

Type G6Z Cross reference

No.YPE-G6Z-0262A(1/5)

31-Aug-12

OMRON Relay & Devices
Product Engineering Gr.1

No.	Features/Construction				Types				Reference page			
	Relay function	Characteristic Impedance	Terminal structure	Terminal Shape	OMRON		Panasonic		RF & Contact ratings	Coil Ratings	Characteristics	Dimensions
					G6Z	G6K-RF	RE	RS				
1	Single side stable	75ohm	Y-shape	SMD	G6Z-1F(-R)	-	(ARE13Axx)	ARS10Yxx	Page2	Page3	Page4	Page5
2				TH	G6Z-1P(-R)	-	(ARE13xx)	(ARS10xx)				
3			E-Shape	SMD	G6Z-1FE(-R)	-	ARE13Axx	ARS10Axx				
4				TH	G6Z-1PE(-R)	-	ARE13xx	ARS10xx				
5		50ohm	Y-shape	SMD	G6Z-1F-A(R)	G6K-2F-RF(-S,-T)	(ARE10Axx)	ARS14Yxx				
6				TH	G6Z-1P-A(R)	-	(ARE10xx)	(ARS14xx)				
7			E-Shape	SMD	G6Z-1FE-A(R)	G6K-2F-RF(-S,-T)	ARE10Axx	ARS14Axx				
8				TH	G6Z-1PE-A(R)	-	ARE10xx	ARS14xx				
9	Single winding latching	75ohm	Y-shape	SMD	G6ZU-1F	-	-	ARS11Yxx				
10				TH	G6ZU-1P	-	-	(ARS11xx)				
11			E-Shape	SMD	G6ZU-1FE	-	-	ARS11Axx				
12				TH	G6ZU-1PE	-	-	ARS11xx				
13		50ohm	Y-shape	SMD	G6ZU-1F-A	G6KU-2F-RF(-S,-T)	-	ARS15Yxx				
14				TH	G6ZU-1P-A	-	-	(ARS15xx)				
15			E-Shape	SMD	G6ZU-1FE-A	G6KU-2F-RF(-S,-T)	-	ARS15Axx				
16				TH	G6ZU-1PE-A	-	-	ARS15xx				
17	Double winding latching	75ohm	Y-shape	SMD	G6ZK-1F	-	-	ARS12Yxx				
18				TH	G6ZK-1P	-	-	(ARS12xx)				
19			E-Shape	SMD	G6ZK-1FE	-	-	ARS12Axx				
20				TH	G6ZK-1PE	-	-	ARS12xx				
21		50ohm	Y-shape	SMD	G6ZK-1F-A	-	-	ARS16Yxx				
22				TH	G6ZK-1P-A	-	-	(ARS16xx)				
23			E-Shape	SMD	G6ZK-1FE-A	-	-	ARS16Axx				
24				TH	G6ZK-1PE-A	-	-	ARS16xx				
					R:Reverse contact arrangement G6K(U)-2F-RF,-S:~1GHz G6K(U)-2F-RF-T:~3GHz		xx:Rated coil voltage (): terminal structure(E/Y) is different					

