



DESCRIPTION:

The JOC303X series combine an AlGaAs infrared emitting diode as the emitter which is optically coupled to a monolithic silicon zero-crossing photo triac in a plastic DIP6 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 up to 120 V_{AC} peripherals.

MAIN FEATURES

- High isolation 5000 VRMS
- DC input with zero-crossing photo triac output
- Operating temperature range -55 - Z U 8 + ') . 8U . 9 I U S V R O G T I K
- HBM: . ' ! 3 3 3
- CQC approved
- VDE approved
- UL approved

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

	Parameter	Symbol	Value	Unit
Input	Forward Current	I _F	60	mA
	Reverse Voltage	V _R	6	V
	Junction Temperature	T _j	125	
	Input Power Dissipation	P _I	100	mW
	Power Dissipation Derating (T _a 125)	•P _D /	-1.33	mW/
Output	Off-state Output Terminal Voltage	V _{OFF}	250	V
	Peak Output Current	I _{TP}	2	A
	On-state RMS Current	I _{T(RMS)}	100	mA

	Power Dissipation Derating (T_a 125)	$\bullet P_{D/}$	-3.33	mW/
Total Power Dissipation		P_{tot}	350	mW
Isolation Voltage		V_{iso}	5000'	Vrms
Operating Temperature		T_{opr}	-55~100	
Storage Temperature		T_{stg}	-55~125	
Soldering Temperature		T_{sol}	260 ⁸	

NOTE1AC for 1minute, R.H.=40~60%

NOTE2For 10 seconds

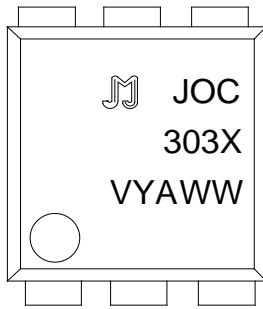
ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V_F	$I_F=10mA$	-	1.27	2.2	V
	Reverse Current	I_R	$V_R=6V$	-	-	1	A
	Input Capacitance	C_{in}	$V=0, f=1kHz$	-	10	-	pF
Output	Peak Off-state Current, Either Direction	I_{OFF}	$V_{OFF}=250V, I_F=0$	-	-	100''	nA
	Peak On-state Voltage, Either Direction	V_{TM}	$I_{TM}=100mA$	-	1.7	2.5	V
	Critical Rate of Rise of Off-state voltage	dV/dt	$V_{PEAK}=250V, I_F=0$	1000•	-	-	9 V
LED Trigger Current	JOC3031	I_{FT}	Terminal Voltage=3V $I_{TM}=100mA$	-	-	15	mA
	JOC3032			-	-	10	
	JOC3033			-	-	5	
Holding Current		I_H	I_{TM}				

Transfer Characteristics

ORDERING AND MARKING INFORMATION

MARKING INFORMATION



Characteristics Curves

FIG.1: Forward Current vs. Ambient Temperature

FIG.2: On-

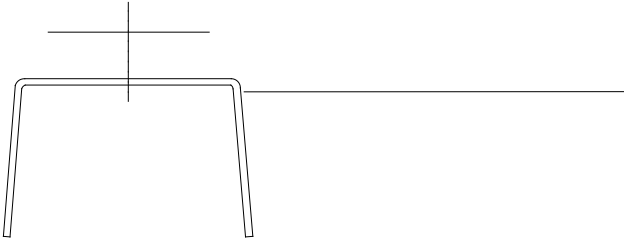
TEST CIRCUITS

FIG.12: Test Circuits of Turn On Time

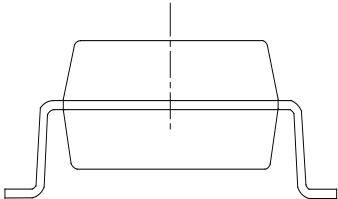
FIG.13: Waveforms of Turn On Time

Package Dimension (Unit: mm)

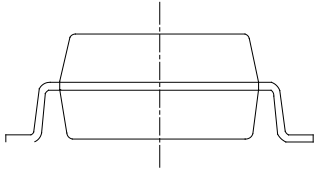
Standard DIP Type:



