JOC302XD4 Series

Rev.A.1.1

DESCRIPTION:

The JOC302XD4 series combine an AIGaAs infrared emitting diode as the emitter which is optically coupled to a monolithic silicon random-phase photo triac in a plastic DIP4 package with different lead forming options. With the robust coplanar double mold structure, JOC302XD4 series provide the most stable isolation feature. 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 random-phase photo triac output
Operating temperature range -55

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 25)	P_D/	-	

	Junction Temperature	T_j	125	
	Output Power Dissipation	P_O	250	mW
	Power Dissipation Derating (T_a 25)	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	

NOTE1:

NOTE2:

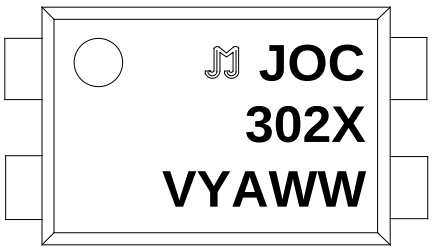
ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V_F	I_F=10mA	-	1.24	1.4	V
	Reverse Current	I_R	V_R=6V	-	-	1	μA
	Input Capacitance	C_{in}	V=0, f=1kHz	-	10	-	pF

P

Output

ORDERING AND MARKING INFORMATION

MARKING INFORMATION	
	
ORDERING INFORMATION	
JOC302XD4(Y)(Z)-GV	

Packing Quantity

Option	Quantity	Quantity – Inner box	Quantity –Outer box

Characteristics Curves

FIG5(9-5.9 (:)-12.9 ( )]TJ /TT3 1 Tf 0.001 Tc -0.006 Tw 3.102 0 Td [(F)9.7 (or)4.5 (w)7.1 (ar)4.4 (d C)7.1 (ur)4.5

TEST CIRCUITS

FIG.12: Test Circuits of Turn On Time

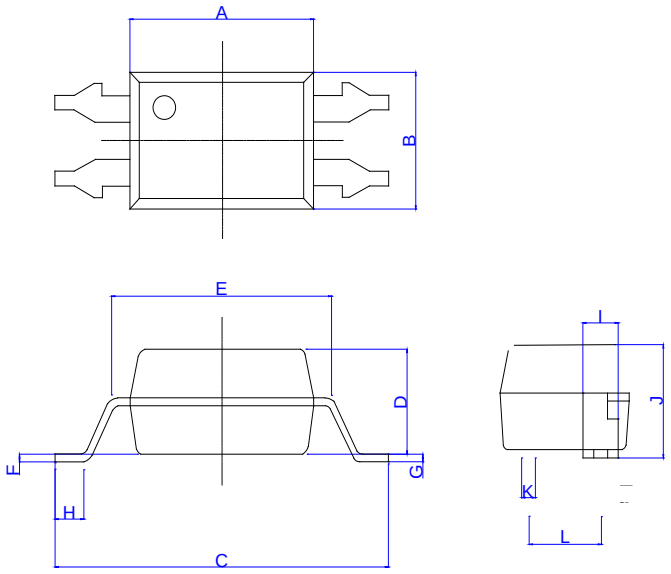
FIG.13: Waveforms of Turn On Time

Fig.14: Test Circuits of dV/dt

Fig.15: Waveforms of dV/dt

Option S Type:

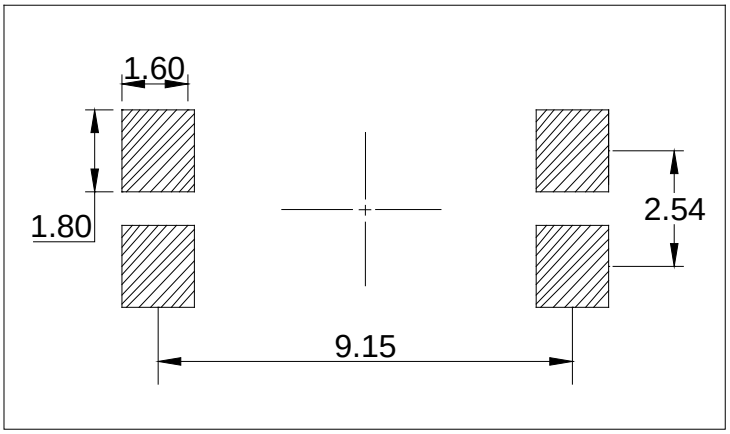
Option SLM Type:



