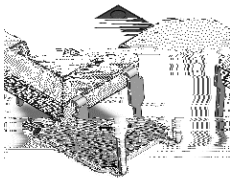
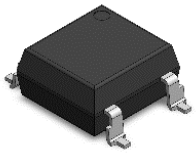
H11B1F Series

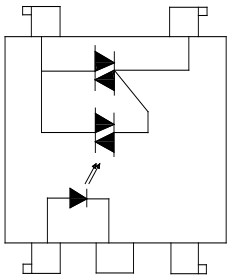
Rev.A.1.0

DESCRIPTION:

The products are 5-pin solid-state relay opto-couplers. The device combines an AlGaAs infrared emitting diode as the emitter which is optically coupled to a monolithic silicon random-phase photo triac to drive a power triac in a plastic DIP5 package with different lead forming options. The products are widely used in solenoid/valve controls, lighting controls, motor controls, temperature controls, static AC power switches, solid state relays, interfacing microprocessors to 265 V_{AC} peripherals.







MAIN FEATURES

High isolation 5000 Vrms
DC input with triac output
Operating temperature range - 40°C to 110 °C
REACH & RoHS compliance
HBM: H3B; MM: M4; CDM: C3
CQC approved
VDE approved
UL approved

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

Parameter		Symbol	Value	Unit
Input	Forward Current	I_F	50	mA
	Peak Forward Current	I_{FP}	1[7]	A
	Reverse Voltage	V_R	6	V
	Power Dissipation	P_D	75	mW
Output	Repetitive peak off-state voltage	V_{DRM}	600	V
	Repetitive peak reverse voltage	V_{RRM}	600	V
	Critical rate of rise of on-state current	dI/dt	100	A s
	On-state RMS Current (T_a ”43 -	$I_{T(RMS)}$	0.6	A
	Non repetitive surge peak on-state current (full cycle , t_p=20ms)	I_{TSM}	6	A
	junction to case (AC)	$R_{th(j-c)}$	65	/W
Isolation Voltage		V_{iso}	5000[8]	Vrms

Operating Temperature	T_{opr}	-40~110	
Junction Temperature	T_j	125	
Storage Temperature	T_{stg}	-40~125	
Soldering Temperature	T_{sol}	260	
Peak pulse voltage (T_j=25 ; non- repetitive,off-state)	V_{pp}	3	kV

NOTE1100μs pulse, 100Hz frequency

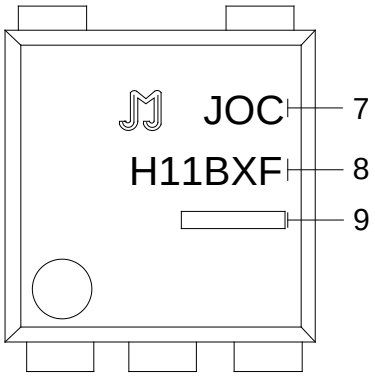
NOTE2AC for 1minute, R.H.=40~60%

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Parameter;

ORDERING AND MARKING INFORMATION

MARKING INFORMATION



7 : Company Abbr.
8 : Part Number & Rank
9 : Production Information Code

Packing Quantity

Option	Quantity	Quantity – Inner box	Quantity –Outer box
DIP	60 Units/Tube	40 Tubes/Inner box	5 Inner box/Outer box =12k Units
SMD	1200 Units/Reel	2 Reels/Inner box	5 Inner box/Outer box =12k Units

Characteristics Curves

FIG.1: Max. Allowable LED Forward Current vs. Ambient Temperature

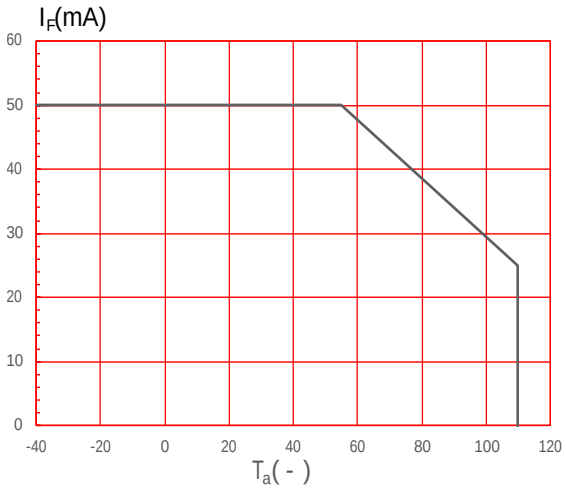


FIG.2: On-state Terminal Current vs. Ambient Temperature

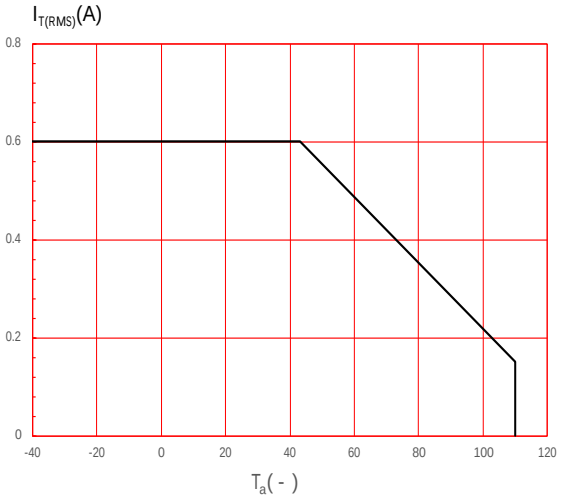


FIG.3:

TEST CIRCUITS

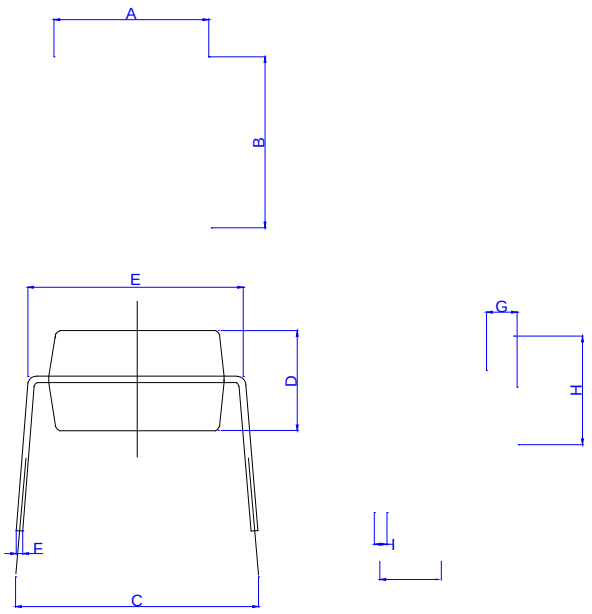
FIG.10: Test Circuits of Turn On Time

FIG.11: Waveforms of Turn On Time

FIG.12: Test circuit for inductive and resistive loads to IEC-61000-4-5 standard]TJ 0 Tw 5.04 0 T

Package Dimension (Unit: mm)

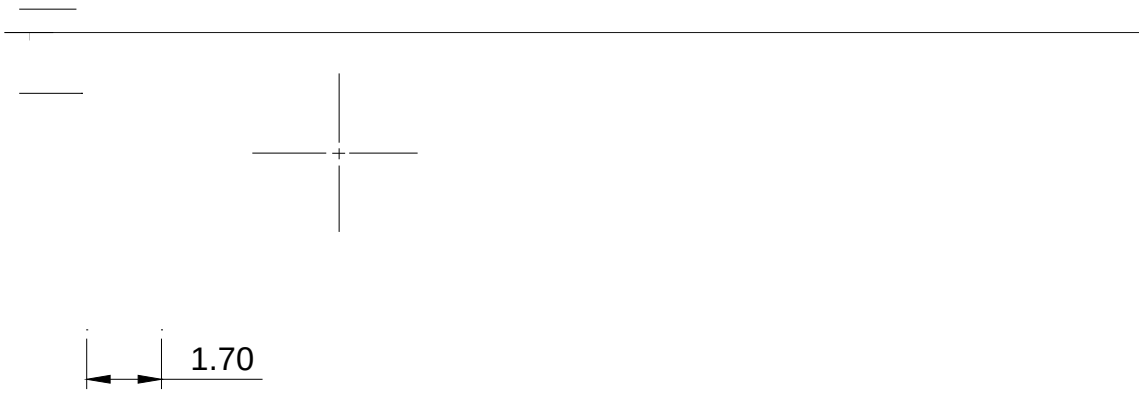
Standard DIP Type:



RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)

