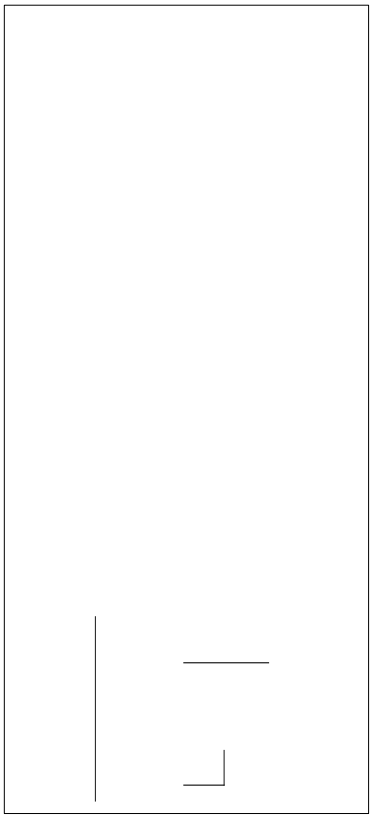
JOC303XD4 Series

Rev.A.1.1

DESCRIPTION:

The JOC303XD4 series combine an AIGaAs infrared emitting diode as the emitter which is optically coupled to a monolithic silicon zero-crossing photo triac in a plastic DIP4 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 ł ₩r 433 ł
UHDFK) UrKV frpsoldqfh
HBM: K6D› P P= P7
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 ($T_a \geq 25$)	ΔP_D/	-1.33	mW/
Output	Off-state Output Terminal Voltage	V_{OFF}	250	V
	Peak On−state Current (100μs pulse, 120 pps)	I_{TP}	2	A
	On-state RMS Current	$I_{T(RMS)}$	100	mA
	Peak Repetitive Surge Current (P_W=10 ms)	I_{TSM}	1	A
	Junction Temperature	T_j	125	
	Output Power Dissipation	P_O	250	mW

FIG.7: Normalized On-state Terminal Voltage vs. Ambient Temperature

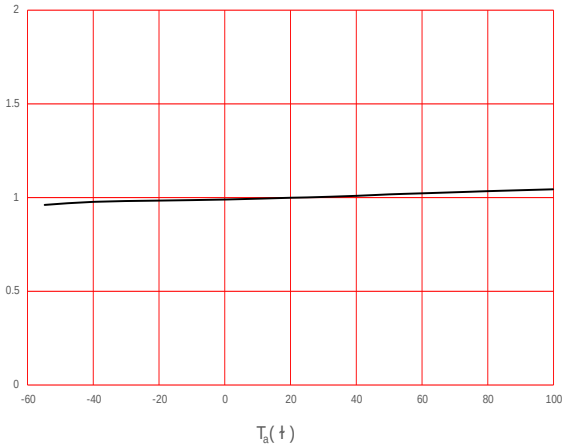


FIG.8: On-state Terminal Voltage vs. On-state Terminal Current

TEST CIRCUITS

FIG.12: Test Circuits of Turn On Time

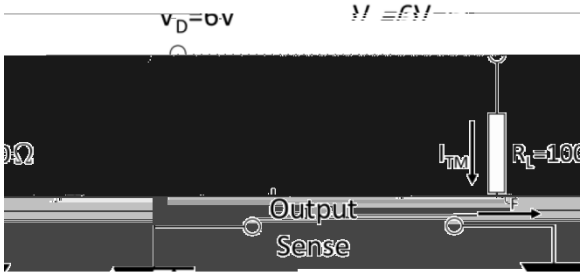


FIG.13: Waveforms of Turn On Time

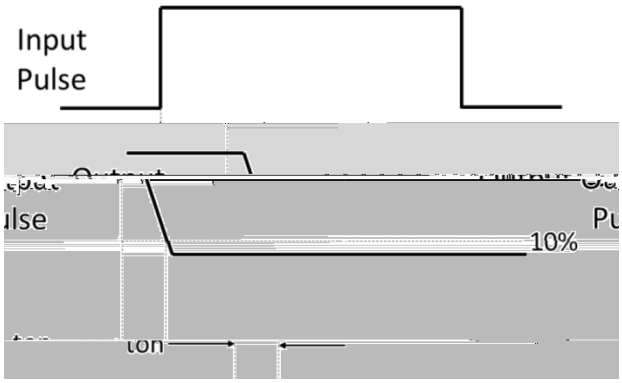


Fig.14: Test Circuits of dV/dt

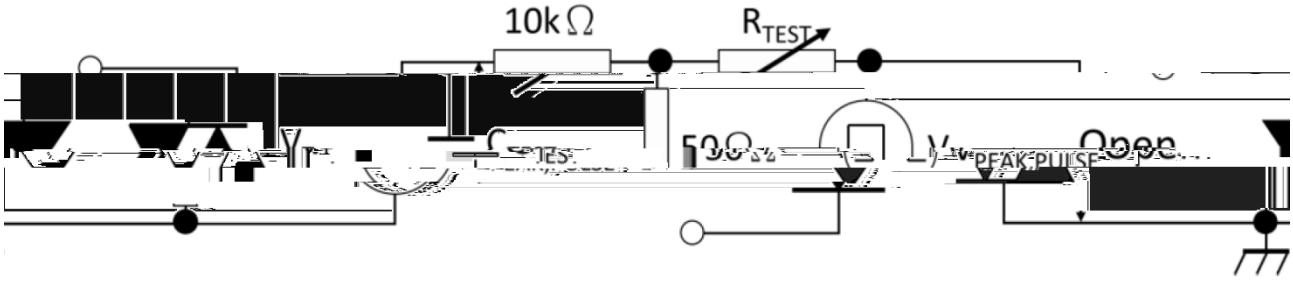
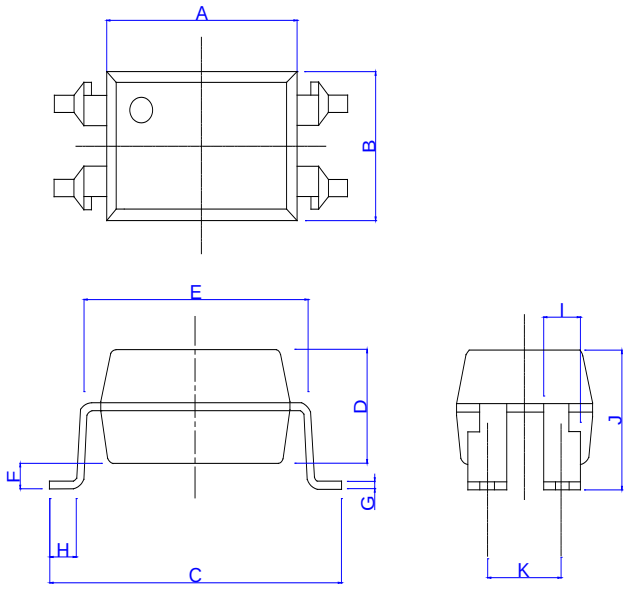


Fig.15: Waveforms of dV/dt

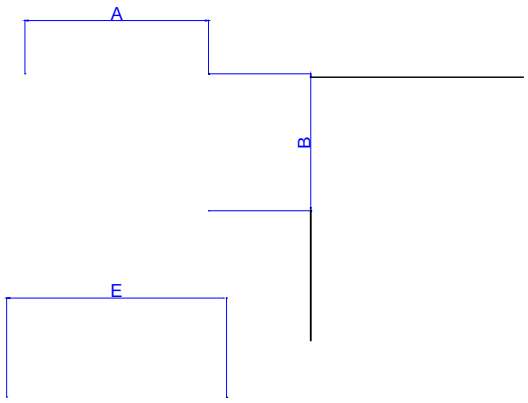
Option S Type:



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	6.30		6.70	0.249		0.265
B	4.38		4.78	0.173		0.189
C	9.85		10.45	0.389		0.413
D	3.30		3.70	0.130		0.146
E	7.32		7.92	0.289		0.313
F		0.80			0.032	
G		0.25			0.010	
H		0.80			0.032	
I	1.20		1.40	0.047		0.055
J	4.00		4.60	0.158		0.182
K		2.54			0.100	

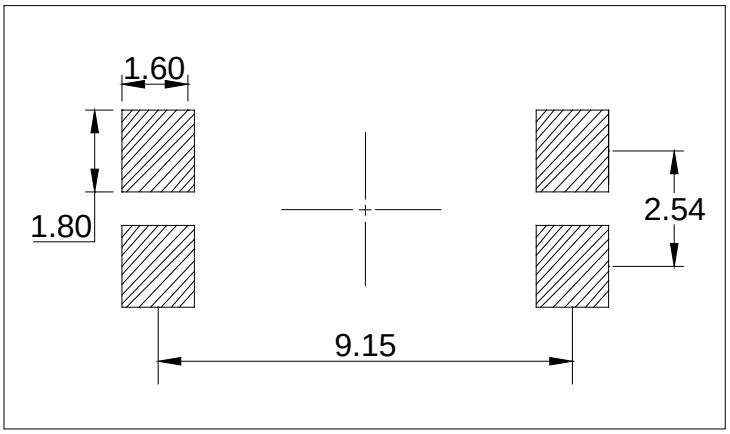
Option SL Type:

Option S LM Type:

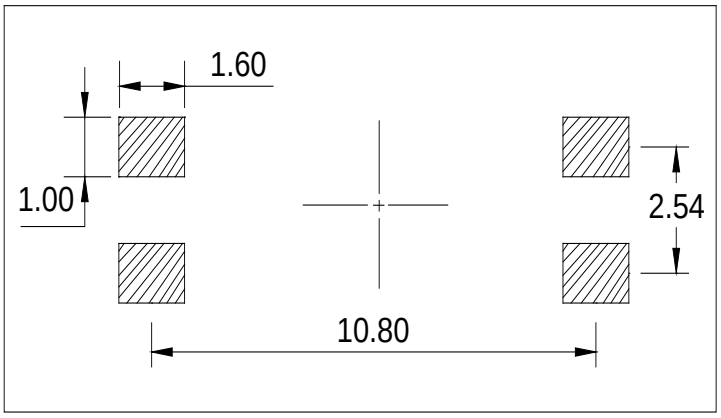


RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)

Option S/SL

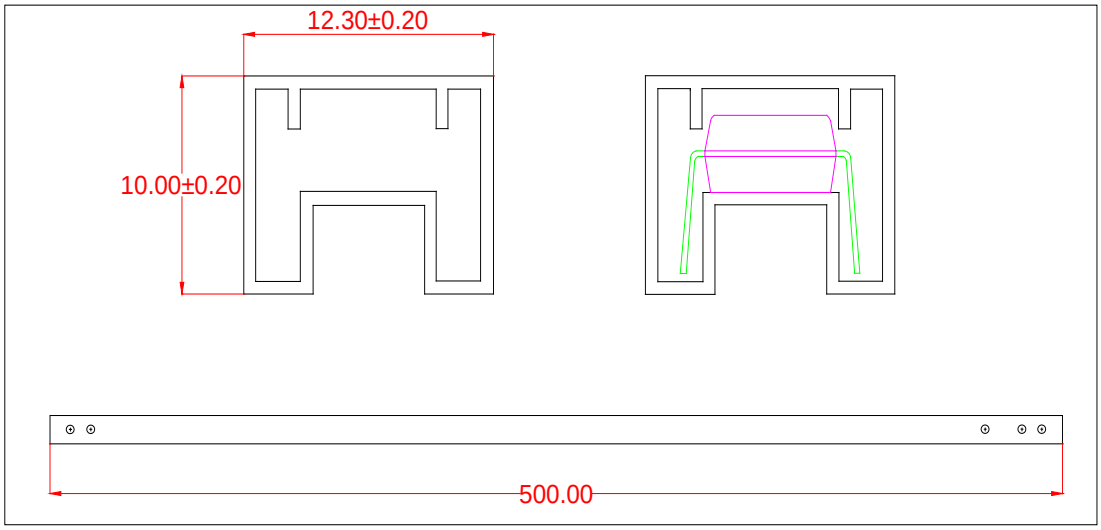


Option SLM

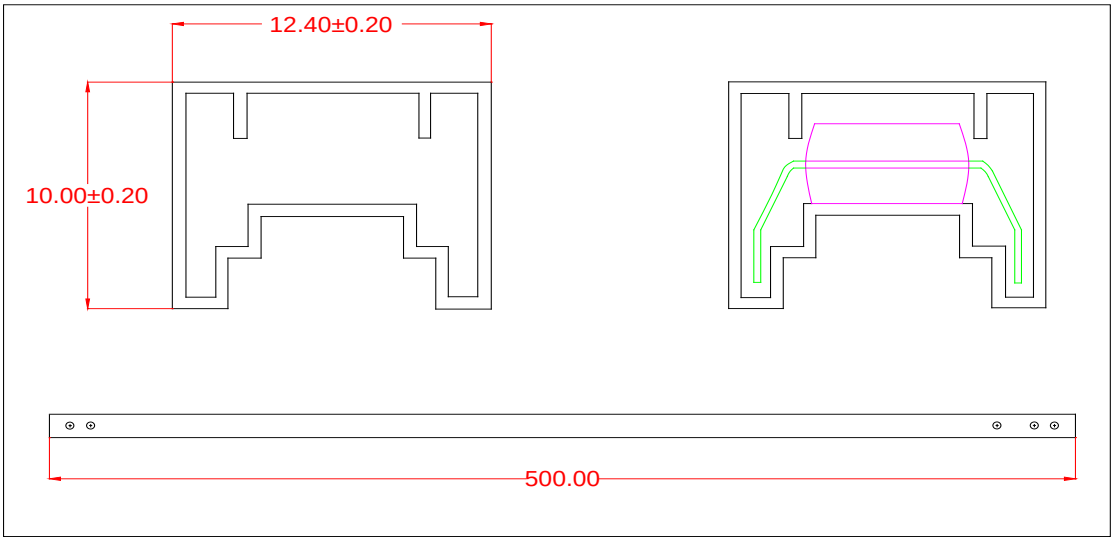


TUBE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