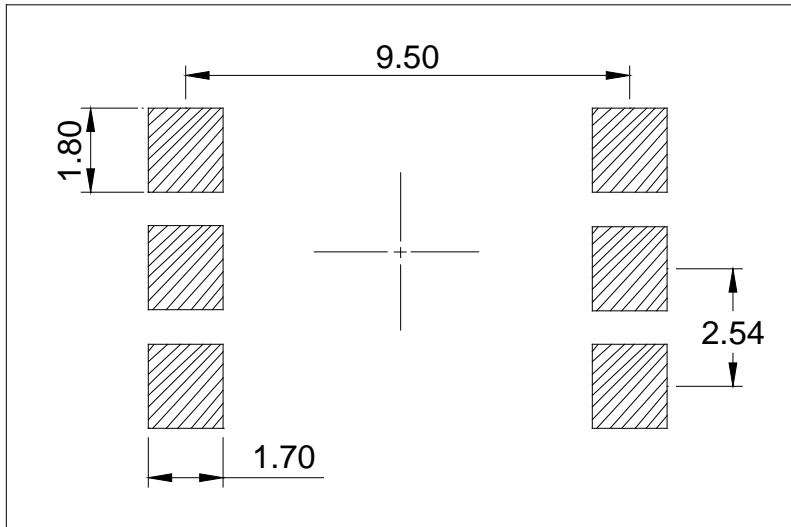
Option S Type:



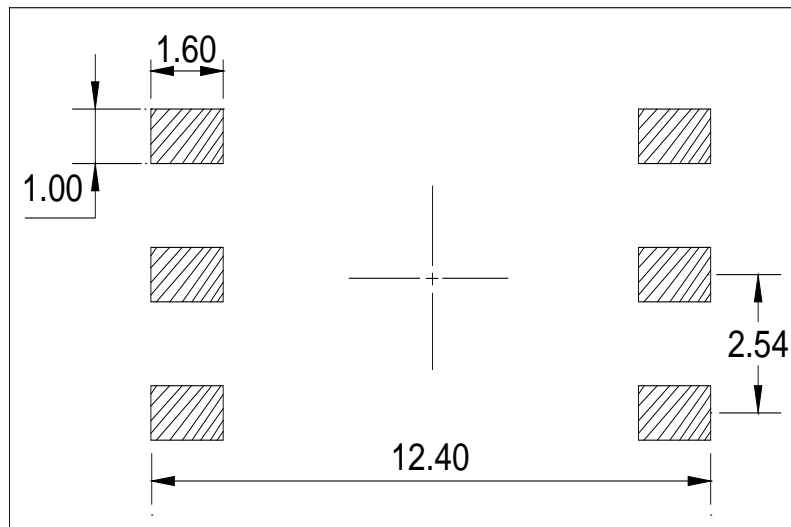
Option SLM Type: Dimensions Millimeters Inches Ref. Min. Typ. Max. Min. Typ. Max.



Option SL

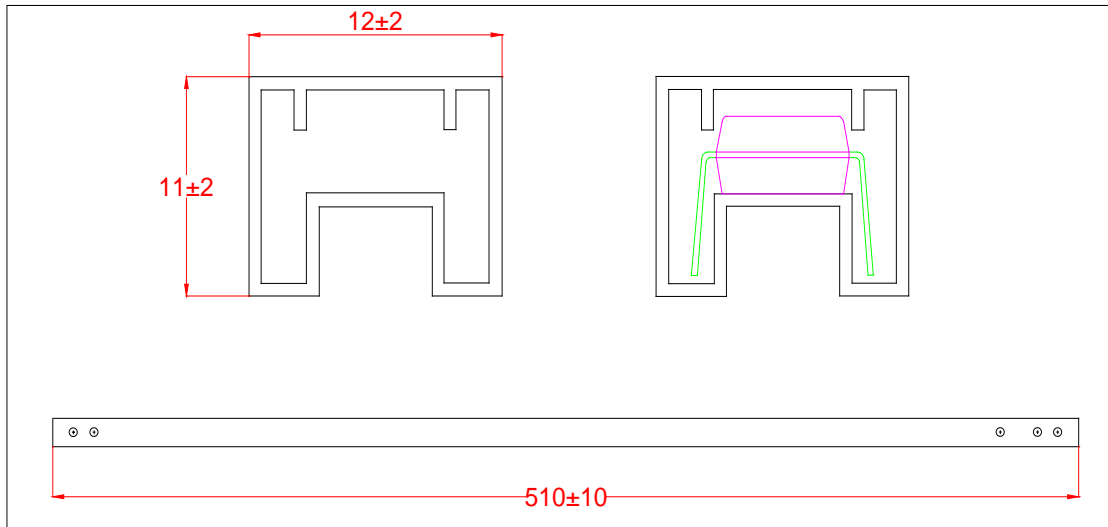


Option SLM

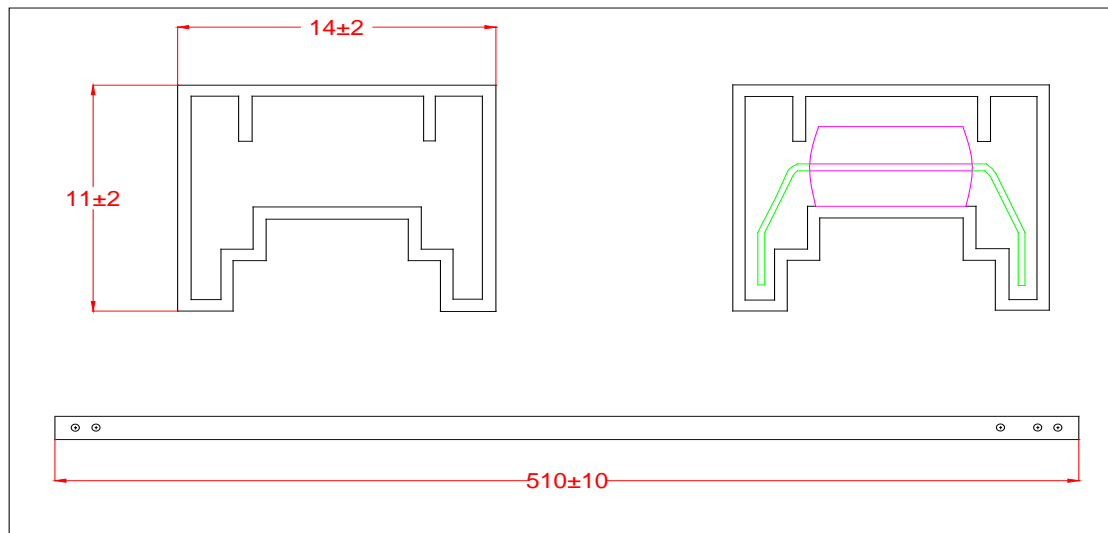


TUBE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

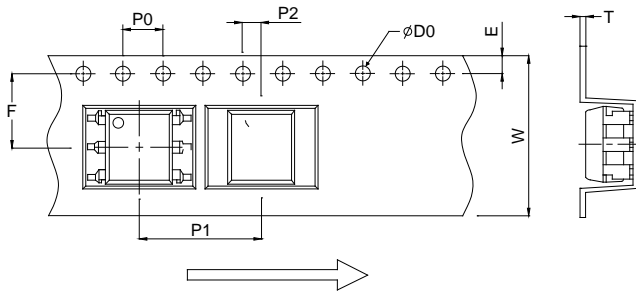
Standard DIP

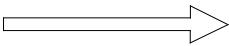
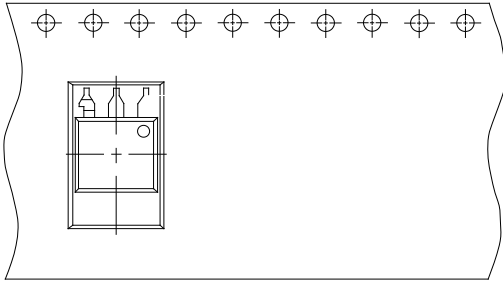


