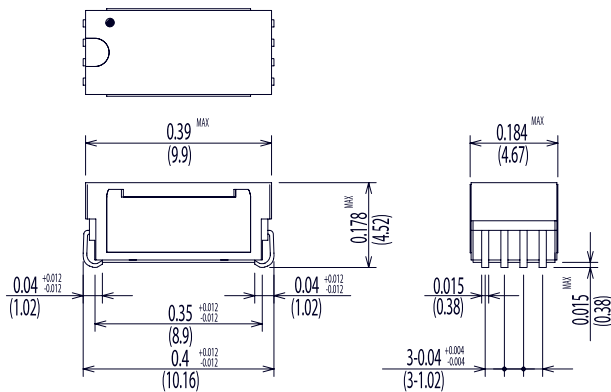
1D-54A/1D-14A/1D-24A



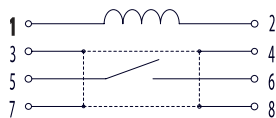
1D-54G/1D-14G/1D-24G



1D-54J/1D-14J/1D-24J



Schematic <Top View>



1D-12G**Miniature Surface Mount****PRODUCT DESCRIPTIONS**

The 1D-12G series was specially developed as a low cost alternative to memory inspection systems. In order to effectively reduce costs, the number of leads on each ground was reduced.

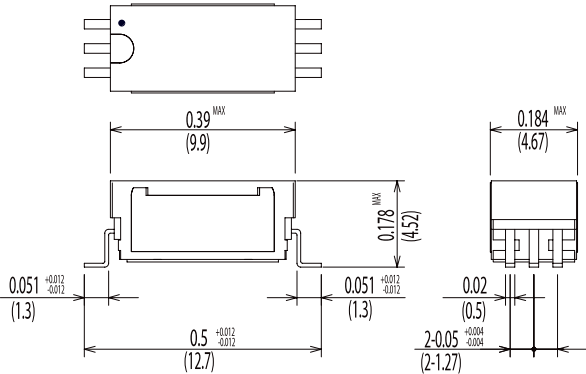
With proven tracks of reliability, cost performance and manufacturing capacity, we have been providing this series to the major memory inspection system companies.

SPECIFICATIONS

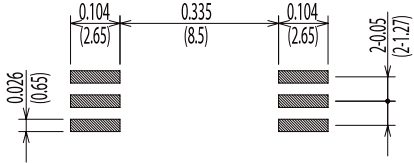
1D-12G		1D-12G	G: Gull-Wing
Parameters	Units	1 Form A	Test Conditions
Coil Specifications			
Nominal Coil Voltage	VDC	5.0	
Coil Resistance	Ω	150	$\pm 10\%$ @ 20°C
Operate Voltage	VDC Max	3.25	15°C to 35°C
Release Voltage	VDC Min	0.7	15°C to 35°C
Contact Ratings			
Switching Voltage	Volts	50	Max DC/Peak AC resistance
Switching Current	Amps	0.2	Max DC/Peak AC resistance
Carry Current	Amps	0.5	Max DC/Peak AC resistance
Contact Rating	Watts	5	Max DC/Peak AC resistance
Life Expectancy	$\times 10^6$ Cycle	300	@ 1V 10mA
Contact Resistance	m Ω	150	Max initial @ operate voltage
Contact Resistance Stability	m Ω	5.0	Max initial @ operate voltage
Relay Specifications			
Insulation Resistance	Ω Min	10^{11}	Between all isolated pins @ 100V 20°C 40%RH
Dielectric Strength	VDC Min	150	Between contacts
	VDC Min	250	Contacts to shield
	VDC Min	250	Contacts/Shield to coil
Operate Time (Including Bounce)	msec Max	0.3	@ nominal coil voltage
Release Time	msec Max	0.05	100Hz square wave Diode suppression
Environmental Ratings			
Measurement Reference Conditions			
Temp: 15°C to 35°C		Storage temp: -40°C to +85°C	
Humidity: 25% to 75%RH		Operate temp: -20°C to +80°C	
Atmospheric Pressure: 860 to 1060hpa		Vibration: 20G's to 2000Hz	
		Shock: 50G's	

Dimensions All Dimensions are inches (mm)

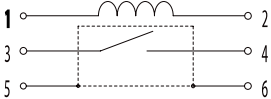
1D-12G



Land Pattern Recommendation



Schematic <Top View>



1D-14G-60

Miniature Surface Mount



PRODUCT DESCRIPTIONS

1D-14G-60 is a variant of 1D-14G, and consists of a high frequency characteristic that extends up to 6GHz range. This relay fulfills the need for 1 Form A to achieve 3.2 Gb/s on PCB mounting level.

This product is in mass production for markets requiring extremely high volume orders, such as the ATE market.