Standard DIP



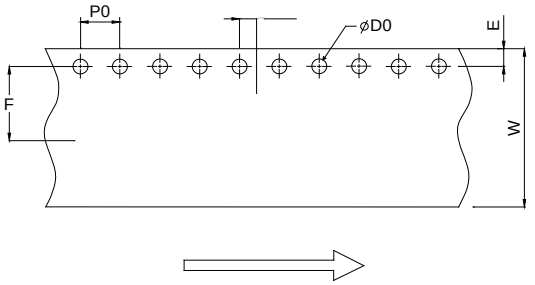
Option M



CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

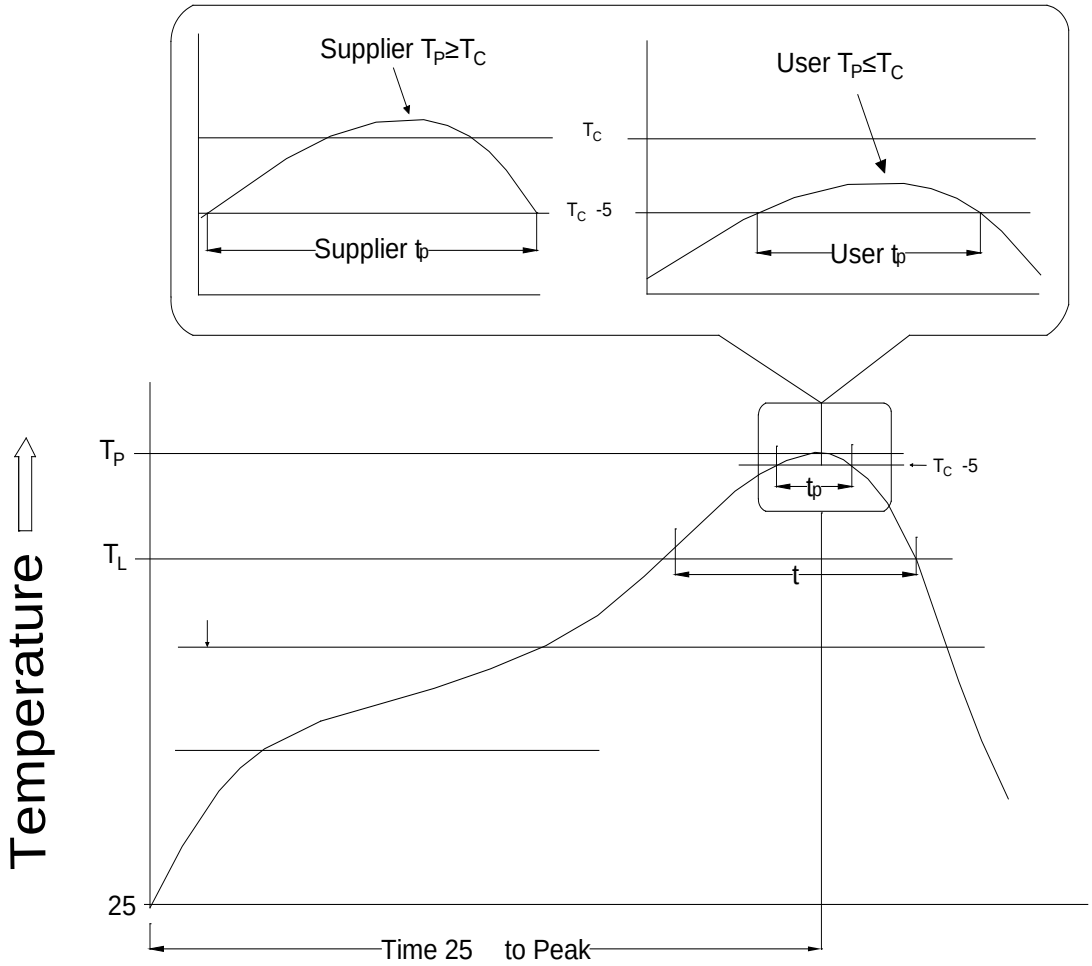
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0						
P0						
P1						
P2						
F						