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***RF Characteristics**

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No.	Characteristic Impedance	Terminal structure	Terminal Shape	Insertion Loss(dB)								Isolation(dB)								V.SWR(dB)											
				OMRON				Panasonic				OMRON				Panasonic				OMRON				Panasonic							
				G6Z		G6K-RF		RE		RS		G6Z		G6K-RF		RE		RS		G6Z		G6K-RF		RE		RS					
				900 MHz	2.6 GHz	1GHz	3GHz *1	900 MHz	2.6 GHz	900 MHz	3GHz	900 MHz	2.6 GHz	1GHz	3GHz *1	900 MHz	2.6 GHz	900 MHz	3GHz	900 MHz	2.6 GHz	1GHz	3GHz *1	900 MHz	2.6 GHz	900 MHz	3GHz				
1, 9,17	75ohm	Y-shape	SMD	0.2	0.5	-	-	-	-	0.2	0.5	60	40	-	-	-	-	55	30	1.2	1.5	-	-	-	-	1.2	1.5				
2,10,18			TH			-	-	-	-	-	-	65	45	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-
3,11,19		E-Shape	SMD			-	-	-	-	0.2	0.5	0.2	0.5	60	30	-	-	-	-			55	30	-	-	-	-	1.2	1.5	1.2	1.5
4,12,20			TH			-	-	0.2	0.5	0.1	0.3	65	35	-	-	60	30	60	30			-	-	60	30	-	-	1.2	1.5	1.15	1.4
5,13,21	50ohm	Y-shape	SMD	0.1	0.3	0.2	0.6	-	-	0.2	0.4	60	40	20	18	-	-	55	30	1.1	1.3	1.2	1.4	-	-	1.2	1.4				
6,14,22			TH			-	-	-	-	-	-		45	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-
7,15,23		E-Shape	SMD			0.2	0.6	0.2	0.7	0.2	0.4		30	20	18	60	30	55	30			1.2	1.4	1.3	1.7	1.2	1.4	1.2	1.4	1.2	1.4
8,16,24			TH			-	-	0.2	0.7	0.1	0.35		35	-	-	60	30	60	35			-	-	1.3	1.7	1.2	1.4	1.2	1.4	1.2	1.4

*1:G6K(U)-2F-RF-T only

*1:G6K(U)-2F-RF-T only

*1:G6K(U)-2F-RF-T only

***Contact ratings**

Item	OMRON		Panasonic	
	G6Z	G6K-RF	RE	RS
Load	Resistive		Resistive	
Rated load	10mA at 30VDC		1A at 30VDC	
	10mA at 30VAC		0.3A at 125VAC	
	10W at 900MHz *		1W at 1GHz*	
Rated carry current	0.5A		1A	
Max. switching voltage	30VAC,30VDC		60VDC,125VAC	
Max. switching current	0.5A		1A	
Max. carry power	10W *		3W *	
Max. switching power	10W *		1W *	
*note	V.SWR<1.2		V.SWR<1.2	
			75ohm V.SWR<1.5 50ohm V.SWR<1.7	

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*Coil rating

No.	Relay function	Item	OMRON		Panasonic	
			G6Z	G6K-RF	RE	RS
1~8	Single side stable	Rated coil voltage	3 , 4.5 , 5 , 9 , 12 , 24 VDC	3 , 4.5 , 5 , 12 , 24 VDC	3 , 4.5 , 6 , 9 , 12 , 24 VDC	3 , 4.5 , 9 , 12 , 24 VDC
		Must operate voltage	75% max.	80% max.	75% max.	75% max.
		Must release voltage	10% min.	10% min.	10% min.	10% min.
		Maximum voltage	150%	150%	110%	110%
		Coil power consumption	Approx. 200mW	Approx. 100mW	Approx. 200mW	Approx. 200mW
9~16	Single winding latching	Rated coil voltage	3 , 4.5 , 5 , 9 , 12 , 24 VDC	3 , 4.5 , 5 , 12 , 24 VDC	—	3 , 4.5 , 9 , 12 , 24 VDC
		Must set voltage	75% max.	75% max.	—	75% max.
		Must reset voltage	75% max.	75% max.	—	75% max.
		Maximum voltage	150%	150%	—	110%
		Coil power consumption	Approx. 200mW	Approx. 100mW	—	Approx. 200mW
17~24	Double winding latching	Rated coil voltage	3 , 4.5 , 5 , 9 , 12 , 24 VDC	—	—	3 , 4.5 , 9 , 12 , 24 VDC
		Must set voltage	75% max.	—	—	75% max.
		Must reset voltage	75% max.	—	—	75% max.
		Maximum voltage	150%	—	—	110%
		Coil power consumption	Approx. 360mW	—	—	Approx. 400mW