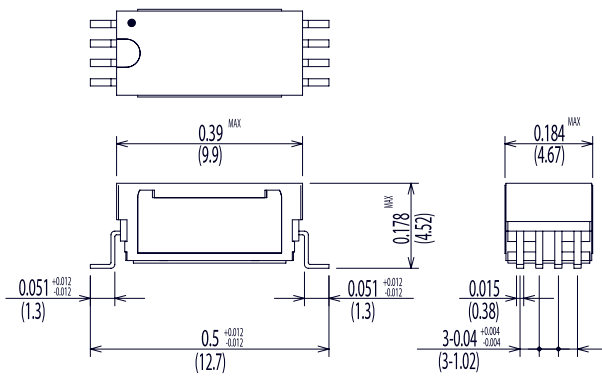
SPECIFICATIONS



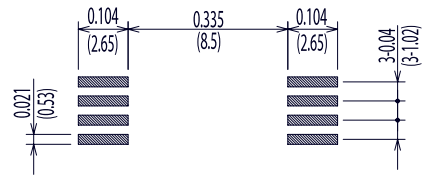
1D-14G-60			G: Gull-Wing
Parameters	Units	1 Form A	Test Conditions
Coil Specifications			
Nominal Coil Voltage	VDC	5.0	
Coil Resistance	Ω	150	$\pm 10\%$ @ 20°C
Operate Voltage	VDC Max	3.25	15°C to 35°C
Release Voltage	VDC Min	0.7	15°C to 35°C
Contact Ratings			
Switching Voltage	Volts	50	Max DC/Peak AC resistance
Switching Current	Amps	0.2	Max DC/Peak AC resistance
Carry Current	Amps	0.5	Max DC/Peak AC resistance
Contact Rating	Watts	5	Max DC/Peak AC resistance
Life Expectancy	$\times 10^6$ Cycle	300	@ 1V 10mA
Contact Resistance	m Ω	150	Max initial @ operate voltage
Contact Resistance Stability	m Ω	5.0	Max initial @ operate voltage
Relay Specifications			
Insulation Resistance	Ω Min	10^{11}	Between all isolated pins @ 100V 20°C 40%RH
Dielectric Strength	VDC Min	150	Between contacts
	VDC Min	250	Contacts to shield
	VDC Min	250	Contacts/Shield to coil
Operate Time (Including Bounce)	msec Max	0.3	@ nominal coil voltage
Release Time	msec Max	0.05	100Hz square wave Diode suppression
Environmental Ratings			
Measurement Reference Conditions		Storage temp: -40°C to +85°C	
Temp: 15°C to 35°C		Operate temp: -20°C to +80°C	
Humidity: 25% to 75%RH		Vibration: 20G's to 2000Hz	
Atmospheric Pressure: 860 to 1060hpa		Shock: 50G's	

Dimensions All Dimensions are inches (mm)

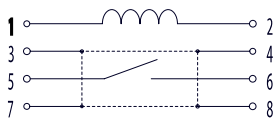
1D-14G-60



Land Pattern Recommendation



Schematic <Top View>



1D-16A

High Frequency Relay



PRODUCT DESCRIPTIONS

1D-16A enables higher RF performance, up to 13GHz. This relay was developed for the ATE industry's demand, and is able to correspond to ATE loads 2X and 3X.

- RF Performance up to 13GHz
- Impedance 50Ω
- Reliability over 300 million operations minimum
- 1 Form A / Axial only

SPECIFICATIONS

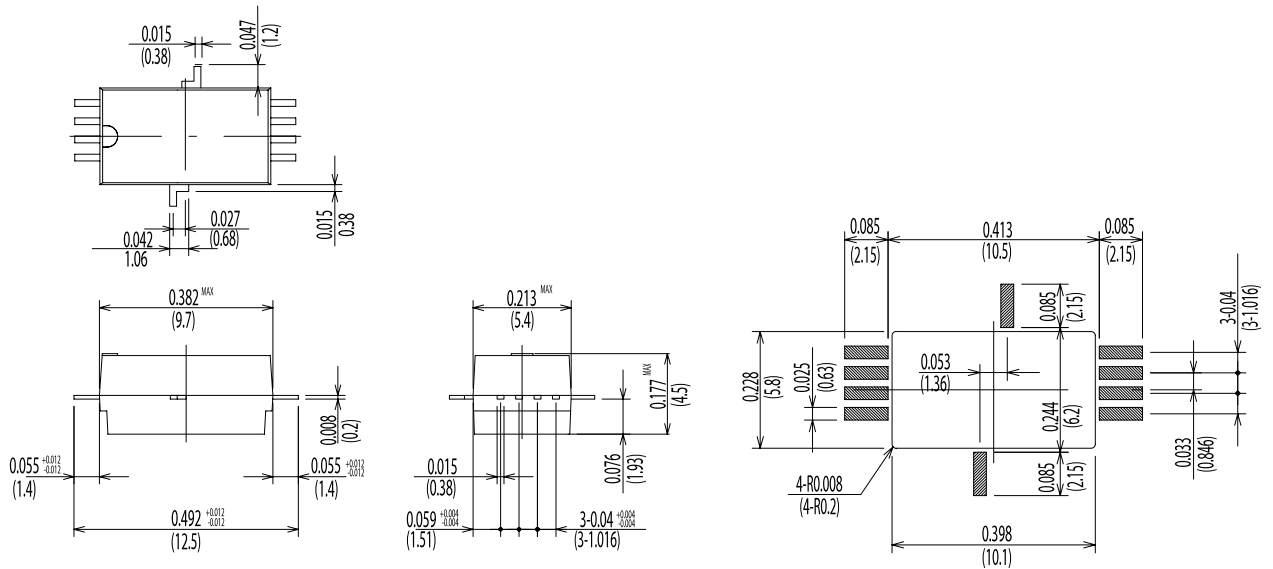


1D-16A			A: Axial
Parameters	Units	1 Form A	Test Conditions
Coil Specifications			
Nominal Coil Voltage	VDC	5.0	
Coil Resistance	Ω	80	±10% @ 20°C
Operate Voltage	VDC Max	3.5	15°C to 35°C
Release Voltage	VDC Min	0.7	15°C to 35°C
Contact Ratings			
Switching Voltage	Volts	100	Max DC/Peak AC resistance
Switching Current	Amps	0.5	Max DC/Peak AC resistance
Carry Current	Amps	1.0	Max DC/Peak AC resistance
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 40%RH
Dielectric Strength	VDC Min	250	Between contacts
	VDC Min	250	Contacts to shield
	VDC Min	250	Contacts/Shield to coil
Operate Time (Including Bounce)	msec Max	0.25	@ nominal coil voltage
Release Time	msec Max	0.05	100Hz square wave Diode suppression
Environmental Ratings			
Measurement Reference Conditions		Storage temp: -40°C to +85°C	
Temp: 15°C to 35°C		Operate temp: -20°C to +60°C	
Humidity: 25% to 75%RH		Vibration: 20G's to 2000Hz	
Atmospheric Pressure: 860 to 1060hpa		Shock: 50G's	

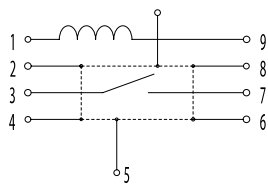
Dimensions All Dimensions are inches (mm)

Land Pattern Recommendation

1D-16A



Schematic <Top View>



1D 2 Form Series

Miniature Surface Mount



PRODUCT DESCRIPTIONS

The 1D 2 Form Series was especially designed for high performance T-circuit design required by the ATE market. The difference between this series and 3D series is that the former is capable of keeping open state during system calibration.

