JOC306X Series

Rev.A.1.1

The JOC306X series combine an AIGaAs infrared emitting diode as the emitter which is optically coupled to a monolithic silicon zero-cross 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 265 V_{AC} peripherals.

High isolation 5000 VRMS
DC input with zero-cross photo triac output
Operating temperature range -55 ł wr 433 ł
UHDFK) UrKV frpsoldqfh
HBM: K6D› P P= P7
CQC approved
VDE approved
UL approved

(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/	-1.33	mW/
Output	Off-state Output Terminal Voltage	V_{OFF}	600	V
	Peak On−state Current (100µs pulse, 120 pps)	I_{TP}	2	A
	On-state RMS Current	$I_{T(RMS)}$	100 eak	mA

	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	

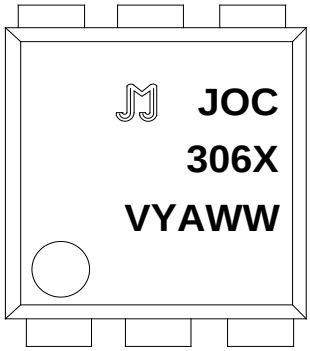
:AC for 1minute, R.H.=40~60%

:For 10 seconds

(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	μA
	Input Capacitance		C_{in}	V=0, f=1kHz	-	10	-	pF
Output	Peak Off-state Current, Either Direction		I_{OFF}	V_{OFF}=600V, 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}=600V, I_F=0	1000	-	-	V/μs
Transfer Characteristics	LED Trigger Current	JOC3061	I_{FT}	Terminal Voltage=3V I_{TM}=100mA	-	-	15	mA
		JOC3062			-	-	10	
		JOC3063			-	-	5	
	Holding Current		I_H	I_{TM}=2mA, I_F=Rated I_{FT}	-	250	-	μA
	Isolation Resistance		R_{ISO}	DC500V 40~60%R.H.	10^{12}	10^{14}	-	Ω
	Floating Capacitance		C_{IO}	V=0, f=1MHz	-	10	-	pF
	Response Time		t_{on}	V_D=6V, R_L=100Ω, I_F=20mA	-	15	50	μs
Zero-crossing Characteristics	Inhibit Voltage		V_{IH}	I_F=Rated I_{FT}	-	-	20	V
	Leakage in Inhibited							

Stad DFFd 0 Td (2)Tj 10.56 0 0 10.56 293.76 108.12 Tm ( )Tj EMC /P <</MCID 164 >>BD



JOC : Company Abbr.
306X : Part Number & Rank
V : VDE Option
Y : Fiscal Year
A : Manufacturing Code
WW : Work Week

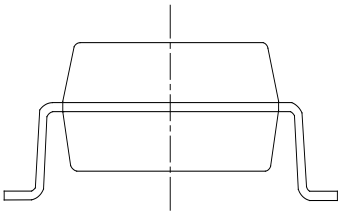
FIG.12: Test Circuits of Turn On Time

FIG.13: Waveforms of Turn On Time

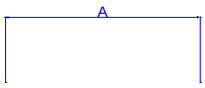
Fig.14: Test Circuits of dV/dt

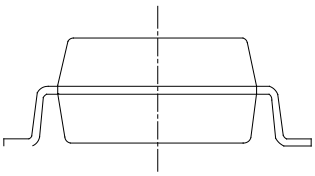
Fig.15: Waveforms of dV/dt

Option S Type:

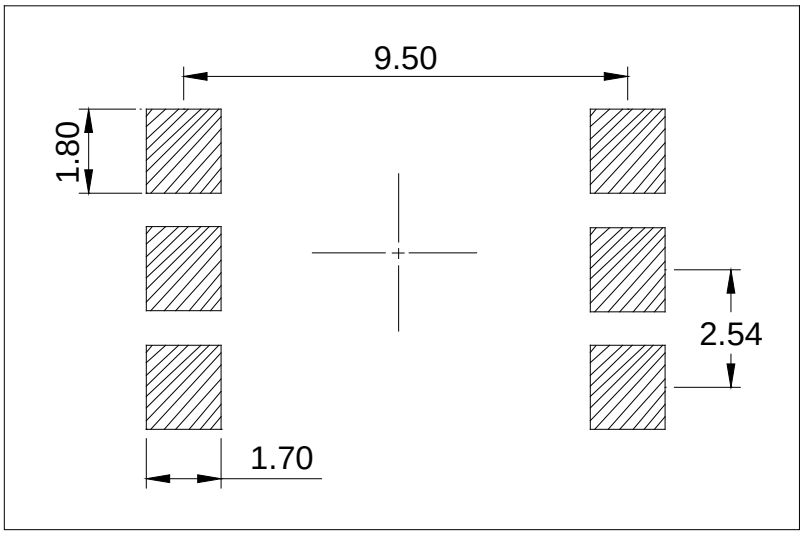


Option SLM Type: DimensionsMillimetersInchesRef.Min.Typ.Max.Min.Typ.Max.