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*Characteristics

Item		OMRON		Panasonic	
		G6Z	G6K-RF	RE	RS
Contact resistance		100mohm max.	100mohm max.	100mohm max.	100mohm max.
Operating (set) time		10ms max.	3ms max.	10ms max.	10ms max.
Release (reset) time		10ms max.	3ms max.	5ms max.	6ms max.
Insulation resistance (at 500VDC)		100Mohm min.	1000Mohm min.	100 Mohm min.	100 Mohm min.
Dielectric strength	Coil and contacts	1000VAC,50/60Hz for 1min	750VAC,50/60Hz for 1min	1000VAC,50/60Hz for 1min	1000VAC,50/60Hz for 1min
	Coil and ground,contacts and ground	500VAC,50/60Hz for 1min	500VAC,50/60Hz for 1min	500VAC,50/60Hz for 1min	500VAC,50/60Hz for 1min
	Contacts of same polarity	500VAC,50/60Hz for 1min	750VAC,50/60Hz for 1min	500VAC,50/60Hz for 1min	500VAC,50/60Hz for 1min
Vibration resistance	Destruction	10to55to10Hz 0.75mm single amplitude	10to55to10Hz 2.5mm single amplitude	10to55to10Hz 2.5mm single amplitude	10to55to10Hz 2.5mm single amplitude
	Malfunction	10to55to10Hz 0.75mm single amplitude	10to55to10Hz 1.65mm single amplitude	10to55to10Hz 1.5mm single amplitude	10to55to10Hz 1.5mm single amplitude
Shock resistance	Destruction	1000m/s ²	1000m/s ²	1000m/s ²	980m/s ²
	Malfunction	500m/s ²	750m/s ²	500m/s ²	196m/s ²
Endurance	Mechanical	1,000,000 ops. min. (at 36,000 ops./hour)	50,000,000 ops. min. (at 36,000 ops./hour)	1,000,000 ops. min. (at 180 ops./min)	5,000,000 ops. min. (single stable)(at 180 ops./min)
					1,000,000 ops. min. (latching)(at 180 ops./min)
	Electrical	300,000 operations min. (30VAC 10mA/30VDC 10mA)	100k operations min. (rated load)	300,000 operations min.	1,000,000ops. min(50ohm,TH)
					300,000ops. min(50ohm,SMD)
	100k operations min. (900MHz 10W)			300,000ops. min(75ohm)	
Ambient temperature(Operating)		-40 to 70 degC	-40 to 70 degC	-40 to 70 degC	-40 to 70 degC
Ambient humidity		5% to 85%	5% to 85%	5% to 85%	5% to 85%
Weight		Approx 2.8g	Approx 0.95g	Approx 5g	Approx 2g

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*Dimensions

No.	OMRON		Panasonic	
	G6Z	G6K-RF	RE	RS
1, 3 9,11 17,19	<p>75ohm SMD</p>	<p>G6K(U)-2F-RF</p>	<p>50ohm SMD</p>	<p>50/75ohm SMD</p> <p>E-shape</p> <p>Y-shape</p>
2, 4 10,12 18,20	<p>75ohm Through-hole</p>	<p>G6K(U)-2F-RF-S</p>	<p>75ohm SMD</p>	<p>50/75ohm Through-hole</p>
5, 7 13,15 21,23	<p>50ohm SMD</p>	<p>G6K(U)-2F-RF-T</p>	<p>50/75ohm Through-hole</p>	<p>5 0 Ω Type</p> <p>2 coil latching only</p> <p>Stand off</p> <p>3-□0.45 (0.60) 2-0.60x0.20</p>
6, 8 14,16 22,24	<p>50ohm Through-hole</p>	<p>G6K(U)-2F-RF-S</p>	<p>50/75ohm Through-hole</p>	<p>7 5 Ω Type</p> <p>2 coil latching only</p> <p>Stand off</p> <p>3-□0.45 (1.40) 2-1.40x0.20</p>