

DESCRIPTION:

The JOC302XD5 series combine an AlGaAs 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

I7 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.

	Junction Temperature	T_j	125	
	Output Power Dissipation	P_o	250	mW
	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 (Sample 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

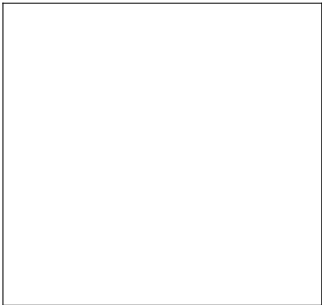
LED JOC3021D5

Trigger Current

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 I_F (

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

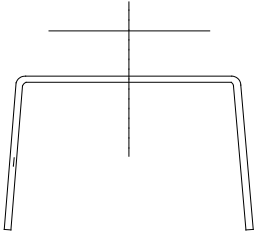
FIG.13: Waveforms of Turn On Time

Fig.14: Test Circuits of dV/dt

Fig.15: Waveforms of dV/dt

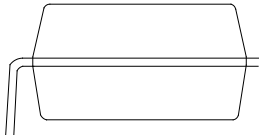
Package Dimension (Unit: mm)

Standard DIP Type:

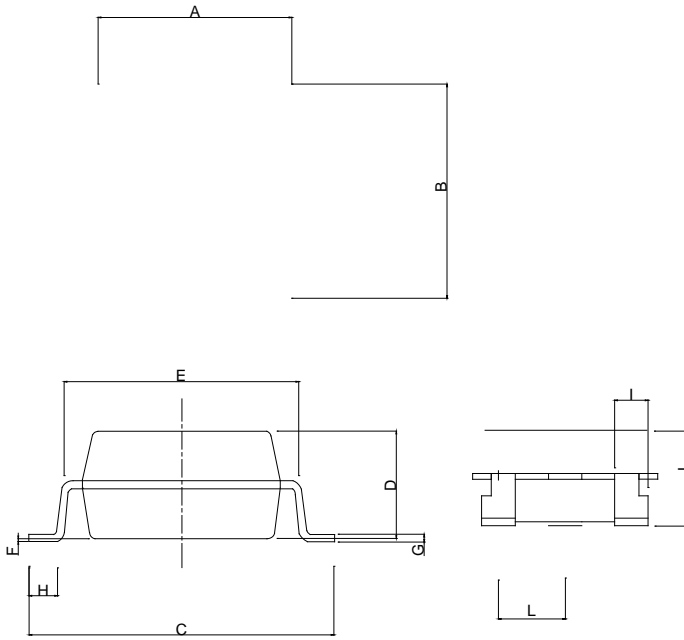


Option S Type:

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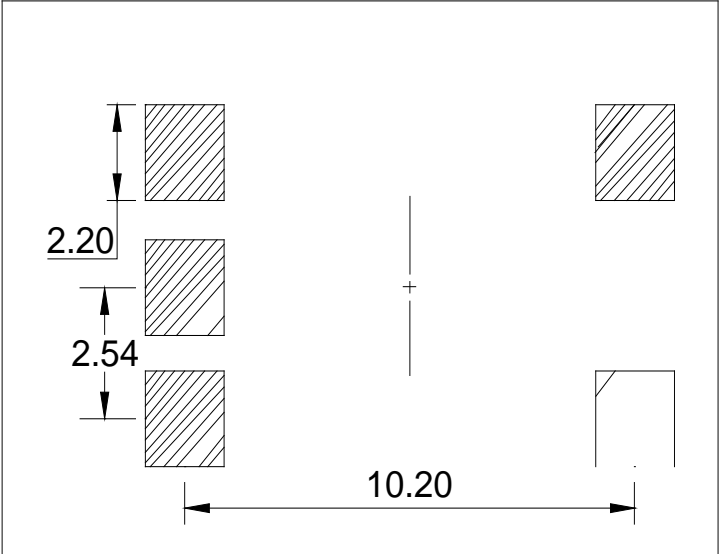


Option SLM Type:



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						

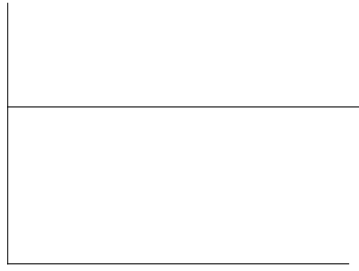
Option SL



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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

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