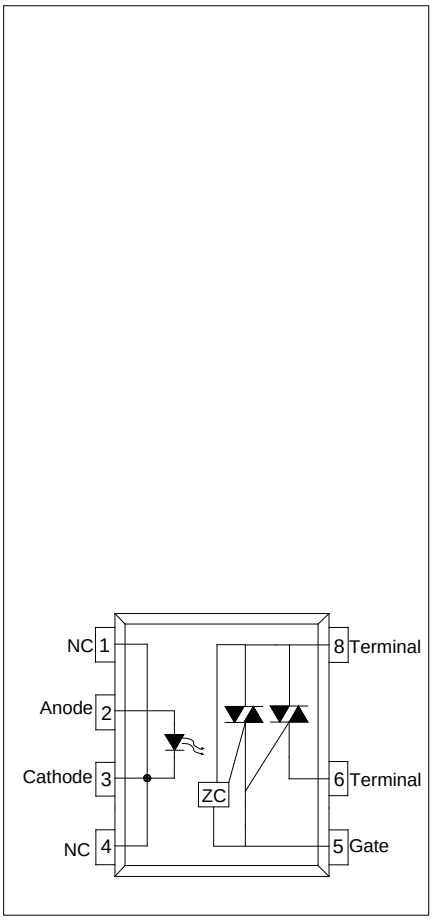
JORX213 Series Rev.A.1.2

DESCRIPTION:

The JORX213 series combine an AlGaAs infrared emitting diode as the emitter which is optically coupled to a monolithic silicon zero-cross photo triac to drive a power triac in a plastic DIP7 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 85 °C
REACH & RoHS compliance
MSL class 2
HBM: H3A; MM: M4
CQC approved
VDE approved
UL approved

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

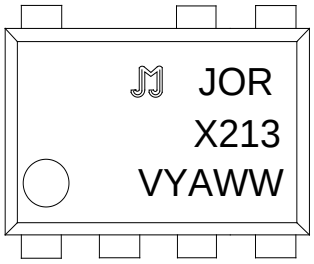
Parameter			Symbol	Value	Unit
Input	Forward Current		I_F	60	mA
	Peak Forward Current		I_{FP}	1[7]	A
	Reverse Voltage		V_R	6	V
Output	Repetitive peak off-state voltage		V_{DRM}	600	V
	Repetitive peak off-state voltage		V_{RRM}	600	V
	Critical rate of rise of on-state current		dI/dt	100	A s
	On-state RMS Current	JOR0213	$I_{T(RMS)}$	0.3	A
		JOR1213		0.6	
		JOR2213		0.9	
		JOR3213		1.2	
	Non repetitive surge	JOR0213	I_{TSM}	3	A

	peak on-state current (full cycle , t_p=20ms)	JOR1213		6	
		JOR2213		9	
		JOR3213		12	
Isolation Voltage			V_{iso}	5000 [8]	Vrms
Operating Temperature			T_{opr}	-40~85	
Storage Temperature			T_{stg}	-40~125	
Soldering Temperature			T_{sol}	260 [9]	

NOTE1 100μs pulse, 100Hz frequency
NOTE2 AC for 1minute, R.H.=40~60%
NOTE3 For 10 seconds