As an added feature, the two switches are configured within the relay as a single package, minimizing the physical length of the stub.

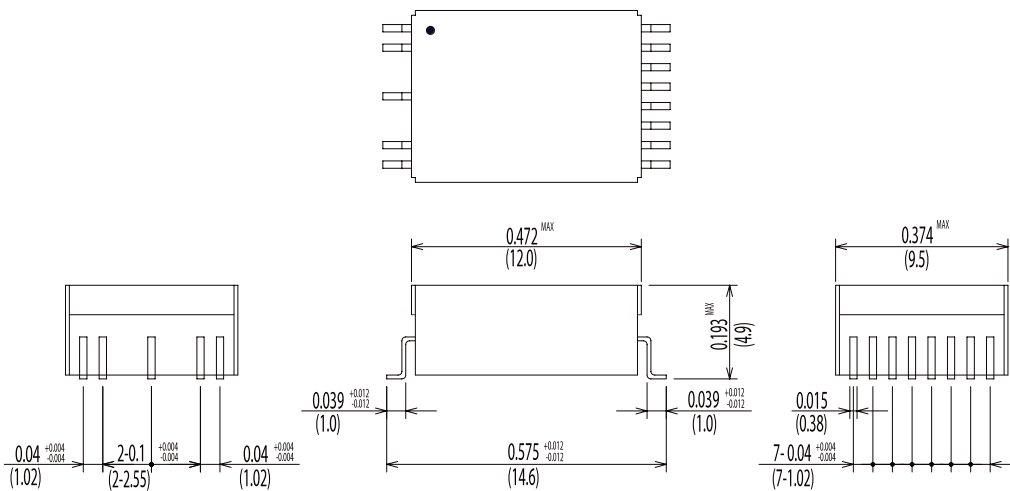
SPECIFICATIONS



1D 2Form Series		1D-2M12G	1D-2M22G	G: Gull-Wing
Parameters	Units	1 Form A		Test Conditions
Coil Specifications				
Nominal Coil Voltage	VDC	5.0	12.0	
Coil Resistance	Ω	150	500	$\pm 10\%$ @ 20°C
Operate Voltage	VDC Max	3.5	8.3	15°C to 35°C
Release Voltage	VDC Min	0.7	1.2	15°C to 35°C
Contact Ratings				
Switching Voltage	Volts	50		Max DC/Peak AC resistance
Switching Current	Amps	0.2		Max DC/Peak AC resistance
Carry Current	Amps	0.5		Max DC/Peak AC resistance
Contact Rating	Watts	5		Max DC/Peak AC resistance
Life Expectancy	x10 ⁶ Cycle	300		@ 1V 10mA
Contact Resistance	m Ω	150		Max initial @ operate voltage
Contact Resistance Stability	m Ω	5.0		Max initial @ operate voltage
Relay Specifications				
Insulation Resistance	Ω Min	10 ¹¹		Between all isolated pins @ 100V 20°C 40%RH
Dielectric Strength	VDC Min	150		Between contacts
	VDC Min	250		Contacts to shield
	VDC Min	250		Contacts/Shield to coil
Operate Time (Including Bounce)	msec Max	0.5		@ nominal coil voltage 100Hz square wave
Release Time	msec Max	0.5		Diode suppression
Environmental Ratings				
Measurement Reference Conditions		Storage temp: -40°C to +85°C		
Temp: 15°C to 35°C		Operate temp: -20°C to +60°C		
Humidity: 25% to 75%RH		Vibration: 20G's to 2000Hz		
Atmospheric Pressure: 860 to 1060hpa		Shock: 50G's		

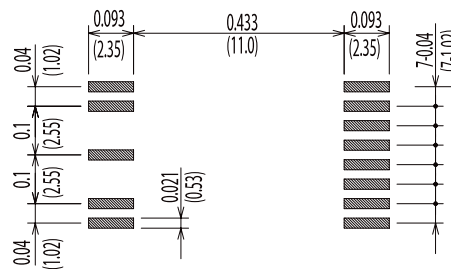
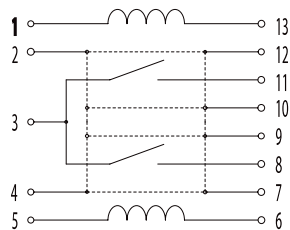
Dimensions All Dimensions are inches (mm)

1D-2M12G/1D-2M22G



Schematic <Top View>

Land Pattern Recommendation



1E Series

Miniature Surface Mount



PRODUCT DESCRIPTIONS

The 1E Series was designed as a high endurance relay with guaranteed mechanical reliability of 1000 operation cycles. This series is positioned as an extended life version of the 1D Series, and has been widely accepted as a highly reliable solution by the ATE industries for memory inspection systems and SOC.

