


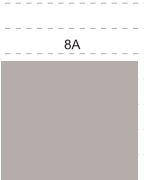
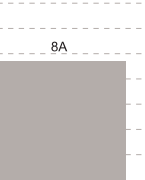
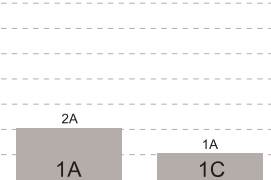
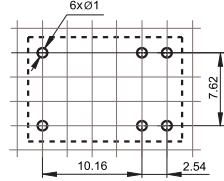
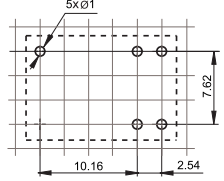
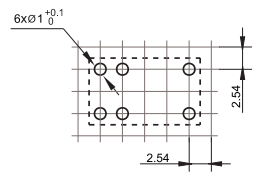


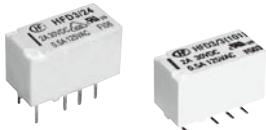


SIGNAL RELAY SELECTION CHART

Type	HFD16	HFD17	HFD23
Appearance			
Dimensions(L x W x H) mm	15.7 x 10.6 x 12.0	15.7 x 10.6 x 12.0	12.5 x 7.5 x 10.0
Features	<ul style="list-style-type: none"> • 8A switching capability • UL insulation system: Class F available • Plastic sealed and flux proofed types available • Standard PCB layout • Product in accordance to IEC 60335-1 available 	<ul style="list-style-type: none"> • 8A switching capability • UL insulation system: Class F available • Plastic sealed and flux proofed types available • Standard PCB layout • Product in accordance to IEC 60335-1 available 	<ul style="list-style-type: none"> • Max.4A switching capability • High sensitive: 150mW • Plastic sealed type available
Contact Ratings			
Contact Form	1C	1C	1A 1C
Contact Material	AgNi, AgSnO ₂	AgNi, AgSnO ₂	AgNi + Au plated
Max. Switching Current (Res. load)			
Max. Switching Voltage	250VAC / 220VDC	250VAC / 220VDC	125VAC / 60VDC
Max. Switching Power	750VA / 90W	750VA / 90W	125VA / 60W 62.5VA / 30W
Rated Load (Resistive load)	3A 30VDC 5A 125VAC	3A 30VDC 3A 250VAC	1A 125VAC 0.5A 125VAC 2A 30VDC 1A 30VDC
Coil Ratings			
Rated Voltage	2.4VDC to 24VDC	2.4VDC to 24VDC	1.5VDC to 24VDC
Nominal Operating Power	0.2W	0.2W	0.15W, 0.2W
Specifications			
Insulation Resistance	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (Between coil and contacts)	1100VAC	1500VAC	1000VAC
Ambient Temperature	-40°C to 85°C	-40°C to 85°C	-40°C to 70°C
Operate / Release Time max.	5ms / 5ms	5ms / 5ms	5ms / 5ms
Mechanical Endurance min.	1 x 10 ⁷ OPS	1 x 10 ⁷ OPS	1 x 10 ⁷ OPS
Electrical Endurance min.	1x10 ⁵ OPS(NO:3A 30VDC) 1x10 ⁴ OPS(NO:5A 125VAC)	1 x 10 ⁵ OPS	9 x 10 ⁴ OPS (1C: 0.5A 125VAC 1A: 1A 125VAC)
Layout (Bottom view)			
Terminal Type	PCB (DIP)	PCB (DIP)	PCB (DIP)
Approved Standards	UL/CUL TÜV	UL/CUL TÜV	UL/CUL CQC
File No.	E133481 R50075326	E133481 R50431434	E133481 CQC09002035070
Cross Reference	OMRON: G2E SONGCHUAN: 842 FUJITSU: FBR211 TE: OUA	FUJITSU: MZ AXICOM: V23101 HKE: HRS1K SANYOU: SYS1K	OMRON: G5V-1 PANASONIC: HY FUJITSU: SY NEC: TY TE: V23111
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Note: Specification and dimensions in this catalog are subject to change without notice.