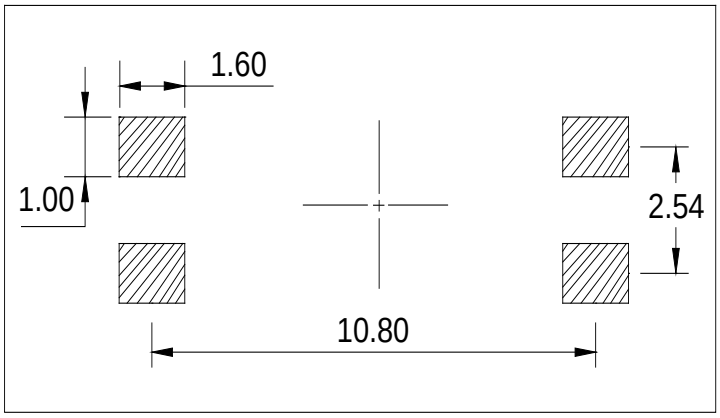
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	6.30		6.70	0.248		0.264
B	4.38		4.78	0.172		0.188
C	11.50		12.10	0.453		0.476
D	3.30		3.70	0.130		0.146
E	7.32		7.92	0.288		0.312
F						
G						
H	0.40			0.016		
I	1.20		1.40	0.047		0.055
J	3.45		4.05	0.136		0.159
K						
L						

RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)

Option S/SL

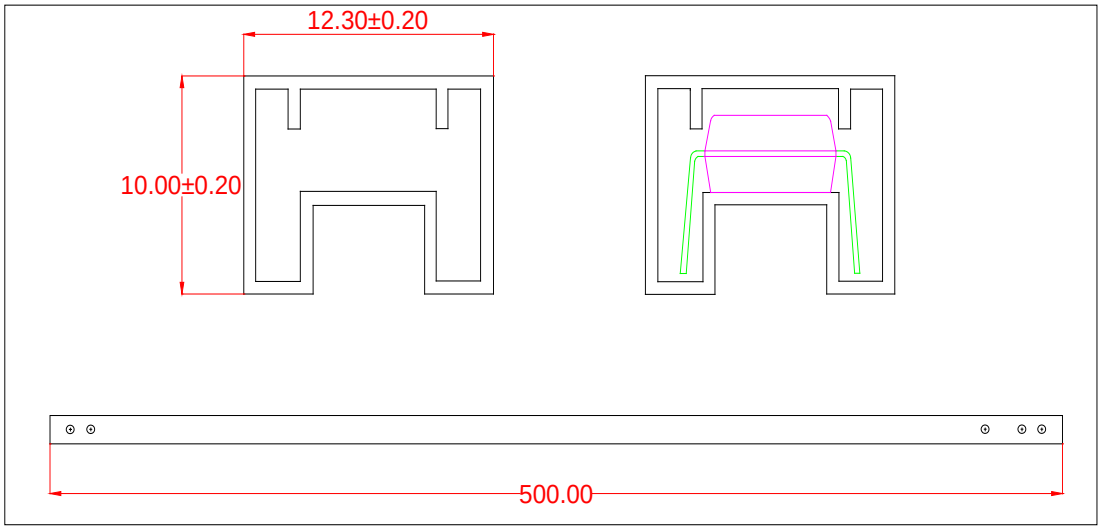


Option SLM

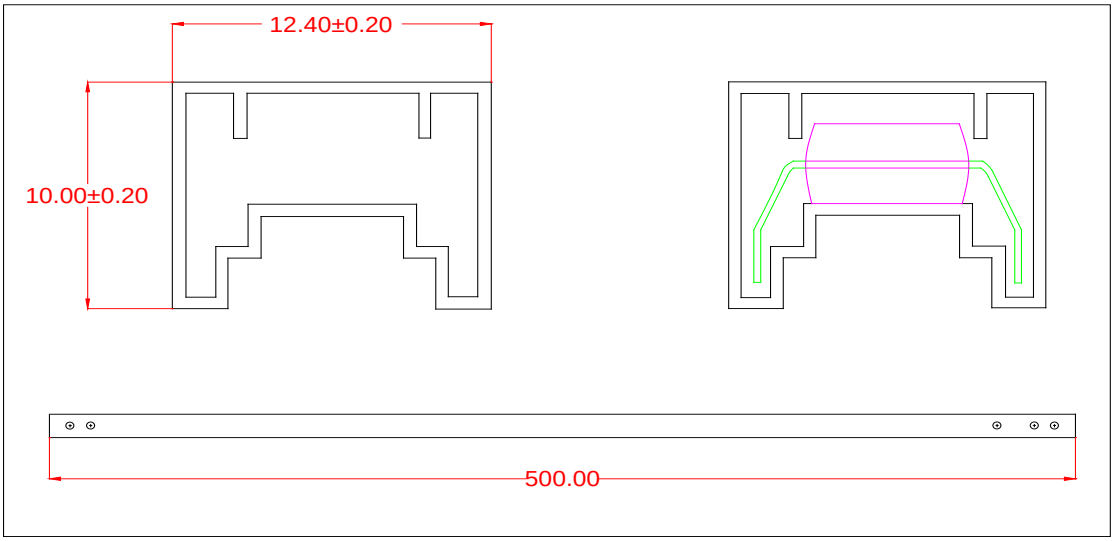


TUBE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

Standard DIP

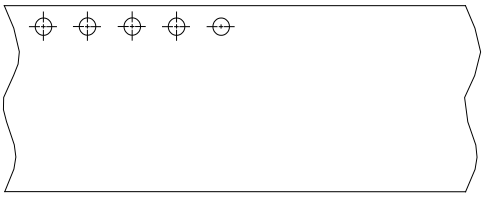


Option M



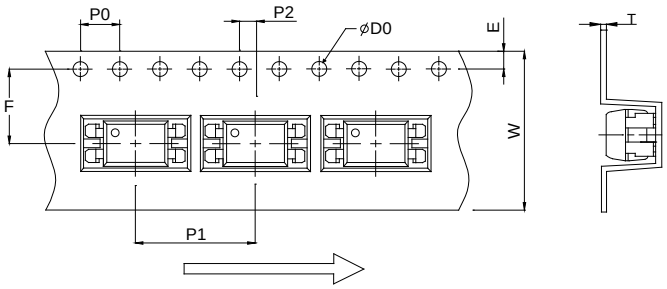
CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

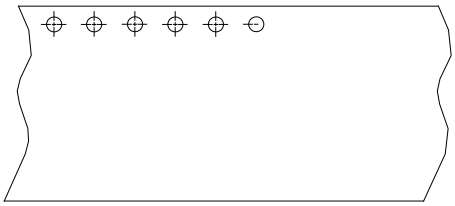
Option S(T1)



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50			0.059	
P0		4.00			0.157	
P1		8.00			0.315	
P2		2.00			0.079	
E		1.75			0.069	
F		7.50			0.295	
T		0.40			0.016	
W		16.00			0.630	

Option SL(T3)