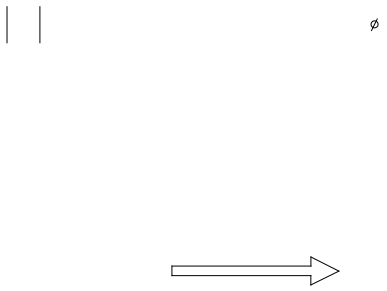
Option SMD

1



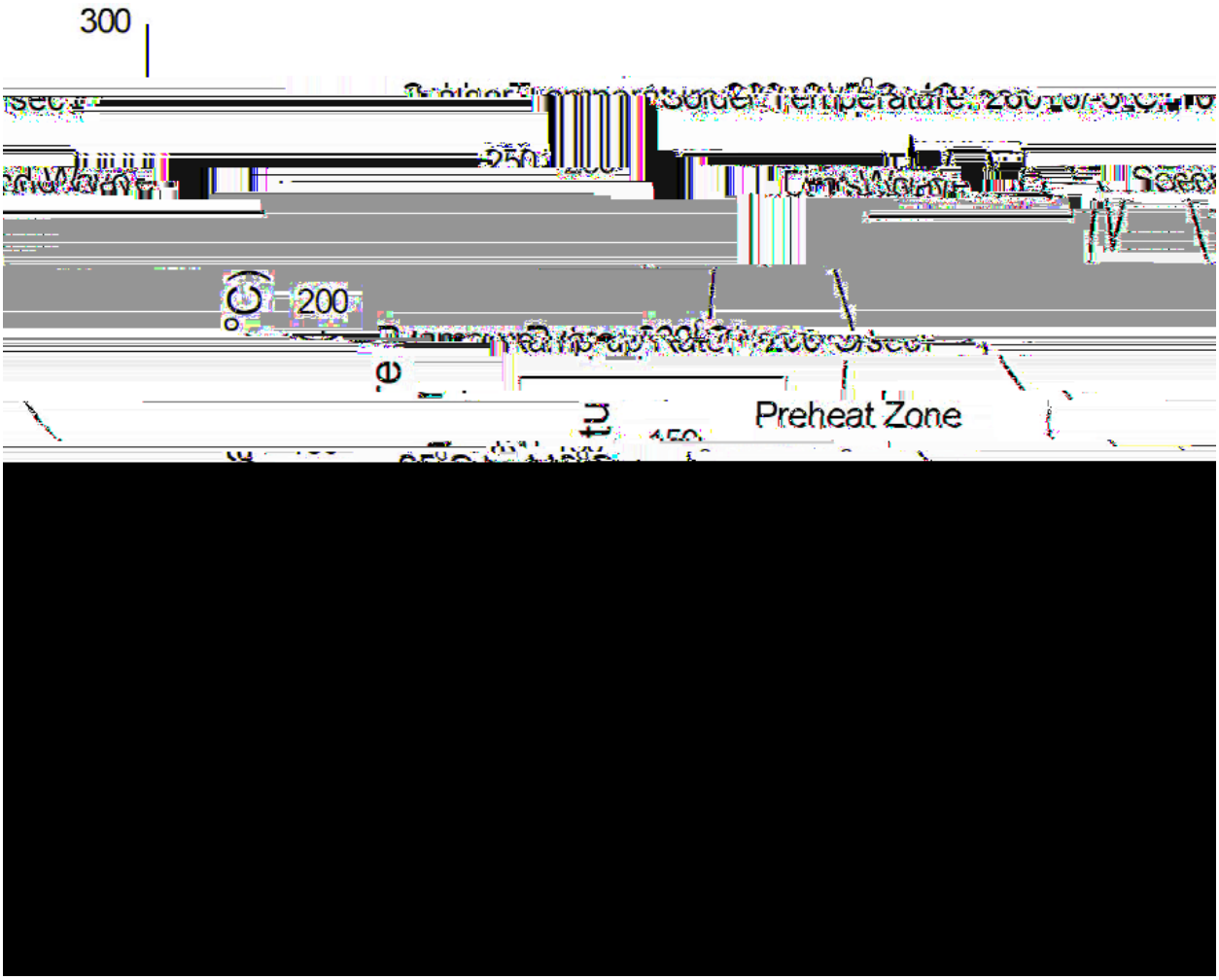
CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

Option T3



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50	1.60		0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	11.90	12.00	12.10	0.469	0.472	0.476
P2	1.90	2.00	2.10	0.075	0.079	0.083
E	1.65	1.75	1.85	0.065	0.069	0.073
F	7.40	7.50	7.60	0.291	0.295	0.299
T	0.35	0.40	0.45	0.014	0.016	0.018
W	15.70	16.00	16.30	0.618	0.630	0.642

WAVE SOLDERING



HANDSOLDERING BY SOLDERING IRON	
Soldering Temperature	360 5
Soldering Time	3s max.

Note:

1. Reflow soldering is recommended at the temperatures and times shown, no more than three times.

2. Avoid direct contact between the epoxy body and any tools or surfaces exceeding its maximum storage temperature.

3. Application of pressure on the epoxy body is prohibited at elevated temperatures. In specific scenarios, any applied force must not exceed 2.5N.

4. Ensure the component has cooled to ambient temperature before proceeding with any subsequent manufacturing steps.

5. The component has a shelf life of one year when stored under standard conditions.

6. Recommend storage Temp.: 0~40°C;

Recommend storage humidity: <60%;

MSL level: MSL 1

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