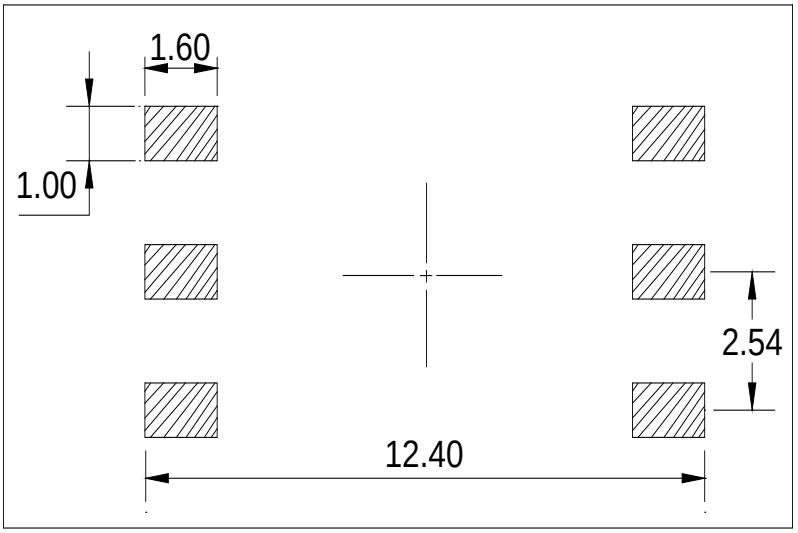




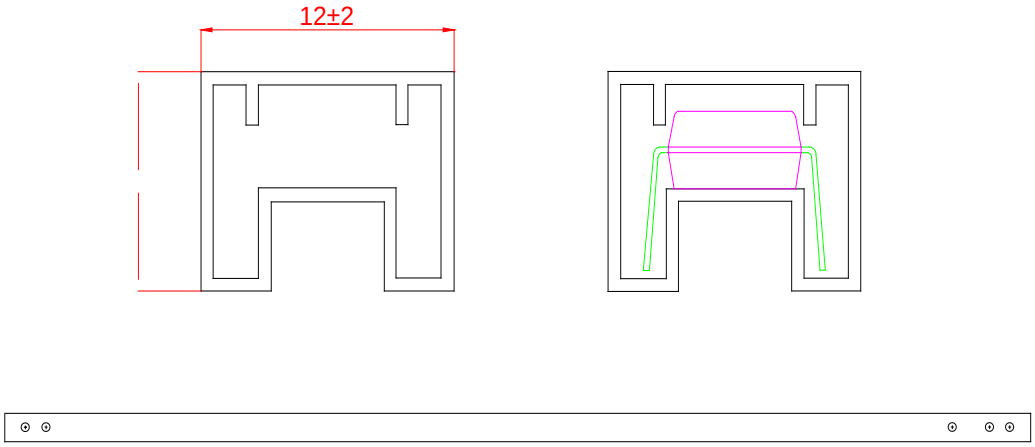
Option SL

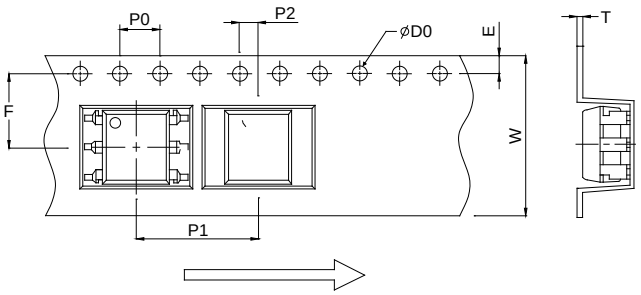


Option SLM



Standard DIP




P0
P2
ØD0
E
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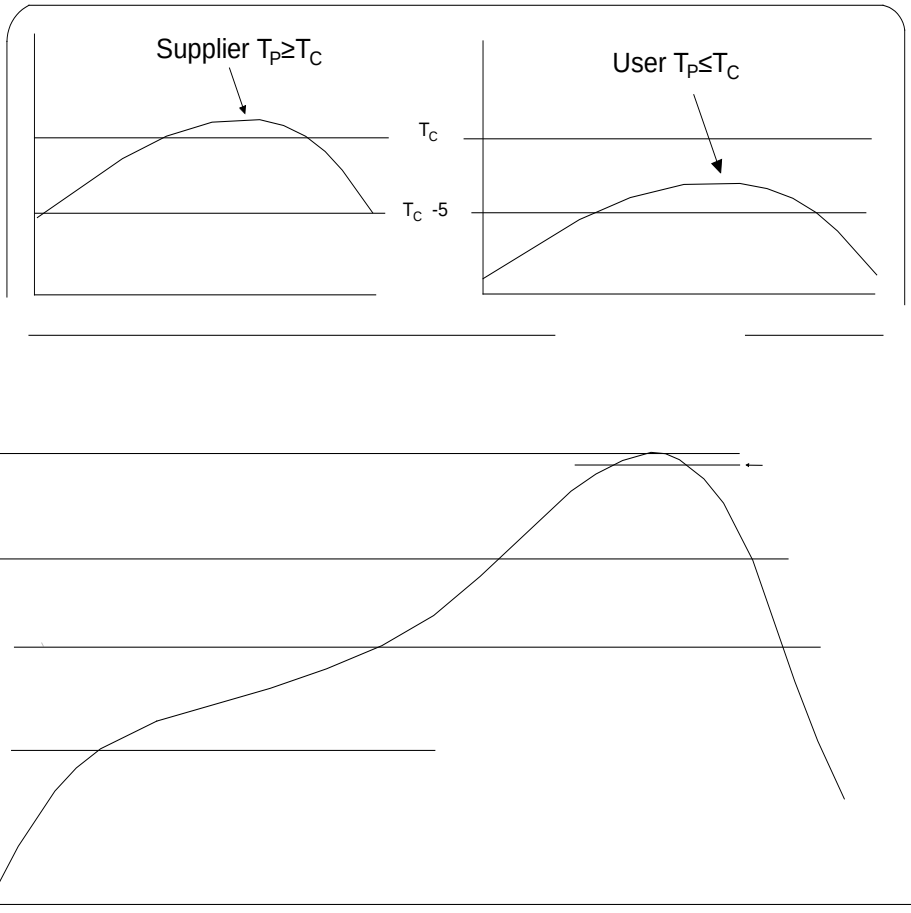
W
P1


Supplier $T_P \geq T_C$
User $T_P \leq T_C$
T_C
T_C -5

Soldering Temperature	360± 5

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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