



JOCSZ21X-M4,JOCSZ31X-M4 Series

Rev.A.1.0

DESCRIPTION:

The products are 4-pin thyristor opto-couplers. The device combines an AlGaAs infrared emitting diode as the emitter which is optically coupled to a monolithic silicon zero-crossing photo triac in a plastic SOP4 package. 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.

MAIN FEATURES

High isolation 3750 VRMS

DC input with zero-crossing photo triac output

Operating temperature range -55 to 110

REACH & RoHS compliance

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Operating Temperature	T _{opr}	-55~110	
Junction Temperature	T _j	125	
Storage Temperature	T _{stg}	-55~125	
Soldering Temperature	T _{sol}	260	
Peak pulse voltage (T _j =25 ; non-repetitive,off-state)	V _{pp}	1	kV

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NOTE2: ! / Ƨ2W mYλydzúŜΣ wφ I φΓπλϥcđz

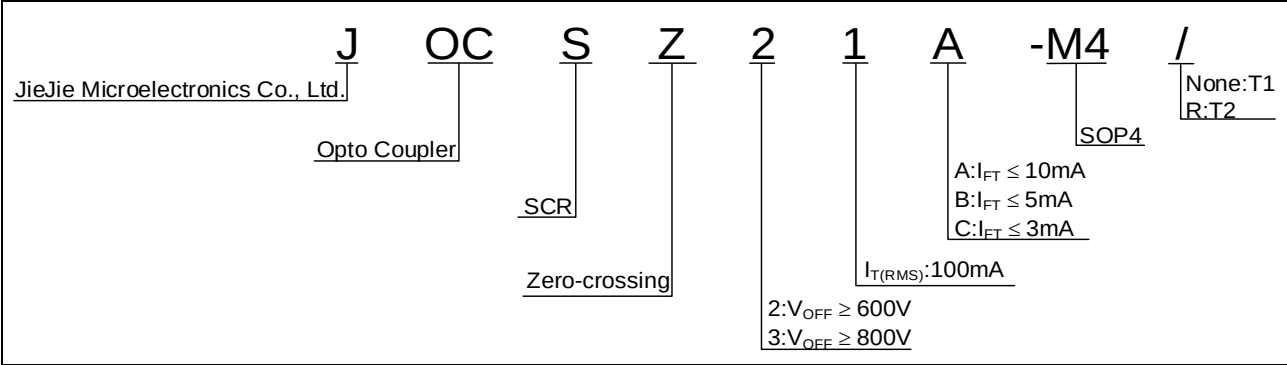
ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Parameter			Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage		V _F	I _F =10mA	-	1.2	1.5	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} =Rated V _{OFF} 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} = Rated V _{PEAK} I _F =0	2000	-	-	V/μs
Transfer Characteristics	LED Trigger Current	JOCSZ21A JOCSZ31A	I _{FT}	Terminal Voltage=3V I _{TM} =100mA	-	-	10	mA
		JOCSZ21B JOCSZ31B			-	-	5	
		JOCSZ21C JOCSZ31C			-	-	3	
	Holding Current		I _H	I _{TM} =2mA, I _F =Rated I _{FT}	-	500	-	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
Leakage in Inhibited State		I _{OFF2}	I _F =Rated I _{FT} V _{OFF} =Rated V _{OFF}	-	-	5	mA	

