



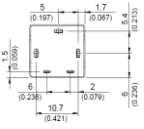
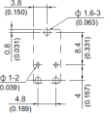
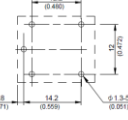
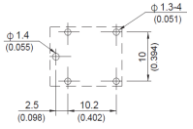




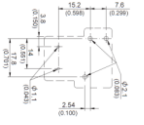
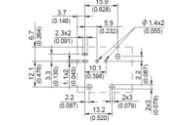
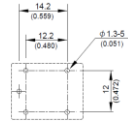
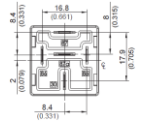




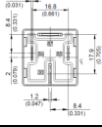
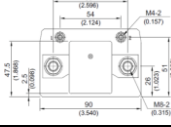
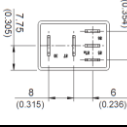
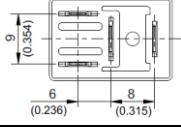




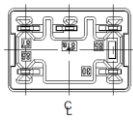
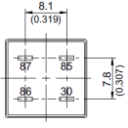
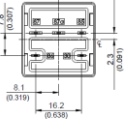
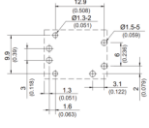


BRAND	松川(Automotive)	松川(Automotive)	松川(Automotive)	松川(Automotive)	
Type	102	103	833HM	895	
外觀形狀 Appearance					
尺寸 Size (LxWxH) mm	14 x 13 x 9.5	14.4 x 7.6(15.8) x 13.7	19 x 15.5 x 15	15.5 x 12 x 13.8	
Terminal Layout dimension Bottom view (PCB layout)					
Features	<ol style="list-style-type: none"> <li>Low cost and compact size miniature PCB relays</li> <li>High rating 20A</li> <li>High temperature endurance up to 125°C.</li> </ol>	<ol style="list-style-type: none"> <li>Smallest and slim.</li> <li>High Temperature withstand up to 125°C.</li> <li>Single or twin relays are both available.</li> </ol>	<ol style="list-style-type: none"> <li>Low profile and low cost sugar cube automotive relay.</li> <li>General purpose applications for automotive system</li> </ol>	<ol style="list-style-type: none"> <li>Low profile PCB automotive relay.</li> <li>High rating 20A/14VDC ; motor load 5A/14VDC ; max carry current up to 35A</li> </ol>	
Contact Form	1A, 1C	1A, 1C	1A, 1B, 1C	1A, 1B, 2A	
Rate Load	NO/NC 20A/10A 14VDC	NO/NC 20A/10A 14VDC	15A 14VDC	NO/NC 20A/10A 14VDC	
Coil Voltage	6 to 24VDC	6 to 24VDC	9 to 24VDC	5 to 24VDC	
Coil Operating Power	0.64W	0.64W	0.45W	0.64W, 0.8W, 1.0W	
Insulation resistance	100MΩ Min. (DC500V)	100 MΩ Min. (DC 500V)	100 MΩ Min. (DC 500V)	100 MΩ Min. (DC 500V)	
Dielectric Strength (coil and contact)	AC500V,50/60Hz1min	AC 500V, 50/60Hz 1 min.	AC 500V, 50/60Hz 1 min.	AC 500V, 50/60Hz 1 min.	
Operating Temperature	up to 125°C	up to 125°C	up to 85°C	up to 85°C	
Operatng / Release Time	10/5ms	10/5ms	10/5ms	10/5ms	
Running Specifications	Load	10 <sup>5</sup> operations (frequency 360 operations/hr)	10 <sup>5</sup> operations (frequency 360 operations/hr)	3x10 <sup>4</sup> operations (frequency 1200 operations/hr)	10 <sup>5</sup> operations (frequency 240 operations/hr)
	Nonload	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations

BRAND	松川(Automotive)	松川(Automotive)	松川(Automotive)	松川(Automotive)	
Type	832AM	822	812HM	896	
外觀形狀 Appearance					
尺寸 Size (LxWxH) mm	32.2 x 27.5 x 20.4	26.6 x 21.4 x 21.8	21 x 16 x 16.3	25.8 x 25.8 x 25	
Terminal Layout dimension Bottom view (PCB layout)					
Features	<ol style="list-style-type: none"> <li>Heavy duty 20/30A automotive PCB Relay.</li> <li>High dielectric strength up to 4000Vrms.</li> </ol>	<ol style="list-style-type: none"> <li>High power 40A automotive relay.</li> <li>USA &amp; European footprint are both available.</li> </ol>	<ol style="list-style-type: none"> <li>High performance sugar cube automotive relay.</li> <li>Low profile and with cadmium free contacts provides with SPNO and SPDT.</li> </ol>	<ol style="list-style-type: none"> <li>Mini ISO automotive relay</li> <li>Available with PCB terminals or quick connect terminals.</li> </ol>	
Contact Form	1A, 1C	1A, 1B, 1C	1A, 1C	1A, 1C, 2A	
Rate Load	1A: 30A 14VDC 1C: NO/NC 20/10A 14VDC	1A: 40A 14VDC 1B: 30A 14VDC 1C: NO/NC 40/20A 14VDC	15A 14VDC	1A, 1B: 40A 14VDC 1C: NO/NC 40A/30A 14VDC	
Coil Voltage	9 to 24VDC	6 to 24VDC	9 to 24VDC	12 to 24VDC	
Coil Operating Power	0.93W	1.2W, 1.6W	0.64W	1.6W, 1.8W	
Insulation resistance	100MΩ Min. (DC 500V)	50MΩ Min. (DC 500V)	100MΩ Min. (DC500V)	20MΩ Min. (DC 500V)	
Dielectric Strength (coil and contact)	500Vrms 50/60Hz 1min.	AC500V,50/60Hz1min.	AC500V,50/60Hz1min.	AC500V ,50/60Hz 1min.	
Operating Temperature	up to 85°C	up to 85°C	up to 85°C	up to 125°C	
Operatng / Release Time	15/10ms	5/4ms	15/10ms	20/20ms	
Running Specifications	Load	10 <sup>5</sup> operations (frequency 1200 operations/hr)	10 <sup>5</sup> operations (frequency 1200 operations/hr)	10 <sup>5</sup> operations (frequency 1200 operations/hr)	10 <sup>5</sup> operations (frequency 1200 operations/hr)
	Nonload	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations

BRAND	松川(Automotive)	松川(Automotive)	松川(Automotive)	松川(Automotive)	
Type	897	409	871	108	
外觀形狀 Appearance					
尺寸 Size (LxWxH) mm	25.8 x 25.8 x 25	90 x 58 x 49.5	23 x 15.5 x 25.4	22.5 x 15 x 16	
Terminal Layout dimension Bottom view (PCB layout)					
Features	1. 70A high power automotive relay. 2. Optional equipped with protection diode or resistor.	200A high power automotive relay and optional resistor or diode for coil transient suppression	1. Micro ISO automotive relay. 2. Available with plain cover and skirted cover. 3. Optional resistor or diode for coil transient suppression.	1. Low profile Micro ISO Automotive relay. 2. Optional to be equipped with diode or resistor. 3. High Rating up to 25A.	
Contact Form	1A	1A	1A, 1C	1A	
Rate Load	70A 14VDC	200A 24VDC	1A: 35A 14VDC 1C: NO/NC 35/20A 14VDC	25A 14VDC	
Coil Voltage	12 to 24VDC	12 to 24VDC	6 to 24VDC	12VDC	
Coil Operating Power	1.6W	4.8 to 6.9W	1.2W, 1.4W	0.8W	
Insulation resistance	20MΩ Min. (DC500V)	20 MΩ Min. (DC 500V)	20MΩ Min. (DC 500V)	20MΩ Min. (DC 500V)	
Dielectric Strength (coil and contact)	AC500V, 50/60Hz 1min.	AC 1000V, 50/60Hz 1min.	AC 500V, 50/60Hz 1 min.	AC 500V, 50/60Hz 1 min.	
Operating Temperature	up to 125°C	up to 75°C	up to 125°C	up to 105°C	
Operatng / Release Time	20/20ms	50/50ms	10/10ms	10/10ms	
Running Specifications	Load	10 <sup>5</sup> operations (frequency 1200 operations/hr)	----	10 <sup>5</sup> operations (frequency 1800 operations/hr)	----
	Nonload	10 <sup>7</sup> operations	10 <sup>6</sup> operations	10 <sup>7</sup> operations	10 <sup>6</sup> operations

BRAND	松川(Automotive)	松川(Automotive)	松川(Automotive)	松川(Automotive)	
Type	301	303	898	905	
外觀形狀 Appearance					
尺寸 Size (LxWxH) mm	22.5 x 15 x 25	16 x 15 x 23.7	25.8 x 25.8 x 25	16.6 x 12.6 x 17	
Terminal Layout dimension Bottom view (PCB layout)					
Features	1. Micro 280 automotive relay 2. NO contacts switch 35A resistive load, NC contacts 3. switch 20A resistive load, 100,000 ops., 23°C.	1. Ultra Micro 280 automotive relay 2. Switch up to 20A resistive load, 100,000 ops., 23°C	1. ISO 280 footprint design 2. Optional to be equipped with protection diode or resistor	1. New generation of heavy duty PCB automotive relay. 2. Mounting space less than micro ISO relay.	
Contact Form	1A, 1C	1A	1A, 1B, 1C	1A, 1C	
Rate Load	NO/NC 35/20A 14VDC 15/10A 28VDC	20A 14VDC, 10A 28VDC	1A: 40-50A 14VDC 1C: NO/NC 50/30A 14VDC	NO/NC 30/20A 14VDC	
Coil Voltage	6 to 24VDC	12 to 24VDC	12VDC	12VDC	
Coil Operating Power	1.2W	0.96W	1.6W	0.72W	
Insulation resistance	20MΩ Min. (DC500V)	20 MΩ Min. (DC 500V)	20MΩ Min. (DC 500V)	100M Min. (DC 500V)	
Dielectric Strength (coil and contact)	AC500V, 50/60Hz 1min.	AC 1000V, 50/60Hz 1min.	AC 500V, 50/60Hz 1 min.	AC 500V, 50/60Hz 1 min.	
Operating Temperature	up to 125°C	up to 125°C	up to 125°C	up to 105°C	
Operatng / Release Time	10/10ms	10/10ms	20/20ms	10/10ms	
Running Specifications	Load	10 <sup>7</sup> operations (frequency 1800 operations/hr)	----	10 <sup>5</sup> operations (frequency 1200 operations/hr)	----
	Nonload	10 <sup>7</sup> operations	10 <sup>6</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations