JOC302XD5 Series

Rev.A.1.1

DESCRIPTION:

The JOC302XD5 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 DIP5 package with different lead forming options. With the robust coplanar double mold structure, JOC302XD5 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 - Z U -

8 + ') . 8 U . 9 I U S V R O G T I K

HBM: H3A; MM: M4

CQC approved

l7 Tc -0.0023 <00520BDC /TT2 1 Tf -13.19 -1.5 2 Tc 05>]TJ 0 Tc 0 Tc 0>>BDC /TT2 1 Tf -136N8.

utpu238]TJ 0 Tc 0 Tw 5.39 0 Td ( )T2 EMC /P 84 T3.19 -1.I 0 T61 1 Tf 061 1 33805 T2931j E0.9.F02 T

	Junction Temperature	T_j	125	
	Output Power Dissipation	P_O	250	mW
	Power Dissipation Derating (T_a 1 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 8	

NOTE1AC for 1minute, R.H.=40~60%
NOTE2For 10 seconds

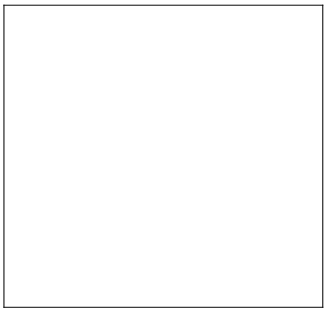
ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V_F	I_F=10mA	-	1.24	1.4	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}=400V, I_F=0	-	-	100 "	nA
	Peak On-state Voltage, Either Direction	V_{TM}	I_{TM}=100mA	-	1.8	2.5	V
	Critical Rate of Rise of Off-state voltage	dV/dt	V_{PEAK}=400V, I_F=0	1000 •	-	-	9 V
	LED Trigger Current	JOC3021D5					

Transfer Characteristics

ORDERING AND MARKING INFORMATION

MARKING INFORMATION



Characteristics Curves

FIG.1: Forward Current vs. Ambient Temperature

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

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

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

TEST CIRCUITS

FIG.12: Test Circuits of Turn On Time

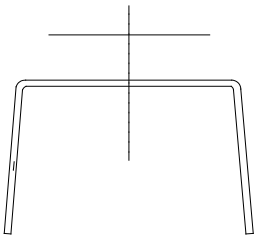
FIG.13: Waveforms of Turn On Time

Fig.14: Test Circuits of dV/dt

Fig.15: Waveforms of dV/dt

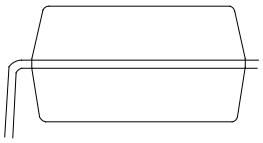
Package Dimension (Unit: mm Å

Standard DIP Type:

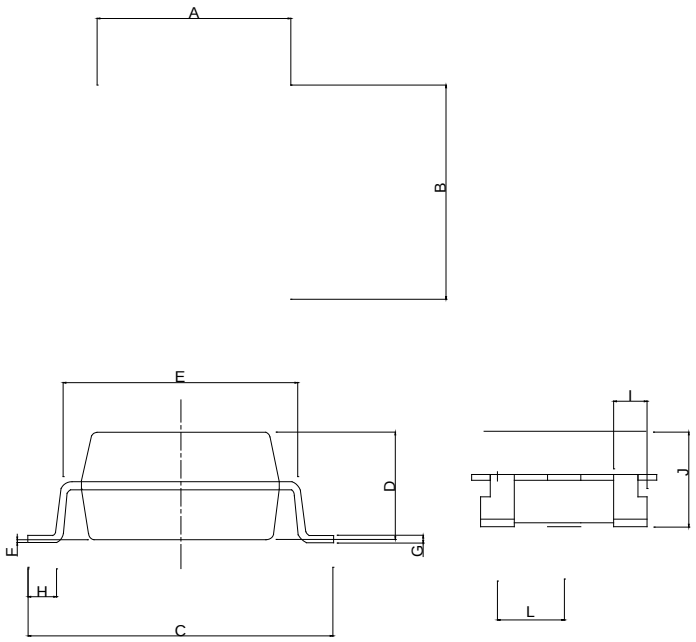


Option S Type:

:91 93.5417699 609.0826605 cm /CS0 CS731.724224S0 CS 35841m -185 809 l S Q q 0.0227635 0 0 -027491 172

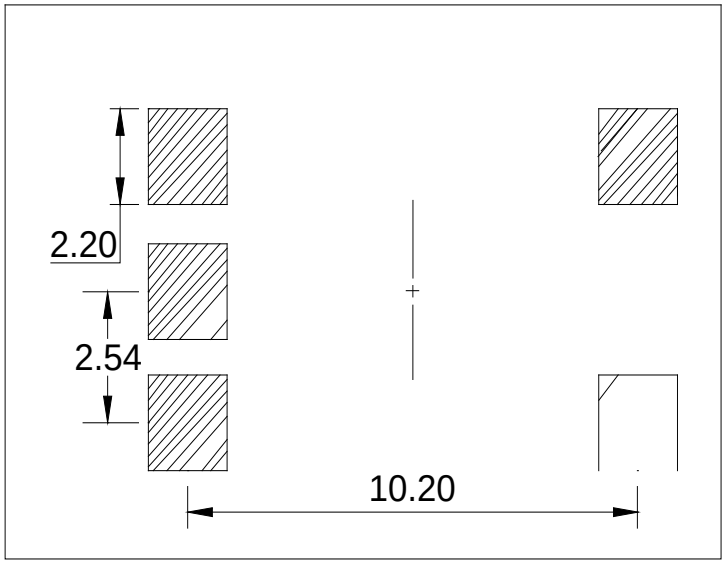


Option SLM Type:

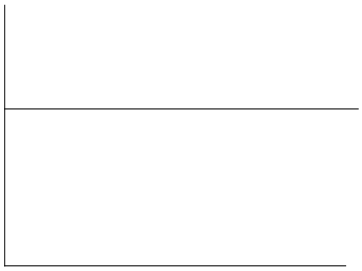


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	6.30		6.70	0.248		0.264
B	6.92		7.32	0.272		0.288
C	11.60		12.10	0.457		0.476
D	3.30		3.70	0.130		0.146
E	7.32		7.92	0.288		0.312
F			0.30			0.012
G						
H	0.50			0.020		
I	1.10		1.30	0.043		0.051
J	3.45		3.85	0.136		0.152
K						

Option SL



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 S&SLM package