Option SL(T3)

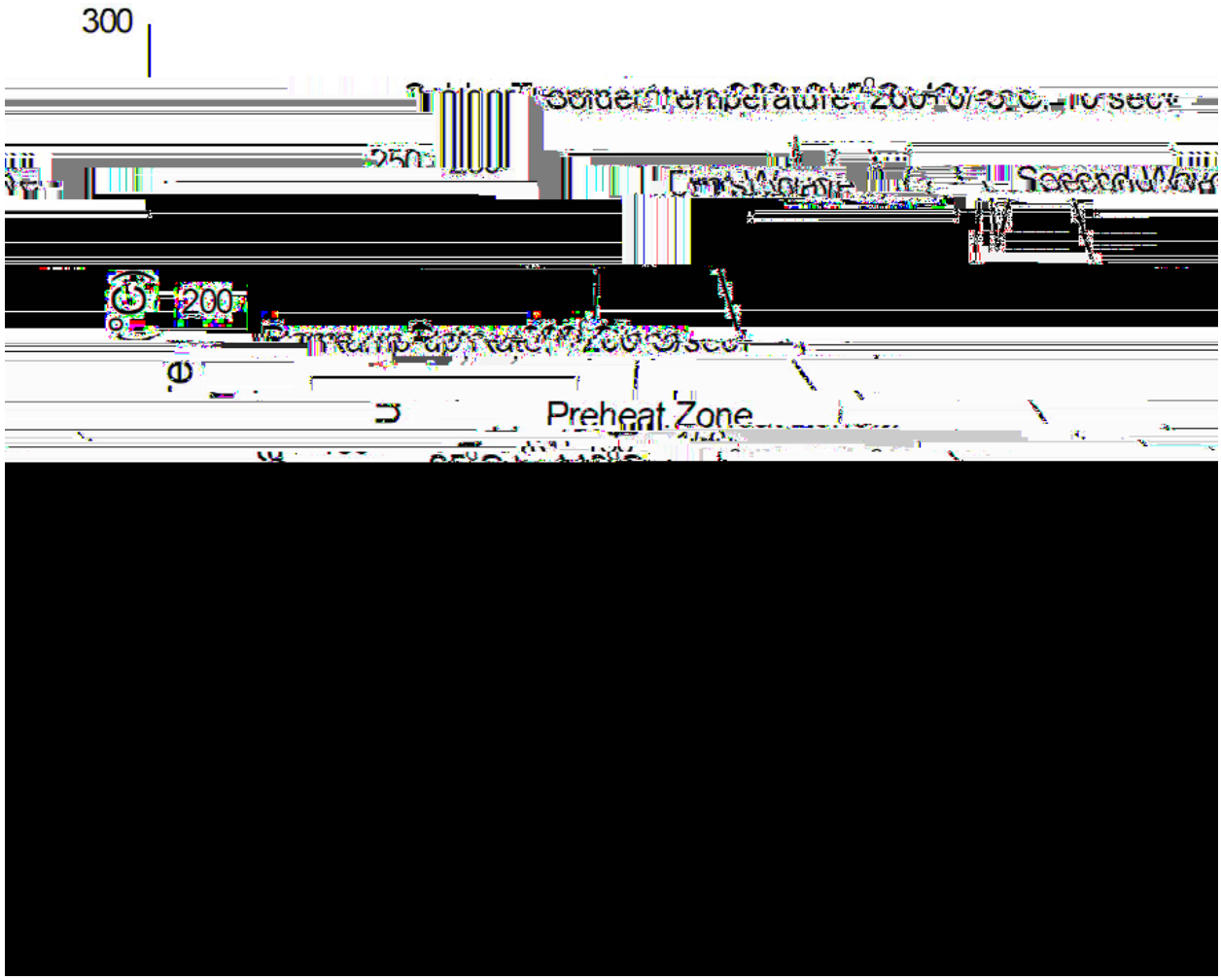


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0						
P0						
P1		12.00			0.472	
P2						
E		1.75			0.069	
F		7.50				
T		0.40			0.016	
W		16.00			0.630	

REFLOW INFORMATION



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 SLM package

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