Option M

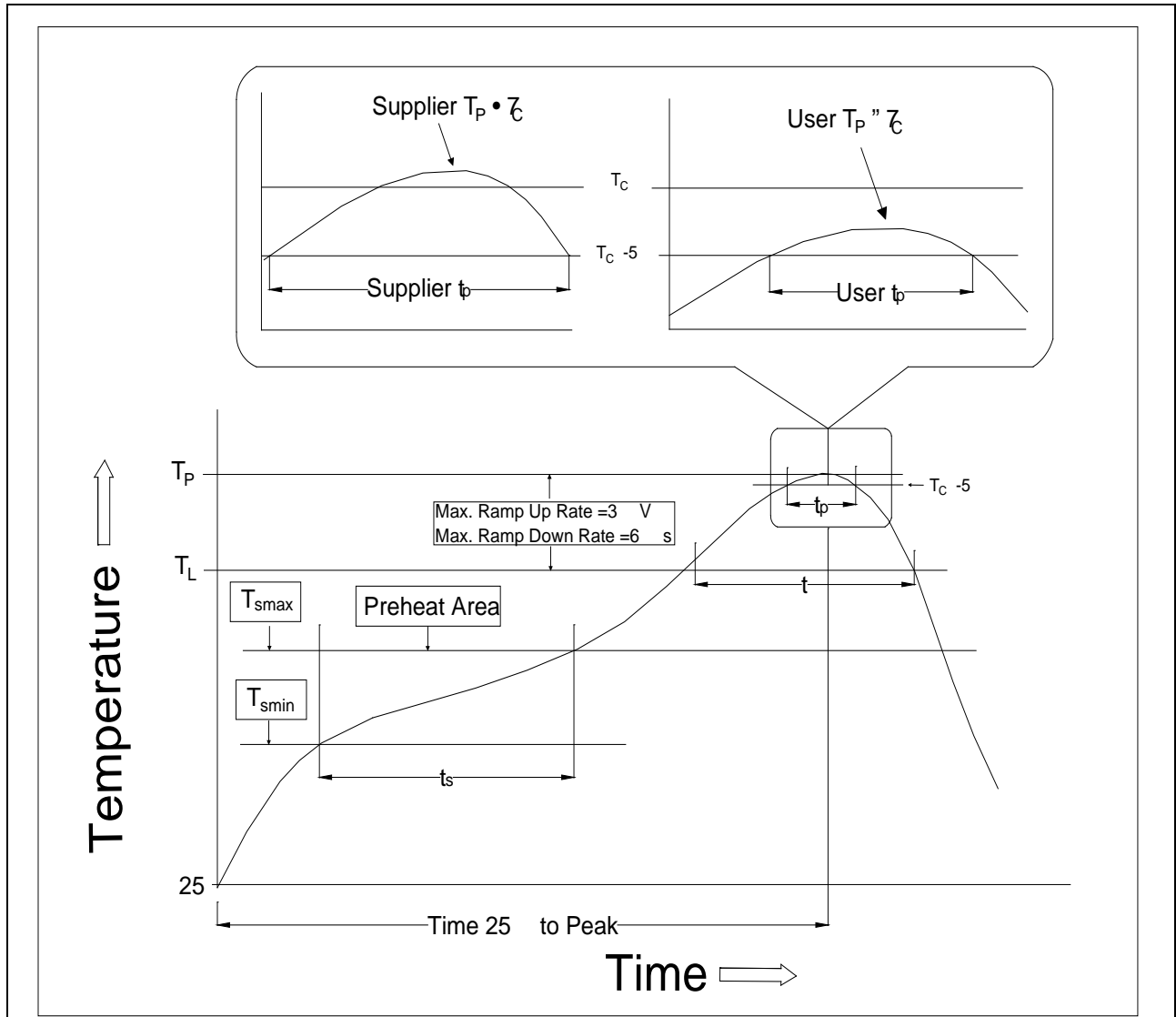


CARRIER TAPE SPECIFICATIONS Dimensions in mm unless otherwise stated



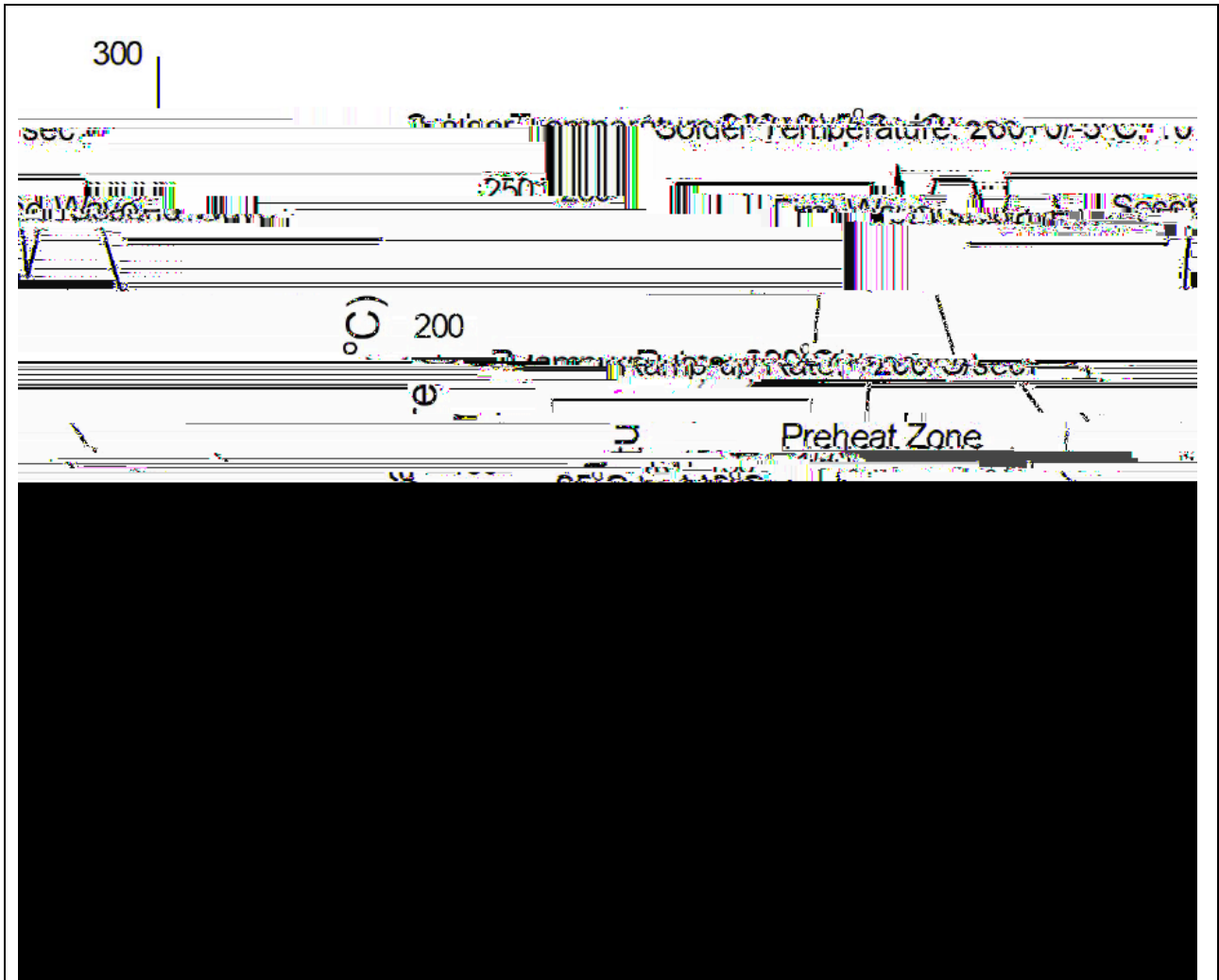


REFLOW INFORMATION



Profile Feature	Sn-Pb Assembly Profile	Pb-Free Assembly Profile
Temperature Min. (T _{smin})	100	150
Temperature Max. (T _{smax})	150	200
Time (t _s) from (T _{smin} to T _{smax})	60-120 seconds	60-120 seconds
Ramp-up Rate (t _L to t _P)	3 / second max.	3 / second max.
Liquidus Temperature (T _L)	183	217
Time (t _L) Maintained Above (T _L)	60-150 seconds	60-150 seconds
Peak Body Package Temperature	235 +0 /-5	260 +0 /-5
Time (t _P) within 5 of 260	20 seconds	30 seconds
Ramp-down Rate (T _P to T _L)	6 / second max.	6 / second max.
Time 25 to Peak Temperature	6 minutes max.	8 minutes max.

WAVE SOLDERING



HAND SOLDERING BY SOLDERING IRON

Soldering Temperature	360 5
Soldering Time	3s max.

Document Revision History

Date	Revision	Changes
Apr.2, 2025	A.1.0	Last update
Nov.5, 2025	A.1.1	Add S&SLM package

Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co., Ltd. assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement.

Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information. This document supersedes and replaces all information previously supplied.

is a registered trademark of Jiangsu JieJie Microelectronics Co., Ltd.

Copyright © 2025 Jiangsu JieJie Microelectronics Co., Ltd. All rights reserved.