SIGNAL RELAY SELECTION CHART

Type	HFD27	HFD2	HFD3
Appearance			
Dimensions(L x W x H) mm	20.2 x 10.0 x 11.5	20.2 x 10.2 x 10.6	15.0 x 7.5 x 9.0
Features	<ul style="list-style-type: none"> High switching capacity: 125VA/60W Matching 16 pin IC socket Epoxy plastic sealed for automatic wave soldering and cleaning Bifurcated contacts 	<ul style="list-style-type: none"> High sensitive: 150mW High switching capacity: 90W/125VA Epoxy plastic sealed for automatic wave soldering and cleaning Matching standard 16 pin IC socket Bifurcated contacts Single side stable and latching types available 	<ul style="list-style-type: none"> Meets EN60950/EN41003 Surge voltage up to 2500VAC, meets FCC Part 68 and Telecordia 2.5kV dielectric strength (between coil and contacts) Bifurcated contacts Single side stable and latching types available

Contact Ratings

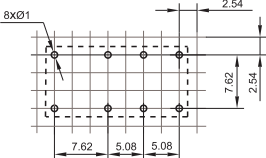
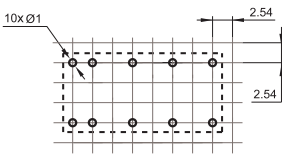
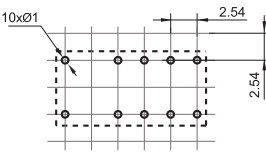
Contact Form	2C	2C	2C
Contact Material	AgNi + Au plated	Ag+Au plated, AgPd+Au plated	AgNi + Au plated
Max. Switching Current (Res. load)	20 A		
	15 A		
	10 A		
	5 A		
	3 A		3A
	2 A	2A	
1 A			4A
Max. Switching Voltage	240VAC / 120VDC	250VAC / 220VDC	277VAC / 220VDC
Max. Switching Power	125VA / 60W	125VA / 90W	62.5VA / 60W
Rated Load (Resistive load)	1A 125VAC 2A 30VDC	1A 125VAC 2A 30VDC 3A 30VDC	0.5A 125VAC 2A 30VDC

Coil Ratings

Rated Voltage	3VDC to 48VDC	3VDC to 48VDC	1.5VDC to 48VDC
Nominal Operating Power	0.15W to 0.58W	0.075W, 0.1W, 0.15W, 0.2W	0.05W 0.1W, 0.14W, 0.2W

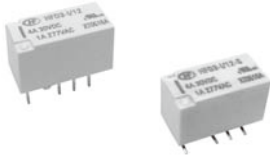
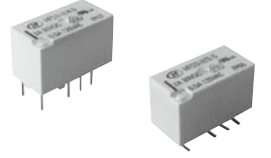
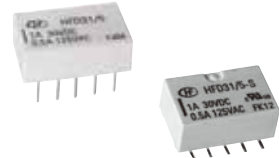
Specifications

Insulation Resistance	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (Between coil and contacts)	1500VAC	1500VAC (1 coil)	2000VAC
Ambient Temperature	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C
Operate / Release Time max.	7ms / 4ms	4.5ms / 3.5ms	4ms / 4ms
Mechanical Endurance min.	1 x 10 ⁸ OPS	1 x 10 ⁸ OPS	1 x 10 ⁸ OPS
Electrical Endurance min.	1 x 10 ⁵ OPS (at 1A 30VDC)	1 x 10 ⁵ OPS (at 1A 125VAC)	1 x 10 ⁵ OPS (at 0.5A 125VAC)

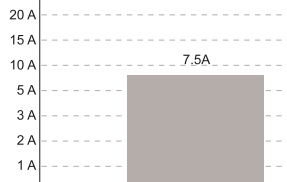
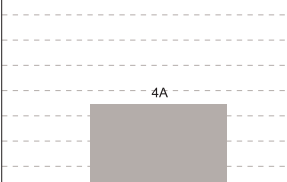
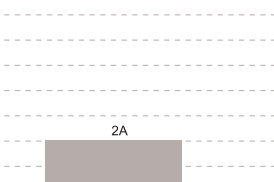
Layout (Bottom view)			
Terminal Type	PCB (DIP)	PCB (DIP)	PCB (DIP, SMT)
Approved Standards	UL/CUL TÜV CQC	UL/CUL TÜV CQC	UL/CUL VDE
File No.	E133481 R50316277 CQC09002033393	E133481 R50306253 CQC13002095175(Latching) CQC13002095174(Single side stable)	E133481 40018867 CQC14002107409
Cross Reference	OMRON: G5V-2 PANASONIC: DS2Y FUJITSU: FBR244/FTR-C2/R NEC: MR62 AXICOM: V23105/D2N	OMRON: G6A PANASONIC: DS2Y FUJITSU: RA NEC: MR82 TE: V23042 / AXICOM: MT2	OMRON: G6S PANASONIC: TX FUJITSU: NA/BA NEC: EC2/ED2 AXICOM: P2/V23079
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Note: Specification and dimensions in this catalog are subject to change without notice.

