JOCMAXXC-M4 Series

Rev.A.1.0

DESCRIPTION:

The products are 4-pin optical relays. The device consists of an AlGaAs infrared emitting diode input stage optically coupled to a high-voltage output detector circuit in a plastic SOP4 package. The detector consists of a high-speed photovoltaic diode array and driver circuitry. The products are widely used in measuring and testing equipment, security and disaster prevention market, industrial machinery and equipment.

MAIN FEATURES

High isolation 3750 Vrms

Wide variation of load voltage 60V to 600V

Operating temperature range -40°C to 110°C

REACH & RoHS compliance

HBM: H3A; MM: M4; CDM: C3

CQC approved

VDE approved

UL approved

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

	Parameter	Symbol	Value	Unit
Input	Forward Current	I_F	5	

Total Power Dissipation	P_{tot}	375	mW
Isolation Voltage	V_{iso}	3750	Vrms
Operating Temperature	T_{opr}	-40~110	℃
Junction Temperature	T_j	125	℃
Storage Temperature	T_{stg}	-55~125	℃
Soldering Temperature	T_{sol}	260	℃

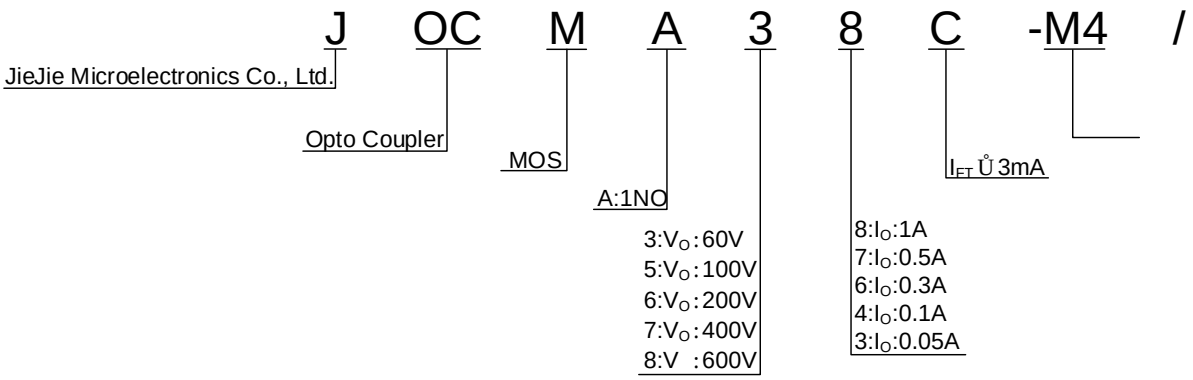
NOTE1:

NOTE2:

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Parameter			Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage		V_F	I_F=10mA	-	1.2	1.5	V
	Reverse Current		I_R	V_R=6V	-	-	1	μA
	Action Current		$I_{F(ON)}$	I_L=$I_{L(MAX)}$	-	0.9	3	mA
	Reset Current		$I_{F(OFF)}$	I_L=$I_{L(MAX)}$	0.4	0.8	-	mA
Output	On Resistance	JOCMA38C	R_{on}	I_F=5mA I_L=Max. Within 1s on time	-	-	0.3	Ω
		JOCMA57C			-	-	0.4	
		JOCMA66C			-	-	2.5	
		JOCMA74C			-	-	25	
		JOCMA83C			-	-	35	
	Off State Leakage Current		I_{Leak}	I_F=0mA, V_L=Max.	-	-	1	μA
	Output Capacitance		C_O	V_{OFF}=0V, f_o=1MHz	-		-	pF
	Isolation Resistance		R_{ISO}	DC500V 40~60%R.H.	10^{12}	-	-	Ω
	Floating Capacitance		C_{IO}	V=0, f=1MHz	-	-	1.5	pF
Switching Characteristics	Turn On Time	JOCMA38C	t_{on}	I_F=5mA, I_L=Max.				

ORDERING INFORMATION



Characteristics Curves

FIG.1: LED Dropout Voltage vs. Ambient Temperature

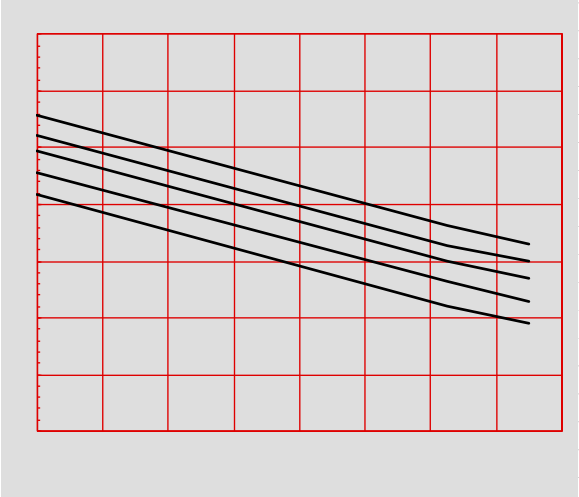


FIG.2: Output Current vs. Output Voltage

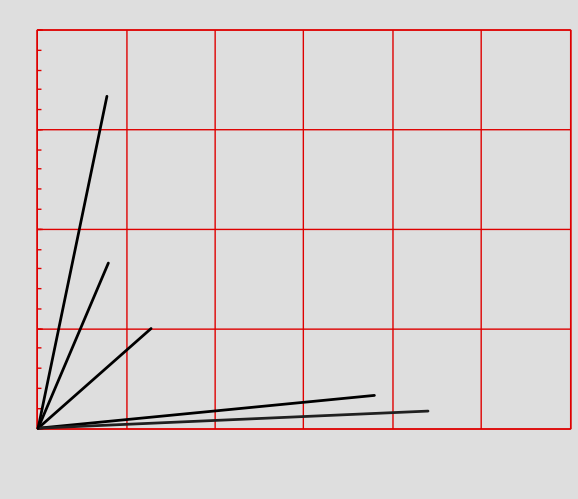


FIG.3: On Resistance vs. Ambient Temperature

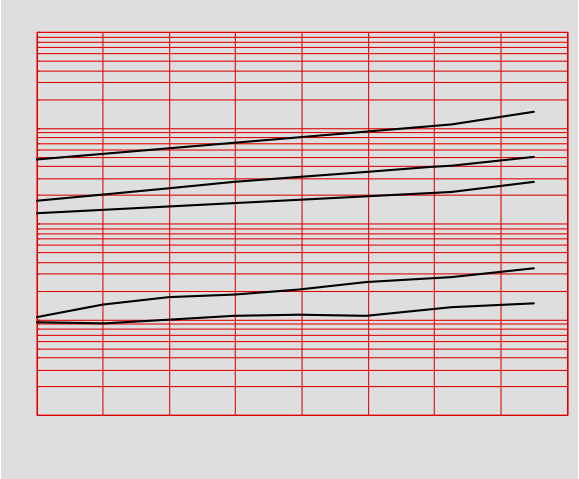


FIG.4: Load Current vs. Ambient Temperature

FIG.7: Turn On Time vs. Ambient Temperature

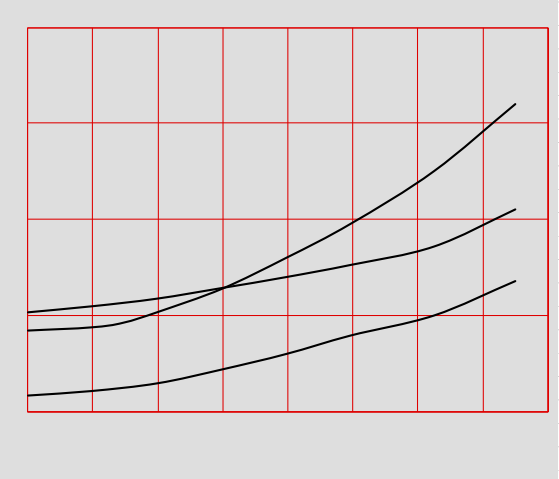


FIG.8: Turn Off Time vs. Ambient Temperature

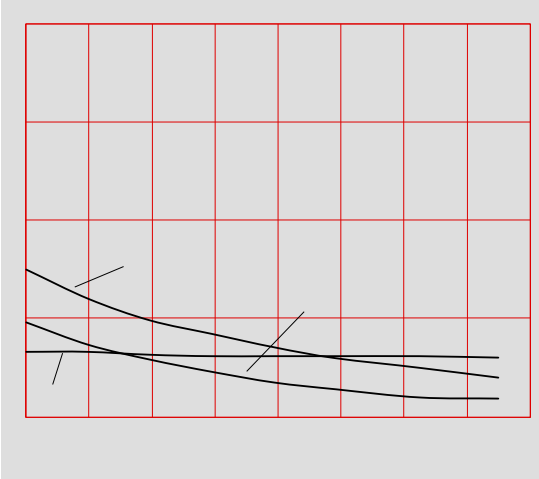


FIG.9: Turn On Time vs. LED Forward Current

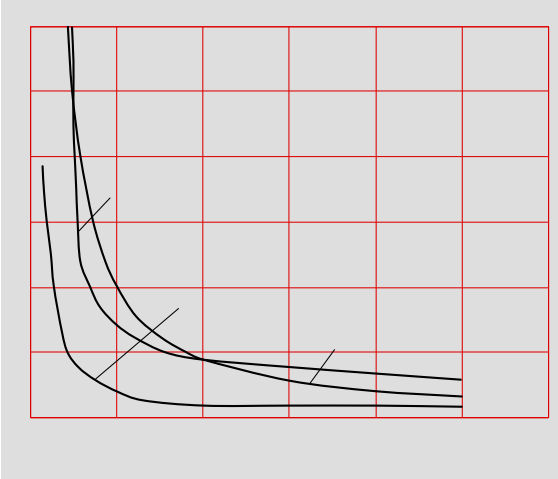


FIG.10: Turn Off Time vs. LED Forward Current

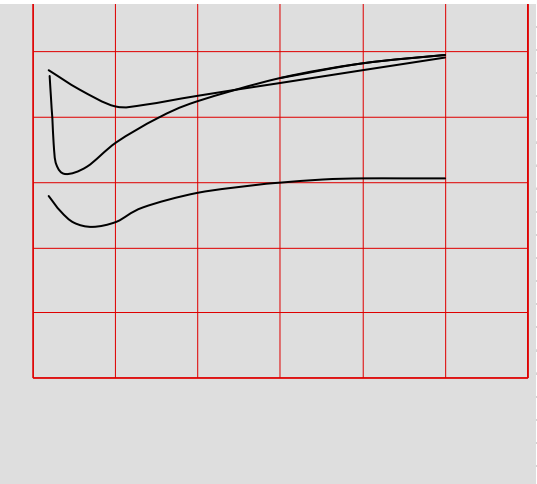
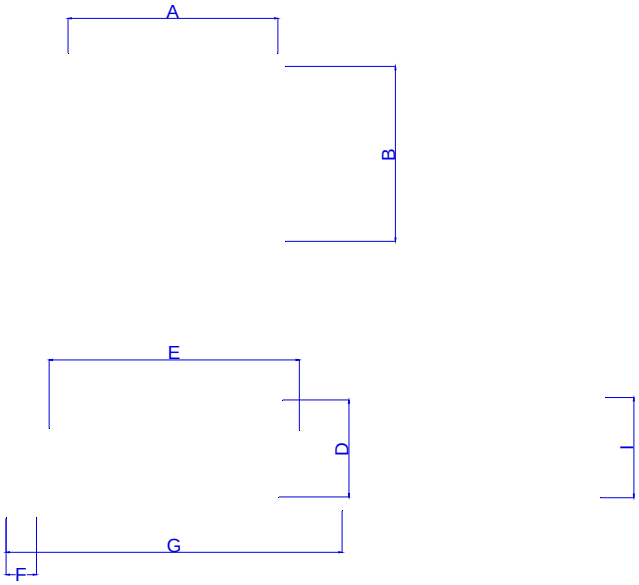


FIG.11: Off State Leakage Current vs. Load Voltage

Fig.12: Turn on/Turn off time

Package Dimension (Unit: mm)



JOCMAXXC

Note:

1. Reflow soldering is recommended at the temperatures and times shown, no more than three times.

2. Avoid direct contact between the epoxy body and any tools or surfaces exceeding its maximum storage temperature.

3. Application of pressure on the epoxy body is prohibited at elevated temperatures. In specific scenarios, any applied force must not exceed 2.5N.

4. Ensure the component has cooled to ambient temperature before proceeding with any subsequent manufacturing steps.

5. The component has a shelf life of one year when stored under standard conditions.

6. Recommend storage Temp.: 0~40°C;

Recommend storage humidity: <60%;

MSL level: MSL 1