SPECIFICATIONS

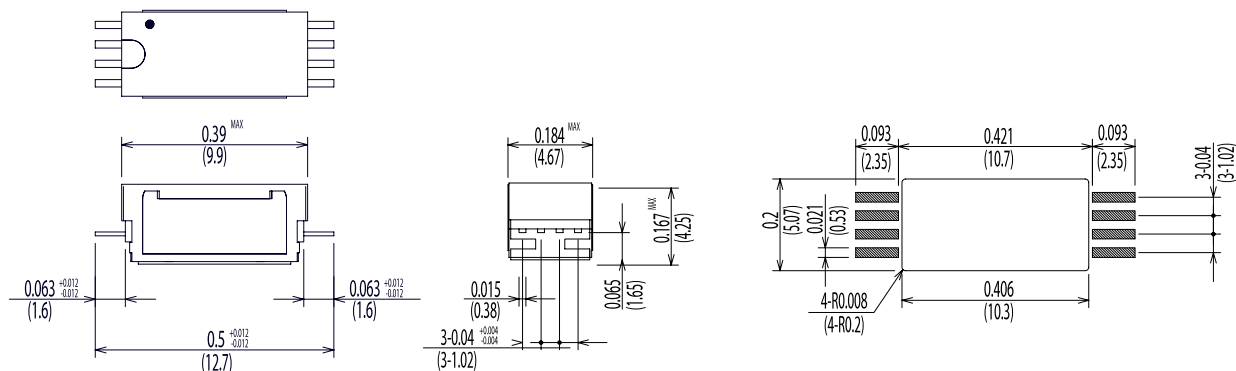


1E Series		1E-14A	A: Axial, G: Gull-Wing, J: J-Lead
		1E-14G	
		1E-14J	
Parameters	Units	1 Form A	Test Conditions
Coil Specifications			
Nominal Coil Voltage	VDC	5.0	±10% @ 20°C 15°C to 35°C 15°C to 35°C
Coil Resistance	Ω	150	
Operate Voltage	VDC Max	3.25	
Release Voltage	VDC Min	0.7	
Contact Ratings			
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
Contact Rating	Watts	10	Max DC/Peak AC resistance
Life Expectancy	x10 ⁵ 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 40%RH
Dielectric Strength	VDC Min	200	Between contacts
	VDC Min	250	Contacts to shield
	VDC Min	250	Contacts/Shield to coil
Operate Time (Including Bounce)	msec Max	0.3	@ nominal coil voltage 100Hz square wave
Release Time	msec Max	0.05	Diode suppression
Environmental Ratings			
Measurement Reference Conditions		Storage temp: -40°C to +85°C	
Temp: 15°C to 35°C		Operate temp: -20°C to +80°C	
Humidity: 25% to 75%RH		Vibration: 20G's to 2000Hz	
Atmospheric Pressure: 860 to 1060hpa		Shock: 50G's	

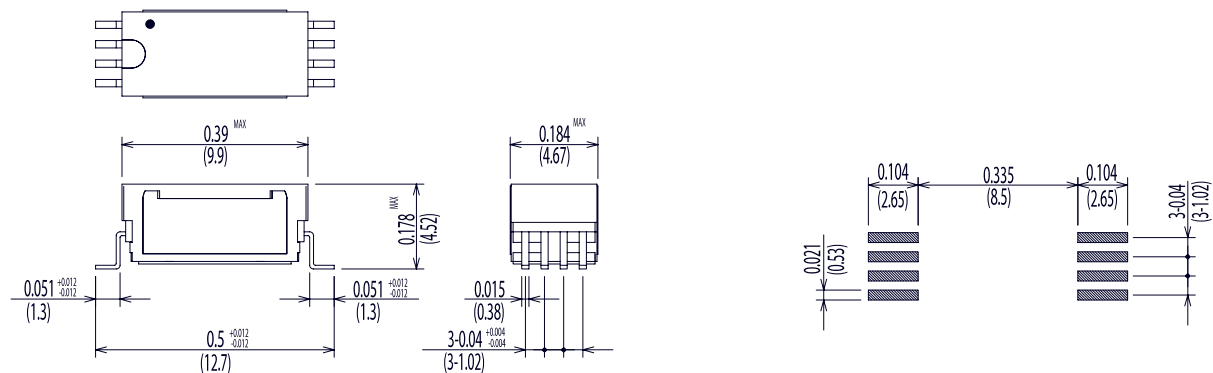
Dimensions All Dimensions are inches (mm)

Land Pattern Recommendation

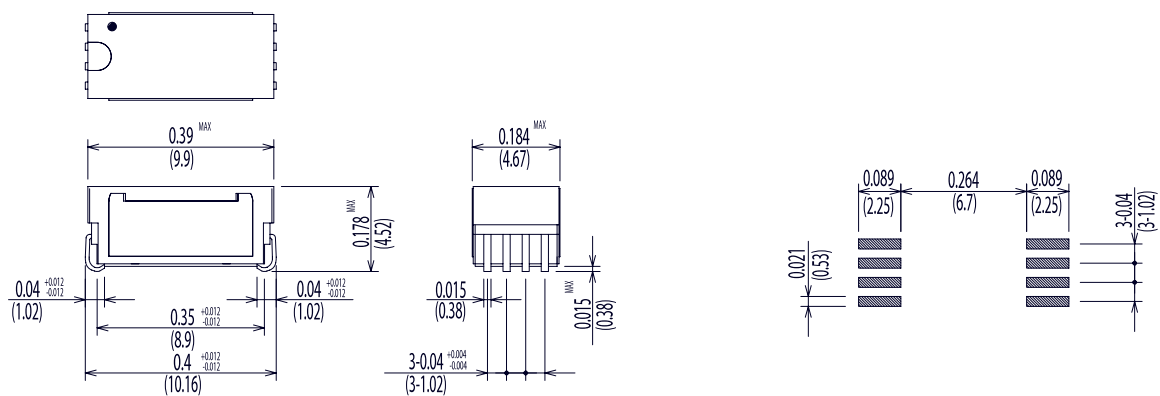
1E-14A



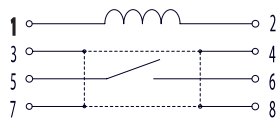
1E-14G



1E-14J



Schematic <Top View>



3D Series

Miniature Surface Mount Form C



PRODUCT DESCRIPTIONS

The 3D Series features the most reliable 1 Form C relays in the Sanyu SMT product line.

These relays provide high-cycle support demanded by the ATE and measurement instrument industries.

