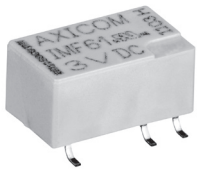
IMF Relay

- **Minimum board-space 84mm²**
- **Slim line 10x6mm and low profile 5.8mm**
- **Switching power 60W/62.5VA**
- **Switching voltage 220VDC/250VAC**
- **Switching current 2A**
- **Sensitive bistable 80mW**
- **Bifurcated contacts**



IMF_SW

Typical applications

Zero power charger, telecommunication, access and transmission equipment, optical network terminals, modems, office and business equipment, consumer electronics, measurement and test equipment, industrial control, medical equipment, automotive applications

Approvals

Contact ratings, UL 508 File No. E 111441

Technical data of approved types on request

Contact Data

Contact arrangement	1 Form B and 1 Form C, NC and CO
Max. switching voltage	220VDC, 250VAC
Rated current	2A
Limiting continuous current	2A
Switching power	60W, 62.5VA
Contact material	PdRu Au covered
Contact style	twin contacts
Minimum switching voltage	100µV/1µA
Initial contact resistance	<50mOhm
Thermoelectric potential	<10µV
Set / reset time	typ. 1ms, max. 3ms
Release time	
without diode in parallel	typ 1ms, max. 3ms
with diode in parallel	typ 3ms, max. 5ms
Bounce time	typ 1ms, max. 5ms
Electrical endurance	
at contact application 0 (≤30mV/≤10mA)	min. $2.5x10^6$ cycles
cable load open end	min. $2.0x10^6$ cycles
resistive, 125VDC / 0.24A - 30W	min. $5x10^5$ cycles
resistive, 220 VDC / 0.27A - 60W	min. $1x10^5$ cycles
resistive, 250VAC / 0.25A - 62.5VA	min. $1x10^5$ cycles
resistive, 30VDC / 1A - 30W	min. $5x10^5$ cycles
resistive, 30VDC / 2A - 60W	min. $1x10^5$ cycles

Contact Data (continued)

Contact ratings, UL contact rating	250VAC, 0.25A, 62.5VA 30VDC, 1A, 30W
Mechanical endurance	10^8 operations

Coil Data

Magnetic system	bistable
Coil voltage range	1.5 to 24VDC
Max. coil temperature	125°C
Thermal resistance	<150K/W

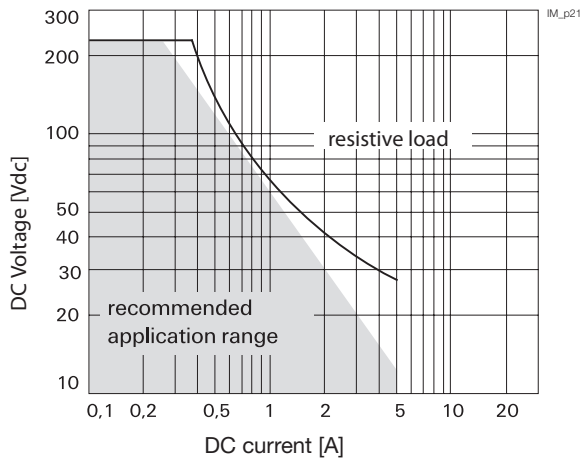
Coil versions, bistable, 1 coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
61	3.0	2.25	-2.25	113	80
68	2.4	1.80	-1.80	72	80

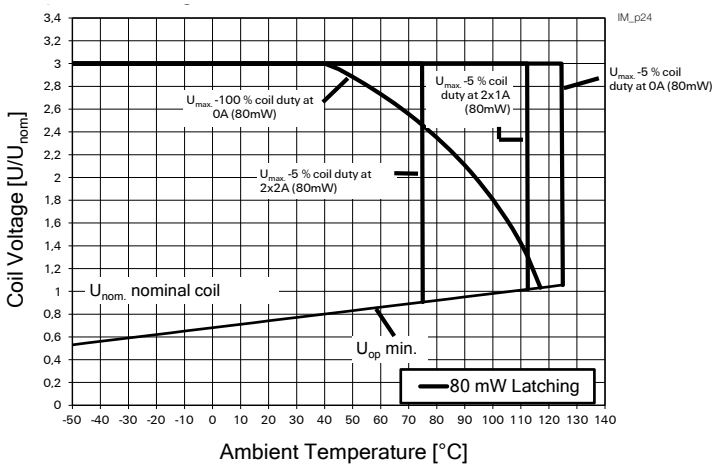
All figures are given for coil without pre-energization, at ambient temperature +23°C