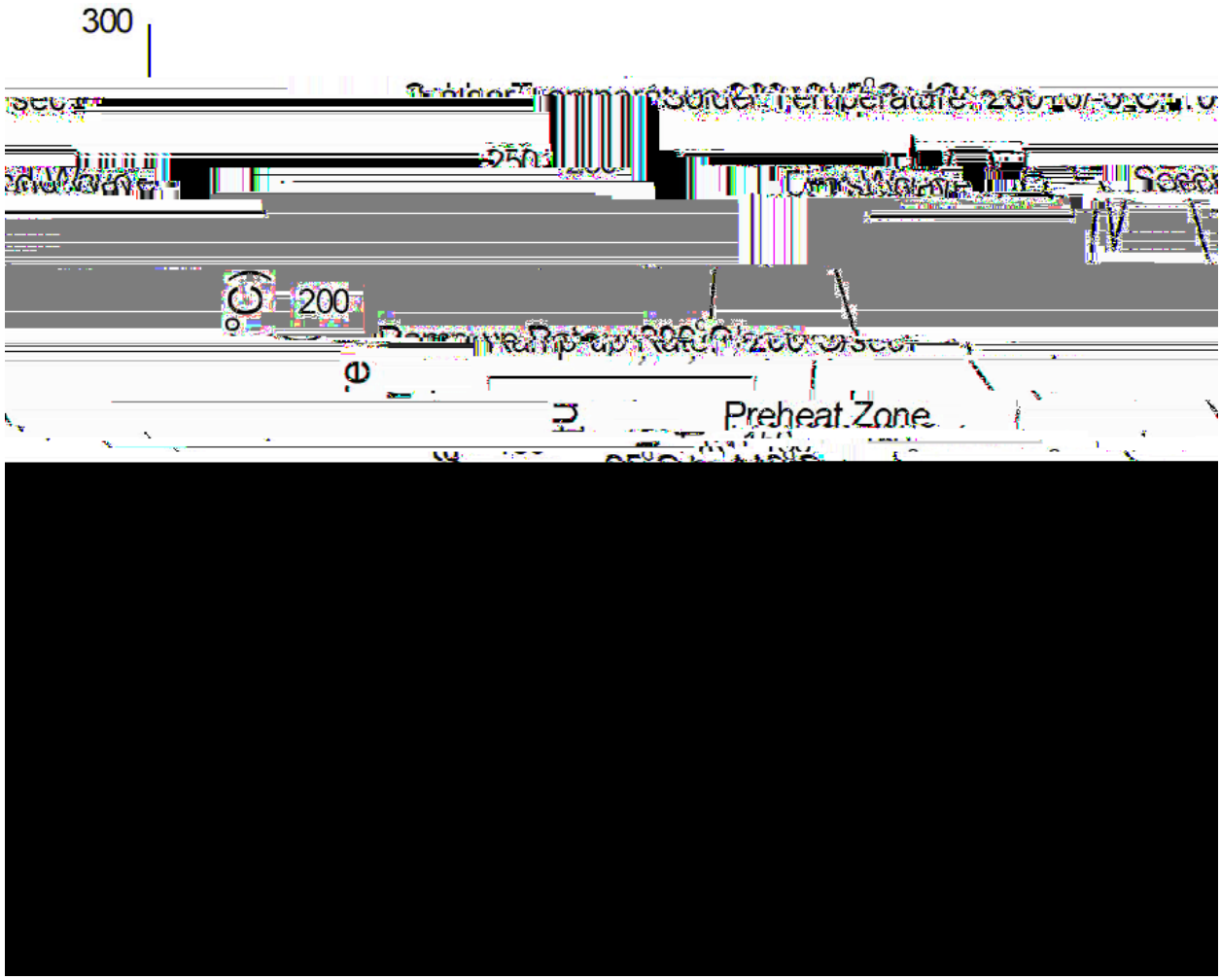




Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50			0.059	
P0		4.00			0.157	
P1		12.00			0.472	
P2		2.00			0.079	
E		1.75			0.069	
F		7.50			0.295	
T		0.40			0.016	
W		16.00			0.630	

REFLOW INFORMATI8w3aE6

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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i. (rf)3(4)3(7)-3 (om)]TJ Tw 0 1.8 94 Tw Td 0.0 1(4)Tj T 0.0 4 Tj -c 0.0 8 4 Tc 0.0 4 w Tw 0 T[(7)7 Te[(3)4 -1 2 e.