- RF performance up to 2.5GHz
- Impedance 50Ω
- High reliability 1 Form C 3x10⁸

SPECIFICATIONS

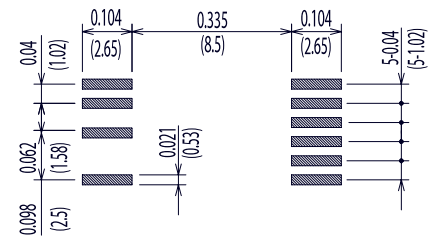
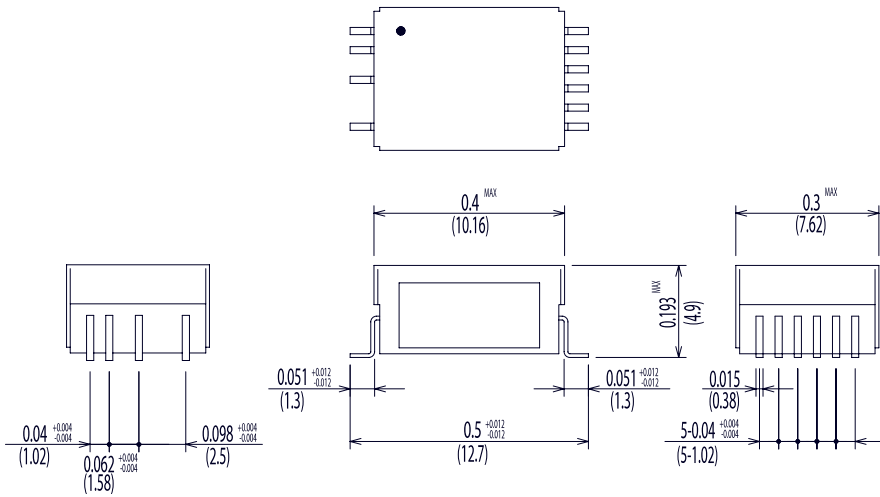


3D Series		3D-55GR	3D-15GR	3D-25G	G: Gull-Wing, J: J-Lead
		3D-55J	3D-15J	3D-25J	
Parameters	Units	1 form C			Test Conditions
Coil Specifications					
Nominal Coil Voltage	VDC	3.3	5.0	12.0	±10% @ 20°C 15°C to 35°C 15°C to 35°C
Coil Resistance	Ω	70	110	550	
Operate Voltage	VDC Max	2.8	3.75	8.4	
Release Voltage	VDC Min	0.7	0.7	1.2	
Contact Ratings					
Switching Voltage	Volts	50			Max DC/Peak AC resistance Max DC/Peak AC resistance Max DC/Peak AC resistance Max DC/Peak AC resistance @ 1V 10mA Max initial @ operate voltage Max initial @ operate voltage
Switching Current	Amps	0.2			
Carry Current	Amps	0.5			
Contact Rating	Watts	5			
Life Expectancy	x10 ⁶ Cycle	300			
Contact Resistance	mΩ	150			
Contact Resistance Stability	mΩ	5.0			
Relay Specifications					
Insulation Resistance	Ω Min	10 ¹¹			Between all isolated pins @ 100V 20°C 40%RH Between contacts Contacts to shield Contacts / Shield to coil @ nominal coil voltage 100Hz square wave Diode suppression
Dielectric Strength	VDC Min	150			
	VDC Min	250			
	VDC Min	250			
Operate Time (Including Bounce)	msec Max	0.5			
Release Time	msec Max	0.5			
Environmental Ratings					
Measurement Reference Conditions		Storage temp: -40°C to +80°C			
Temp: 15°C to 35°C		Operate temp: -20°C to +60°C			
Humidity: 25% to 75%RH		Vibration: 20G's to 2000Hz			
Atmospheric Pressure: 860 to 1060hpa		Shock: 50G's			

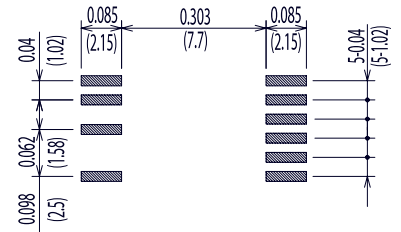
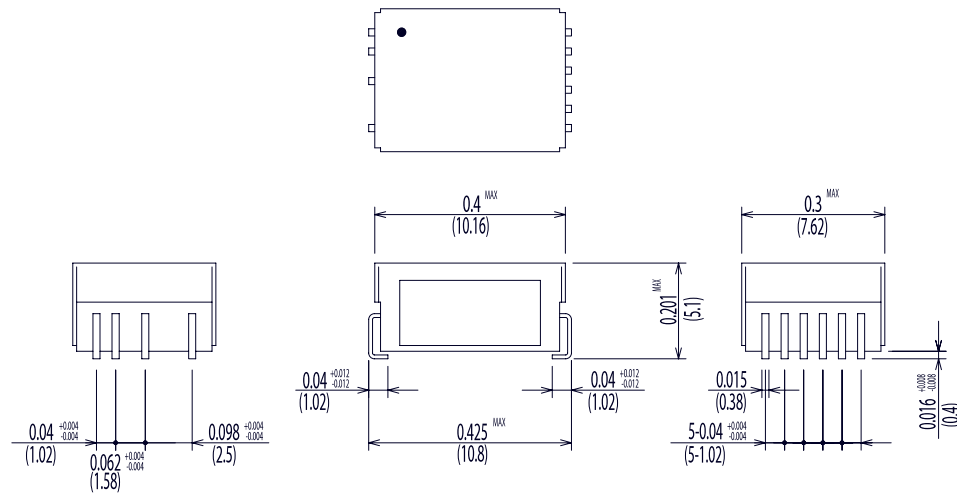
Dimensions All Dimensions are inches (mm)

Land Pattern Recommendation

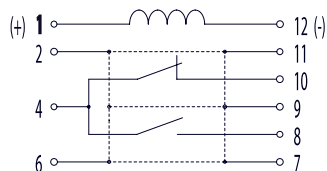
3D-55GR/3D-15GR/3D-25GR



3D-55J/3D-15J/3D-25J



Schematic <Top View>



10D Series

Surface Mount



PRODUCT DESCRIPTIONS

With historically proven reliability, Sanyu 10D Series 10 Watt SMT relay has been widely accepted by the ATE, telecommunications, and instrument markets.

SPECIFICATIONS



10D Series		10D-1A□2G		10D-2A□2G		G: Gull-Wing
Parameters	Units	1 Form A		2 Form A		Test Conditions
Coil Specifications						
Nominal Coil Voltage	VDC	5.0	12.0	5.0	12.0	±10% @ 20°C 15°C to 35°C 15°C to 35°C
Coil Resistance	Ω	160	600	140	600	
Operate Voltage	VDC Max	3.2	8.1	3.3	8.2	
Release Voltage	VDC Min	0.8	1.2	0.8	1.2	
Contact Ratings						
Switching Voltage	Volts	100		100		Max DC/Peak AC resistance
Switching Current	Amps	0.5		0.5		Max DC/Peak AC resistance
Carry Current	Amps	1.0		1.0		Max DC/Peak AC resistance
Contact Rating	Watts	10		10		Max DC/Peak AC resistance
Life Expectancy	x10 ⁶ Cycle	1000		1000		@ 1V 10mA
Contact Resistance	mΩ	150		150		Max initial @ operate voltage
Contact Resistance Stability	mΩ	5.0		5.0		Max initial @ operate voltage
Relay Specifications						
Insulation Resistance	Ω Min	10 ¹¹		10 ¹¹		Between all isolated pins @ 100V 20°C 40%RH
Dielectric Strength	VDC Min	200		200		Between contacts
	VDC Min	250		250		Contacts to shield
	VDC Min	250		250		Contacts/Shield to coil
Operate Time (Including Bounce)	msec Max	0.5		0.5		@ nominal coil voltage 100Hz square wave
Release Time	msec Max	0.3		0.5		Diode suppression
Environmental Ratings						
Measurement Reference Conditions		Storage temp: -40°C to +85°C				
Temp: 15°C to 35°C		Operate temp: -20°C to +80°C				
Humidity: 25% to 75%RH		Vibration: 20G's to 2000Hz				
Atmospheric Pressure: 860 to 1060hpa		Shock: 50G's				

Ordering Code:

10D-1A□2G

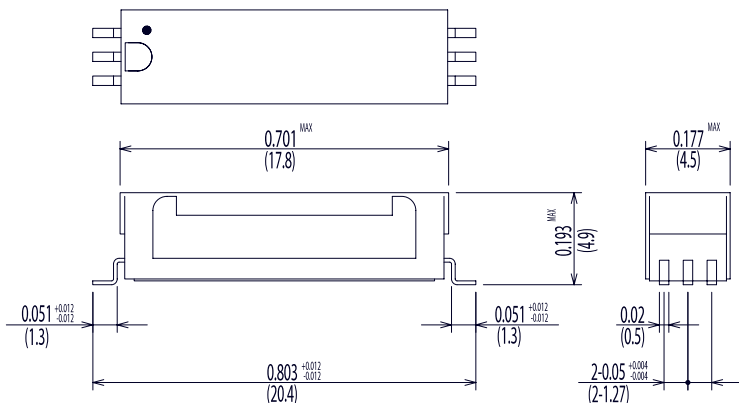
□=1 (5.0VDC), 2 (12.0VDC)

10D-2A□2G

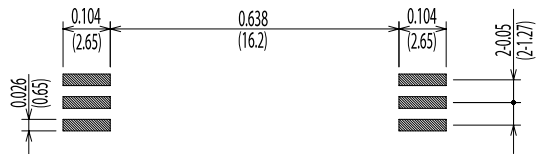
□=1 (5.0VDC), 2 (12.0VDC)

Dimensions All Dimensions are inches (mm)

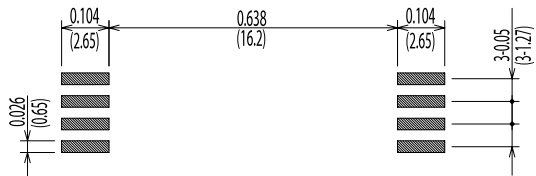
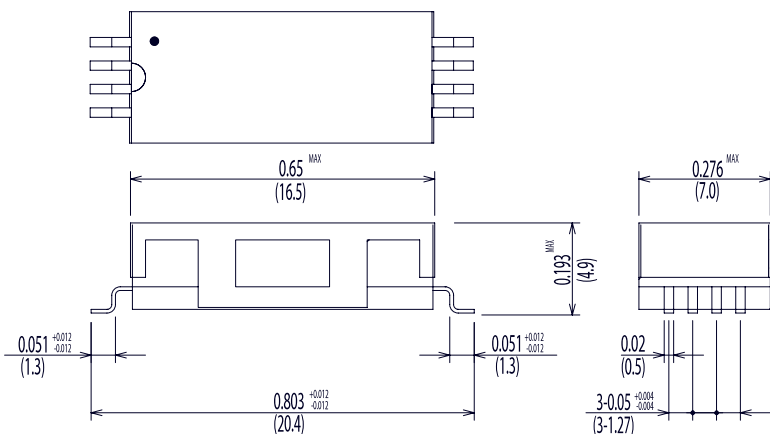
10D-1A□2G



Land Pattern Recommendation

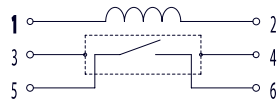


10D-2A□2G

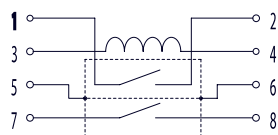


Schematic <Top View>

10D-1A□2G

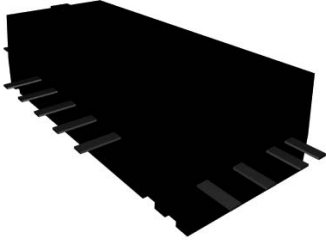


10D-2A□2G



10D-1T Series

Surface Mount Form C



PRODUCT DESCRIPTIONS

The 10D-1T Series was developed in a single SPDT (1 Form C) package to satisfy the requirements of high frequency range. Supported by the exceptional technology, this series ensures to correspond to a wide range of applications from DC to AC, and is ideal for ATE and measurement instruments.