ORDERING AND MARKING INFORMATION

MARKING INFORMATION > K @ 0 P K€RDERING INFOR



Characteristics Curves

FIG.1: Forward Current vs. Ambient Temperature

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

TEST CIRCUITS

FIG.11: Test Circuits of Turn On Time

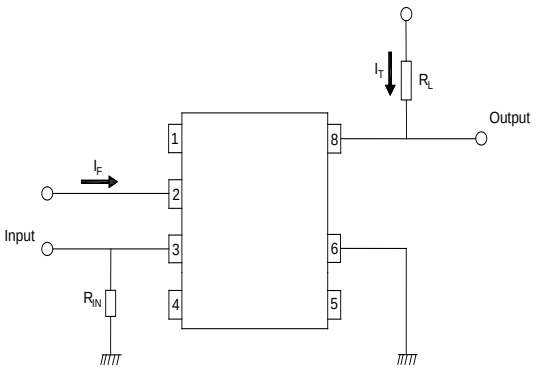
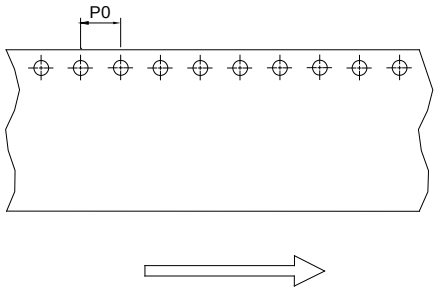
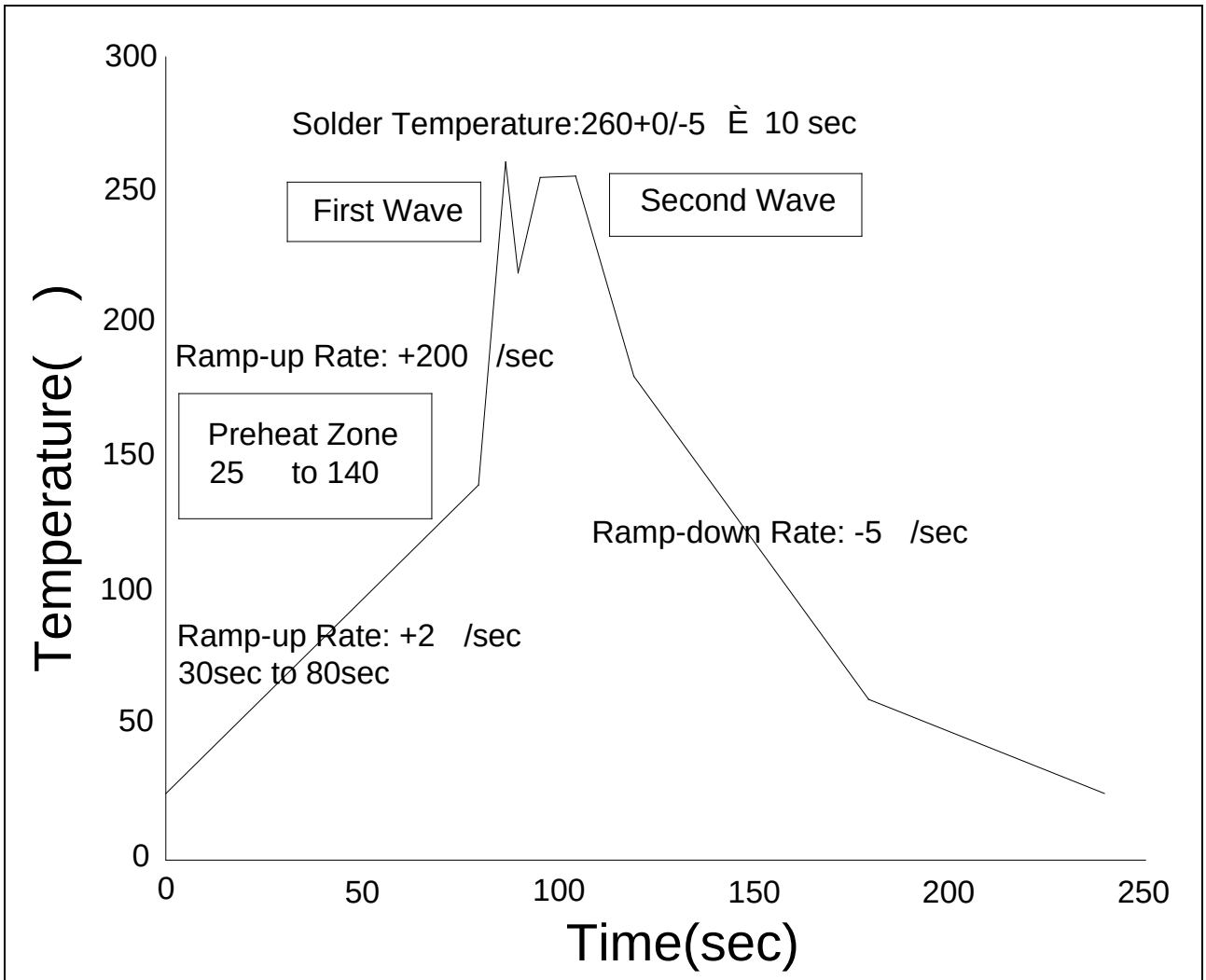


FIG.12: Waveforms of Turn On Time

CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)



WAVE SOLDERING



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

Document Revision History

Date	Revision	Changes
Feb.21, 2025	A.1.0	Last update
Nov.7, 2025	A.1.1	Add (dV/dt)c
Feb.27, 2026	A.1.2	Revise Package Dimension