Other coil voltages on request

Max. DC load breaking capacity



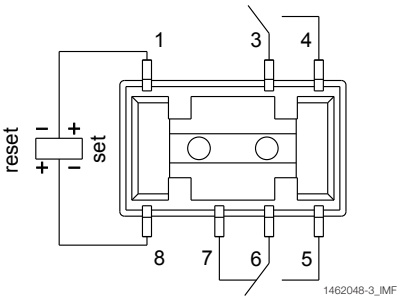
Coil operating range, bistable 1 coil



IMF Relay (Continued)

Insulation	
Initial dielectric strength	
between open contacts	$1000V_{rms}$
between contact and coil	$3000V_{rms}$
between adjacent contacts	$3000V_{rms}$
Initial surge withstand voltage	
between open contacts	1500V
between contact and coil	4500V
between adjacent contacts	4500V
Initial insulation resistance	
between insulated elements	$>10^9\Omega$
Capacitance	
between open contacts	max. 1pF
between contact and coil	max. 2pF
between adjacent contacts	max. 2pF
Cross talk	
at 100MHz/900MHz	-37.0dB/-18.8dB
Insertion loss	
at 100MHz/900MHz	0.03dB/0.33dB
Voltage standing wave ratio (VSWR)	
at 100MHz/900MHz	1.06/1.49

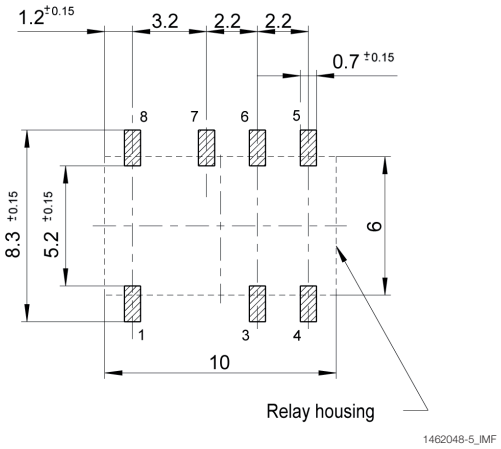
Terminal assignment
bottom view



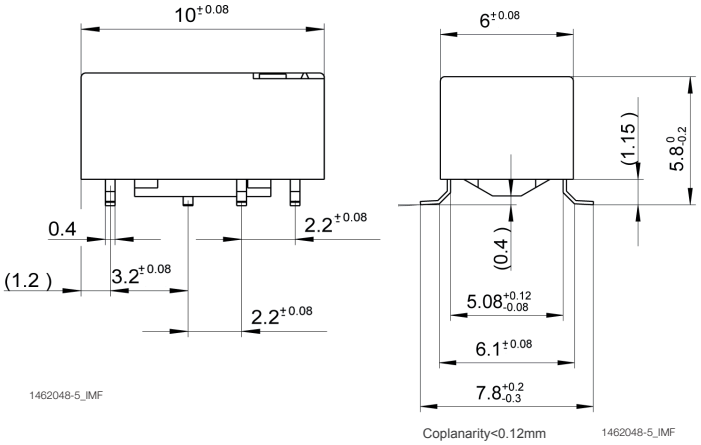
Contacts are shown in reset condition. Contact position might change during transportation and must be reset before soldering.

Other Data	
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter	
Ambient temperature	-40°C to +85°C
Thermal resistance	<150K/W
Category of environmental protection	
IEC 61810	RT V - hermetically sealed
Vibration resistance (functional)	20g, 10 to 500Hz
Shock resistance (functional), half sinus 11ms	50g
Shock resistance (destructive), half sinus 0.5ms	500g
Weight	0.7g
Resistance to soldering heat SMT	
IEC 60068-2-58	265°C / 10s
Moisture sensitive level, JEDEC J-Std-020D	MSL3
Ultrasonic cleaning	not recommended
Packaging/unit	reel/1000 pcs., box/1000 or 5000 pcs.

PCB layout
Top view on component side of PCB



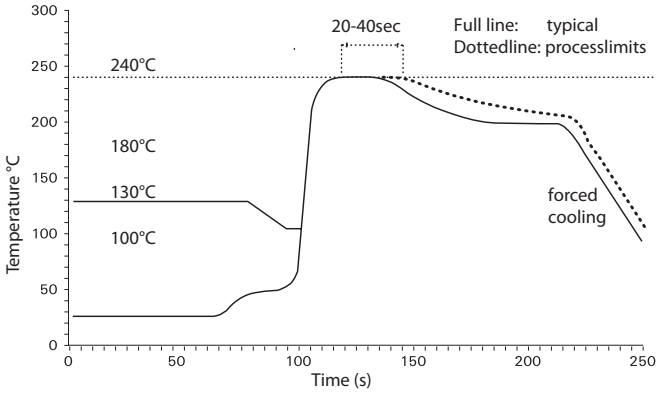
Dimensions
Relay



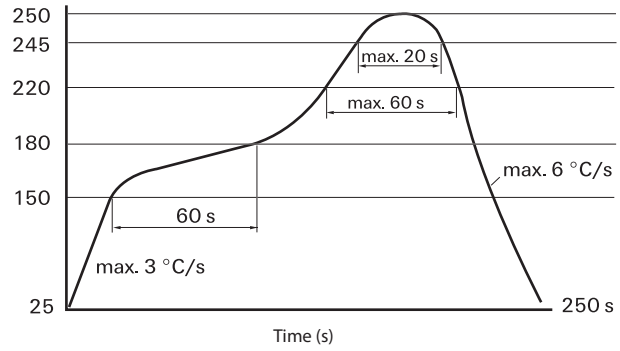
IMF Relay (Continued)

Processing
Recommended soldering conditions

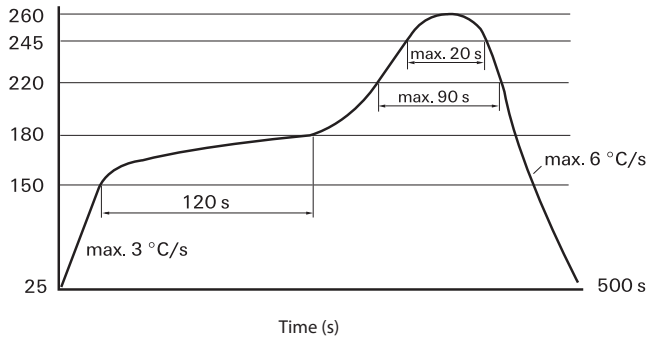
Soldering conditions according IEC 60058-2-58 and IPC/JEDEC J-STD-020B



Recommended reflow soldering profile

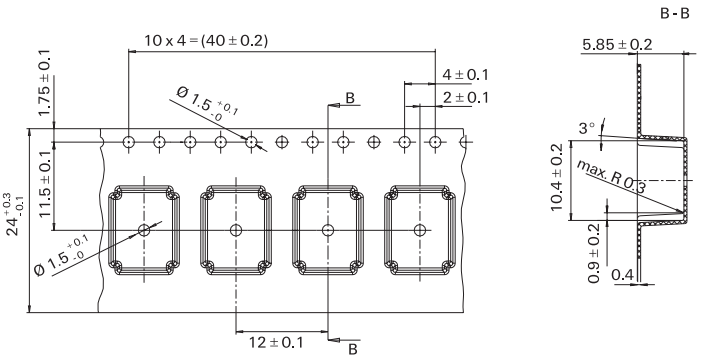


Resistance to soldering heat - Reflow profile

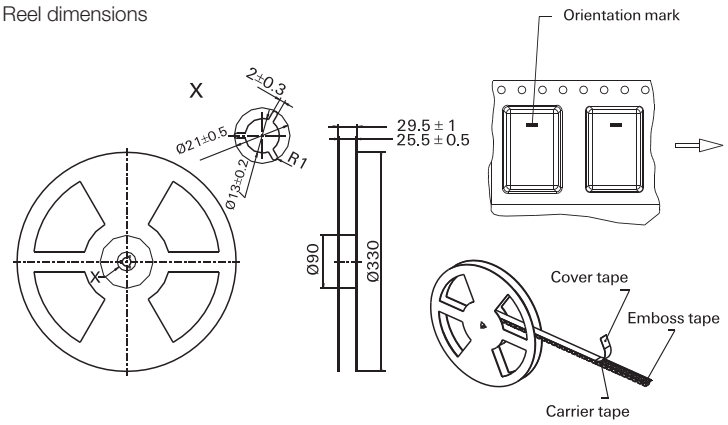


Packing

Tape and reel for SMT version
1000 relays per reel, 1000 or 5000 relays per box



Reel dimensions



IMF Relay (Continued)

Product code structure	Typical product code	IMF		61	H	R

Type
IMF Signal Relays IMF Series

Contact arrangement
Blank 1 form B and 1 form C, (NC and CO)

Coil
Coil code: please refer to coil versions table

Terminals
H SMT - high board clearance gull wing

Packing
R Reel

Product code	Arrangement	Coil	Coil type	Terminals	Part number
IMF61HR	1 form B and 1 form C	3VDC	bistable	SMT high distance	1462048-3
IMF68HR	1 form B and 1 form C	2.4VDC	bistable	SMT high distance	1-1462048-0

Other types on request.
This list represents the most common types and does not show all variants covered by this datasheet.

Mouser Electronics

Authorized Distributor

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TE Connectivity:

IMF61HR IMF68HR