SPECIFICATIONS



10D-1T Series		10D-1T56A	10D-1T16A	Axial
Parameters	Units	1 Form C		Test Conditions
Coil Specifications				
Nominal Coil Voltage	VDC	3.3	5.0	
Coil Resistance	Ω	70	120	$\pm 10\%$ @ 20°C
Operate Voltage	VDC Max	2.8	3.7	15°C to 35°C
Release Voltage	VDC Min	0.8	0.7	15°C to 35°C
Contact Ratings				
Switching Voltage	Volts	30		Max DC/Peak AC resistance
Switching Current	Amps	0.2		Max DC/Peak AC resistance
Carry Current	Amps	0.5		Max DC/Peak AC resistance
Contact Rating	Watts	3		Max DC/Peak AC resistance
Life Expectancy	$\times 10^6$ Cycle	50		@ 1V 10mA
Contact Resistance	$m\Omega$	100		Max initial @ operate voltage
Contact Resistance Stability	$m\Omega$	5.0		Max initial @ operate voltage
Relay Specifications				
Insulation Resistance	Ω Min	10^{10}		Between all isolated pins @ 100V 20°C 40%RH
Dielectric Strength	VDC Min	150		Between contacts
	VDC Min	200		Contacts to shield
	VDC Min	200		Contacts/Shield to coil
Operate Time (Including Bounce)	msec Max	1.5		@ nominal coil voltage 100Hz square wave
Release Time	msec Max	2.0		Diode suppression
Environmental Ratings				
Measurement Reference Conditions		Storage temp: -40°C to +85°C		
Temp: 15°C to 35°C		Operate temp: -20°C to +60°C		
Humidity: 25% to 75%RH		Vibration: 20G's to 2000Hz		
Atmospheric Pressure: 860 to 1060hpa		Shock: 50G's		

12R Series

Surface Mount



PRODUCT DESCRIPTIONS

The 12R Series is one of the Sanyu 10 Watt SMT relays that features high insulation resistance, 50Ω impedance and high reliability. This series has been widely accepted by the ATE, telecommunications and instrument markets.

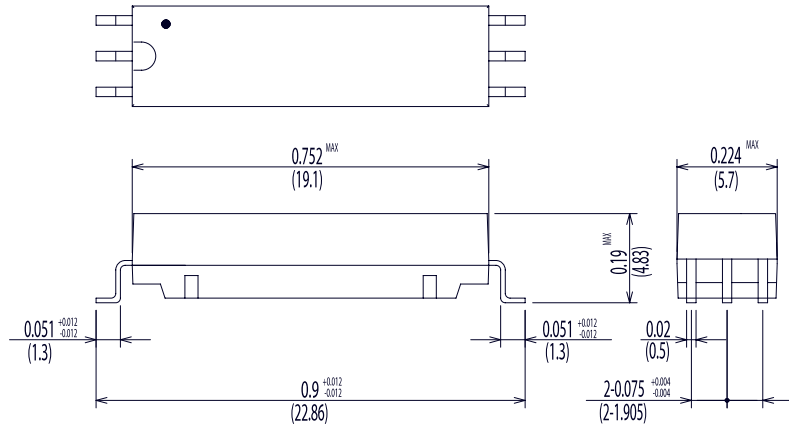
SPECIFICATIONS



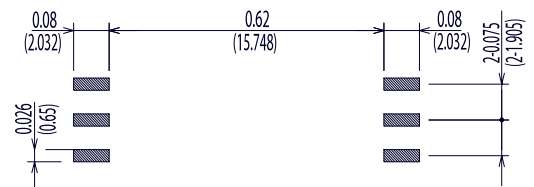
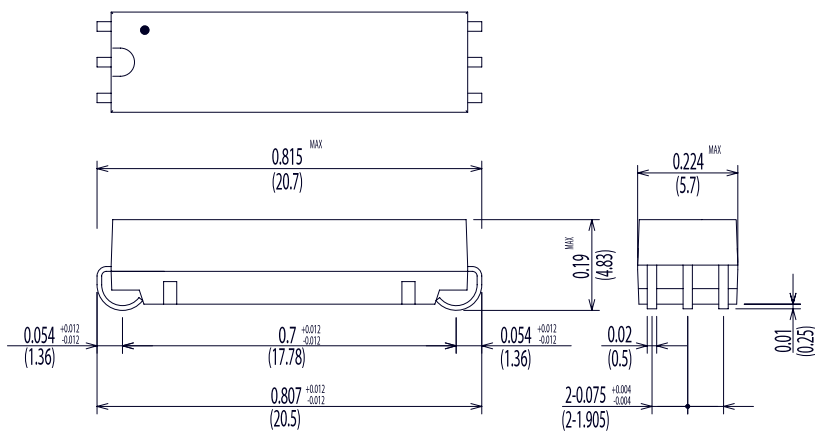
12R Series		12R-1A12G	12R-1A22G	G: Gull-Wing, J: J-Lead
		12R-1A12J	12R-1A22J	
Parameters	Units	1 Form A		Test Conditions
Coil Specifications				
Nominal Coil Voltage	VDC	5.0	12.0	±10% @ 20°C 15°C to 35°C 15°C to 35°C
Coil Resistance	Ω	160	650	
Operate Voltage	VDC Max	3.75	9.0	
Release Voltage	VDC Min	0.7	1.2	
Contact Ratings				
Switching Voltage	Volts	200		Max DC/Peak AC resistance
Switching Current	Amps	0.5		Max DC/Peak AC resistance
Carry Current	Amps	1.5		Max DC/Peak AC resistance
Contact Rating	Watts	10		Max DC/Peak AC resistance
Life Expectancy	x10 ⁶ Cycle	1500		@ 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 40%RH
Dielectric Strength	VDC Min	300		Between contacts
	VDC Min	1200		Contacts to shield
	VDC Min	1200		Contacts/Shield to coil
Operate Time (Including Bounce)	msec Max	0.35		@ nominal coil voltage 100Hz square wave
Release Time	msec Max	0.25		Diode suppression
Environmental Ratings				
Measurement Reference Conditions		Storage temp: -40°C to +85°C		
Temp: 15°C to 35°C		Operate temp: -20°C to +80°C		
Humidity: 25% to 75%RH		Vibration: 20G's to 2000Hz		
Atmospheric Pressure: 860 to 1060hpa		Shock: 50G's		

Dimensions All Dimensions are inches (mm)

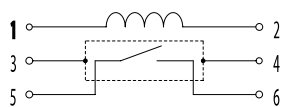
12R-1A12G/12R-1A22G



12R-1A12J/12R-1A22J



Schematic <Top View>



17D/R Series

Surface Mount



PRODUCT DESCRIPTIONS

The 17D/R Series is one of the Sanyu 10 Watt SMT relays, featuring 50 Ω impedance and high dielectric strength in small form factor. This series has been widely accepted by the ATE, telecommunications, and instrument markets.

SPECIFICATIONS



17D/R Series		17D-1A□2G-01		17R-1A□2G-01		G: Gull-Wing, J: J-Lead
		17D-1A□2J-01		17R-1A□2J-01		
Parameters	Units	1 Form A				Test Conditions
Coil Specifications						
Nominal Coil Voltage	VDC	5.0	12.0	5.0	12.0	±10% @ 20°C 15°C to 35°C 15°C to 35°C
Coil Resistance	Ω	200	825	200	825	
Operate Voltage	VDC Max	3.3	8.1	3.3	8.1	
Release Voltage	VDC Min	0.7	1.2	0.7	1.2	
Contact Ratings						
Switching Voltage	Volts	200		200		Max DC/Peak AC resistance
Switching Current	Amps	0.5		0.5		Max DC/Peak AC resistance
Carry Current	Amps	1.0		1.5		Max DC/Peak AC resistance
Contact Rating	Watts	10		10		Max DC/Peak AC resistance
Life Expectancy	x10 ⁶ Cycle	1000		1000		@ 1V 10mA
Contact Resistance	m Ω	150		150		Max initial @ operate voltage
Contact Resistance Stability	m Ω	5.0		5.0		Max initial @ operate voltage
Relay Specifications						
Insulation Resistance	Ω Min	10 ¹²		10 ¹²		Between all isolated pins @ 100V 20°C 40%RH
Dielectric Strength	VDC Min	300		300		Between contacts
	VDC Min	1500		1500		Contacts to shield
	VDC Min	1500		1500		Contacts/Shield to coil
Operate Time (Including Bounce)	msec Max	0.4		0.4		@ nominal coil voltage 100Hz square wave
Release Time	msec Max	0.2		0.2		Diode suppression
Environmental Ratings						
Measurement Reference Conditions		Storage temp: -40°C to +85°C				
Temp: 15°C to 35°C		Operate temp: -20°C to +80°C				
Humidity: 25% to 75%RH		Vibration: 20G's to 2000Hz				
Atmospheric Pressure: 860 to 1060hpa		Shock: 50G's				

Ordering Code:

17D-1A□2G/J-01

□=1 (5.0VDC), 2 (12.0VDC)

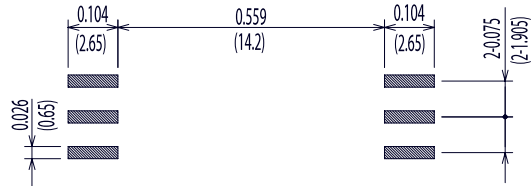
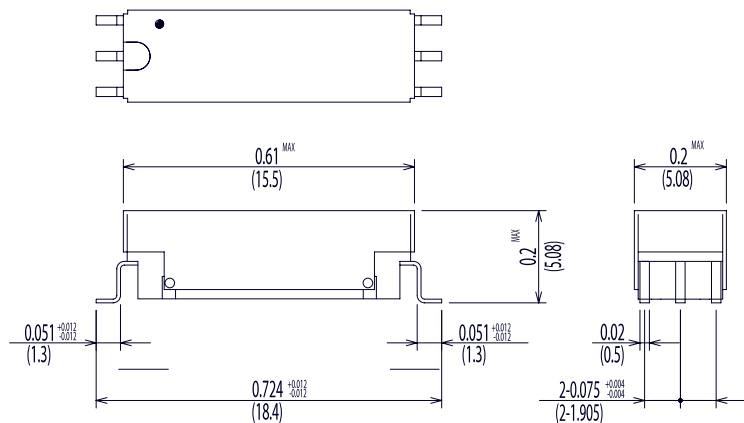
17R-1A□2G/J-01

□=1 (5.0VDC), 2 (12.0VDC)

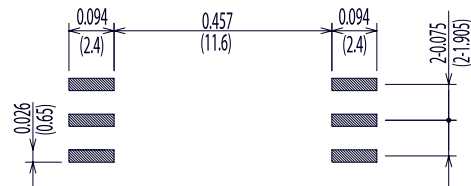
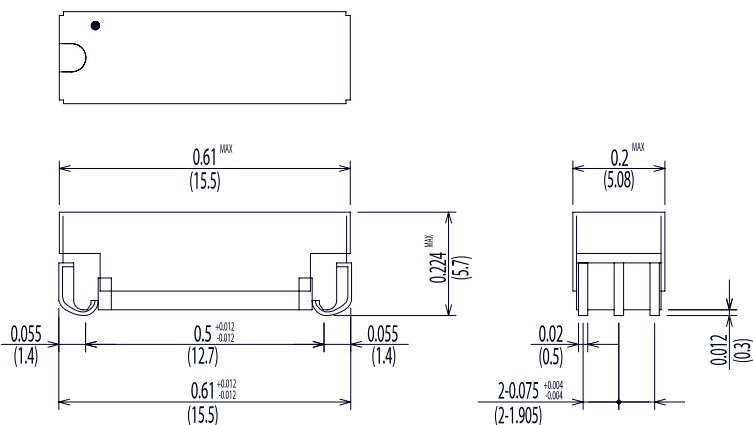
Dimensions All Dimensions are inches (mm)

Land Pattern Recommendation

17D-1A□2G-01/17R-1A□2G-01



17D-1A□2J-01/17R-1A□2J-01



Schematic <Top View>