SIGNAL RELAY SELECTION CHART

Type	HFD3-I	HFD3-V	HFD3I
Appearance			
Dimensions(L x W x H) mm	15.0 x 7.5 x 9.0	15.0 x 7.5 x 9.4	14.0 x 9.0 x 5.0
Features	<ul style="list-style-type: none"> • Third generation Signal relay • High contact switching capacity • Withstand inrush current at 7.5A (Effective value) • SMT and DIP types available • Single side stable and latching types available 	<ul style="list-style-type: none"> • 3kV dielectric strength (between coil and contacts) • Surge withstand voltage up to 6000VAC, meets FCC Part 68 and Telecordia • Meets EN60950 / EN41003 • Bifurcated contacts • Single side stable and latching types available 	<ul style="list-style-type: none"> • Surge voltage up to 1500VAC, meets FCC Part 68 and Telecordia • High contact capacity: 2A 30VDC • Single side stable and latching types available

Contact Ratings

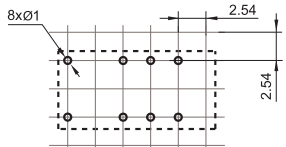
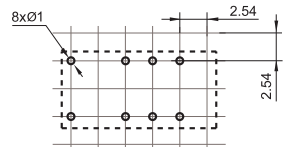
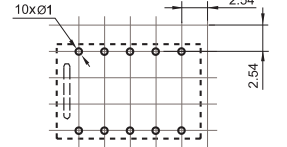
Contact Form	2C	2C	2C
Contact Material	Ag Alloy + Au plated	AgNi+Au plated, AgPd+Au plated	AgNi+Au plated, AgPd+Au plated
Max. Switching Current (Res. load)			
Max. Switching Voltage	277VAC / 220VDC	277VAC / 220VDC	125VAC / 110VDC
Max. Switching Power	277VAC / 120W	62.5VA / 60W	62.5VA / 60W
Rated Load (Resistive load)	4A 30VDC 2A 30VDC 1A 277VAC	0.5A 125VAC 2A 30VDC	0.5A 125VAC 1A 30VDC 2A 30VDC

Coil Ratings

Rated Voltage	1.5VDC to 24VDC	1.5VDC to 24VDC	1.5VDC to 24VDC
Nominal Operating Power	0.1W, 0.14W, 0.2W	0.14W, 0.2W	0.1W, 0.14W, 0.2W

Specifications


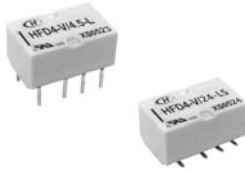
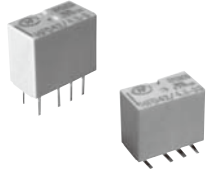
Insulation Resistance	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (Between coil and contacts)	2000VAC	3000VAC	1000VAC
Ambient Temperature	-40°C to 85°C	-40°C to 85°C	-40°C to 70°C
Operate / Release Time max.	4ms / 4ms	6ms / 6ms	3ms / 3ms
Mechanical Endurance min.	1 x 10 ⁷ OPS	1 x 10 ⁷ OPS	1 x 10 ⁸ OPS
Electrical Endurance min.	See "CONTACT DATA"	1 x 10 ⁵ OPS (at 0.5A 125VAC)	1 x 10 ⁵ OPS (at 0.5A 125VAC)

Layout (Bottom view)			
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Terminal Type	PCB (DIP, SMT)	PCB (DIP, SMT)	PCB (DIP, SMT)
Approved Standards	UL/CUL	UL/CUL VDE	UL/CUL
File No.	E133481	E133481 40018867 CQC14002107409	E133481
Cross Reference	PANASONIC :TX-TH	PANASONIC: TXD2 FUJITSU: FTR-C1	OMRON: G6H PANASONIC: TQ FUJITSU: A NEC: EA2 AXICOM: FP2
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Note: Specification and dimensions in this catalog are subject to change without notice.

SIGNAL RELAY SELECTION CHART

Type	HFD4	HFD4-V	HFD42
Appearance			
Dimensions(L x W x H) mm	10.0 x 6.5 x 5.4	10.0 x 6.5 x 5.65	10.6 x 5.7 x 9.0
Features	<ul style="list-style-type: none"> • Offers excellent board space savings • Surge withstand voltage up to 2500V, meets FCC Part 68 and Telecordia • Meets EN60950/EN41003 • SMT and DIP types available • Single side stable and latching type available 	<ul style="list-style-type: none"> • Subminiature high dielectric strength signal relay • Surge withstand voltage up to 2500V • Meets EN60950/EN41003 • gap between open contacts $\geq 0.4\text{mm}$ • Low power consumption • Single side stable and latching type available 	<ul style="list-style-type: none"> • Surge withstand voltage up to 2500V, meets FCC Part 68 and Telecordia • Meets EN60950/EN41003 • SMT and DIP types available • High contact capacity 2A 30VDC • Single side stable and latching type available

Contact Ratings

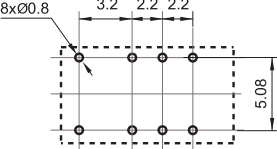
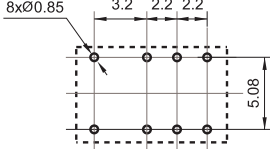
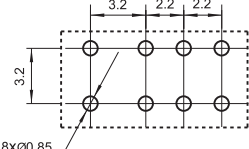
Contact Form	2C	2Z	2C
Contact Material	AgNi+Au plated, AgPd+Au plated	AgNi+Au plated	AgNi+Au plated, AgPd+Au plated
Max. Switching Current (Res. load)	20A		
	15A		
	10A		
	5A		
	3A		
	2A	1A	2A
Max. Switching Voltage	250VAC / 220VDC	425VAC / 600VDC	250VAC / 220VDC
Max. Switching Power	62.5VA / 60W	62.5VA / 60W	125VA / 120W
Rated Load (Resistive load)	0.3A 125VAC 1A 30VDC	0.3A 125VAC 1A 30VDC	0.5A 125VAC 1A 30VDC 1A 125VAC 2A 30VDC

Coil Ratings

Rated Voltage	1.5VDC to 24VDC	1.5VDC to 24VDC	1.5VDC to 24VDC
Nominal Operating Power	0.1W, 0.14W, 0.2W	0.14W, 0.2W	0.1W, 0.12W, 0.14W, 0.23W

Specifications

Insulation Resistance	1000M Ω	1000M Ω	1000M Ω
Dielectric Strength (Between coil and contacts)	1600VAC	1600VAC	1500VAC
Ambient Temperature	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C
Operate / Release Time max.	3ms / 3ms	3ms / 3ms	3ms / 3ms
Mechanical Endurance min.	1 x 10 ⁸ OPS	1 x 10 ⁷ OPS	1 x 10 ⁸ OPS
Electrical Endurance min.	1 x 10 ⁵ OPS (at 0.3A 125VAC)	1 x 10 ⁵ ops(1A 30VDC) 1 x 10 ⁵ ops(0.3A 125VAC) 1 x 10 ⁵ ops(0.01A 600VDC)	1 x 10 ⁵ OPS

Layout (Bottom view)			
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Terminal Type	PCB (DIP, SMT)	PCB (DIP, SMT)	PCB (DIP, SMT)
Approved Standards	UL/CUL	UL/CUL VDE	UL/CUL TÜV
File No.	E133481	E133481 40048125	E133481 R50317623
Cross Reference	OMRON: G6K PANASONIC: AGQ AXICOM: IM FUJITSU: FTR-B3 NEC: UC2/UD2		OMRON: G6J PANASONIC: AGN AXICOM: IM FUJITSU: FTR-B4 NEC: UA2/UB2
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