NOTE3: cŠăú ōzŭl-ēš Ydzăú ōš l-lJlfjŠř øłúKlyŘ±kRŭ Nl-úlvyăð

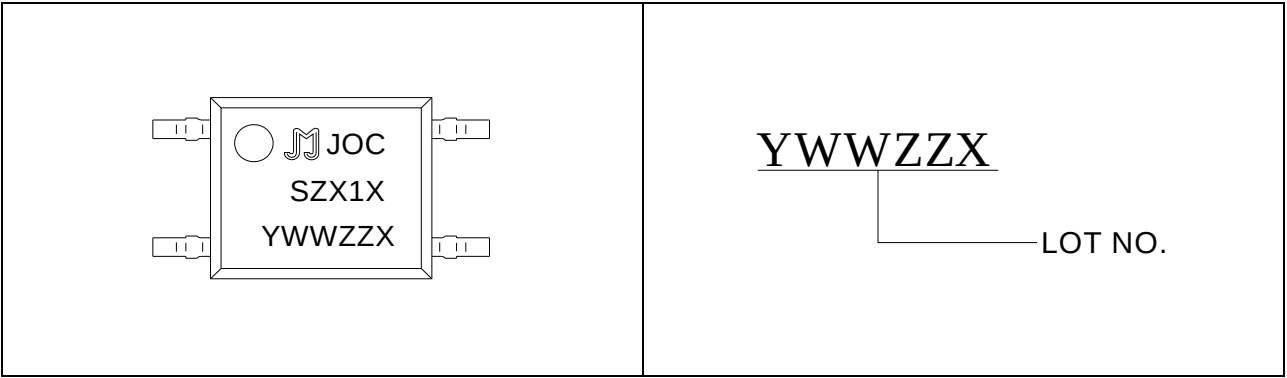
NOTE4: $w\hat{S}^\dagger\hat{S}w \geq C\lambda\Theta\mu\eta$ & $C\lambda\Theta\mu\rho$

ORDERING INFORMATION



Packing Quantity	
Option	Quantity
b2yŠkw	оллл ; yłúăkwŠŝf

MARKING



Characteristics Curves

FIG.1: Max. Allowable LED Forward Current vs. Ambient Temperature

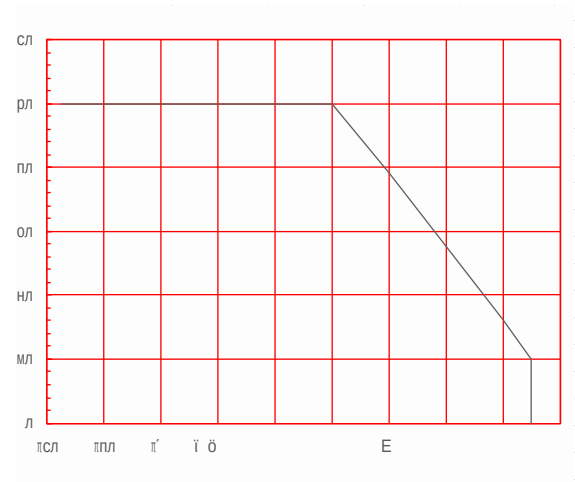


FIG.2: On-state Terminal Current vs. Ambient Temperature



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

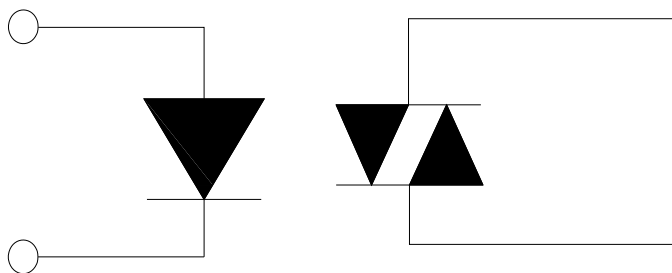
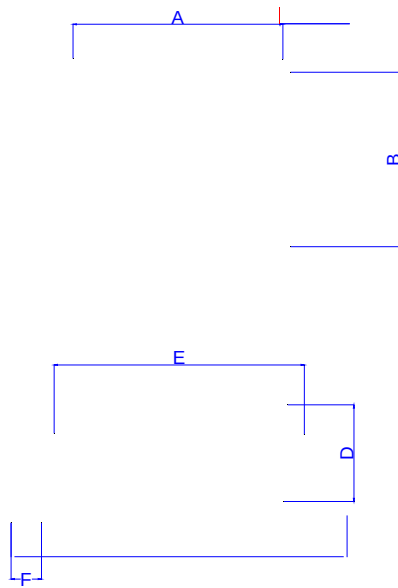


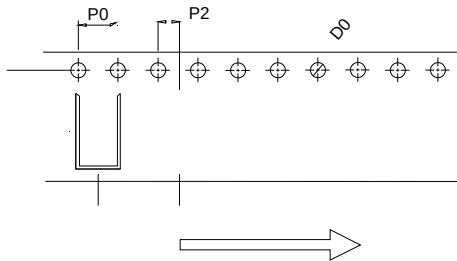
FIG.16: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



Package Dimension (Unit: mm)



Option None



W

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T

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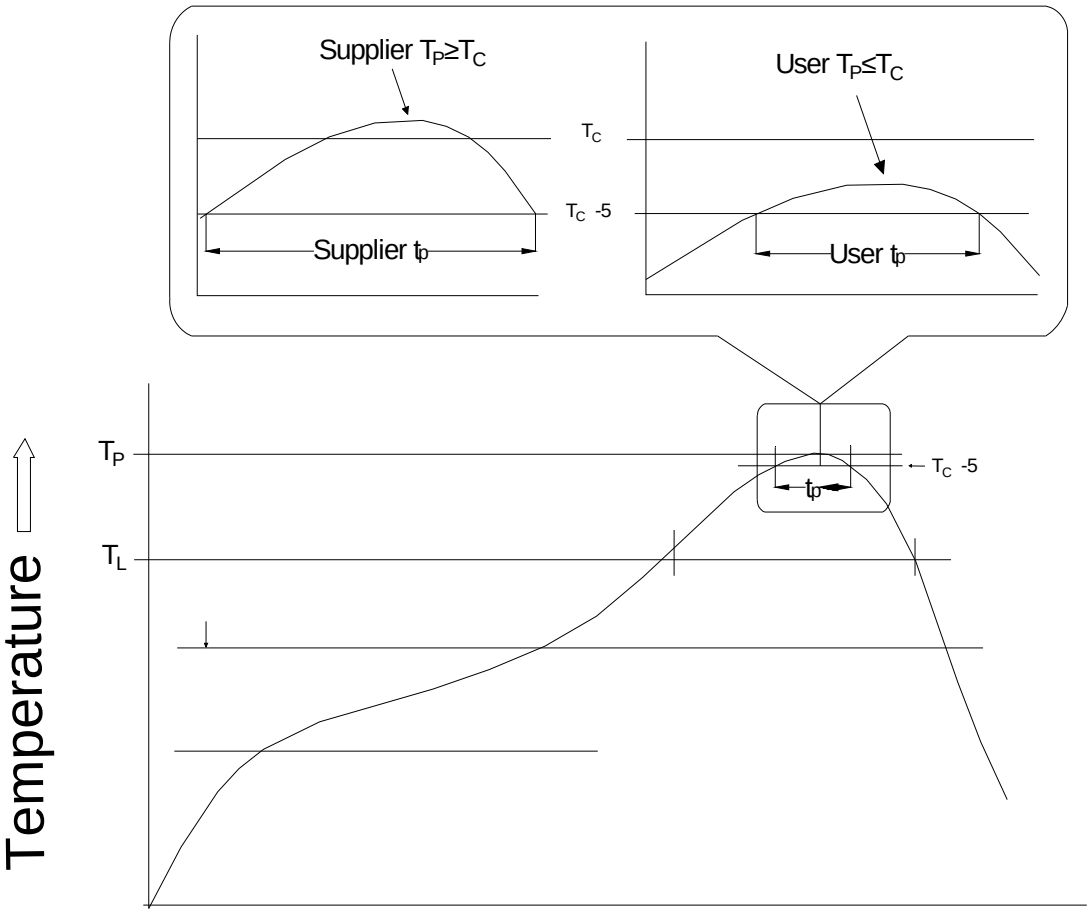
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T

V

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.				

REFLOW INFORMATION



Note: