



DESCRIPTION:

The products are 6-pin solid-state relay opto-couplers. The device combines an AlGaAs infrared emitting diode as the emitter which is optically coupled to a monolithic silicon random-phase photo triac to drive a power 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 to 265 V_{AC} peripherals.

MAIN FEATURES

High isolation 5000 V_{rms}

DC input with triac output

Operating temperature range - 40°C to 110 °C

REACH & RoHS compliance

HBM: H3B; MM: M4; CDM: C3

CQC approved

VDE approved

UL approved

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

Input	Forward Current	I _F	50	mA
	Peak Forward Current	I _{FP}	1	A
	Reverse Voltage	V _R	6	V
	Power Dissipation	P _D	75	mW
Output	Repetitive peak off-state voltage	V _{DRM}	600	V
	Repetitive peak off-state voltage	V _{RRM}	600	V
	Critical rate of rise of on-state current	di/dt	100	A/μs
	On-state RMS Current (T _a 43 °C)	I _{T(RMS)}	0.6	A
	Non repetitive surge peak on-state current (full cycle , t _p =20ms)	I _{TSM}	6	A
	junction to case (AC)	R _{th(j-c)}	65	/W



Isolation Voltage	V_{iso}	5000	Vrms
Operating Temperature	T_{opr}	-40~110	
Junction Temperature	T_j	125	
Storage Temperature	T_{stg}	-40~125	
Soldering Temperature	T_{sol}	260	
Peak pulse voltage ($T_j=25$; non-repetitive,off-state)	V_{pp}	3	kV

NOTE1:

NOTE2:

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Input	Forward Voltage	V_F	$I_F=10mA$	-	1.2	1.5	V
	Reverse Current	I_R	$V_R=6V$	-	-	1	μA

Peak Off-state
Current, Either
Direction

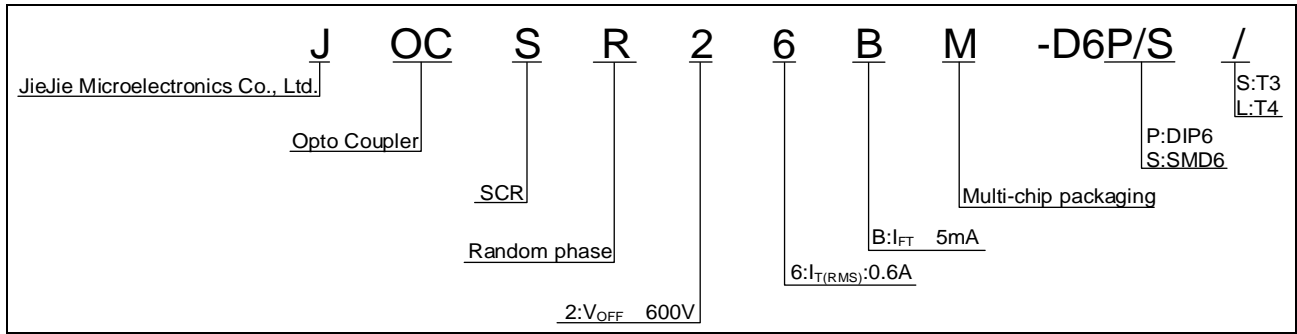
I_{DRM1}
Direction

=

Output

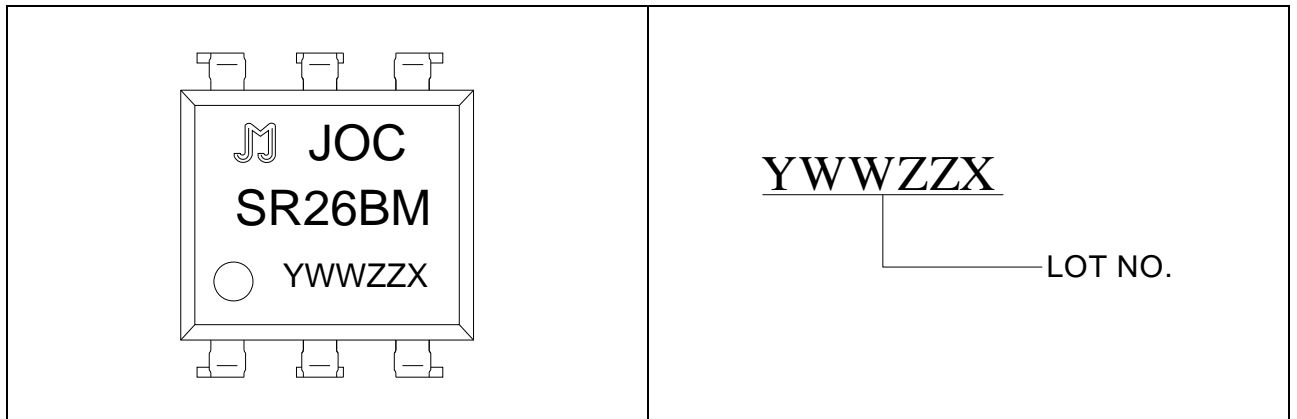


ORDERING INFORMATION



Packing Quantity	
Option	Quantity

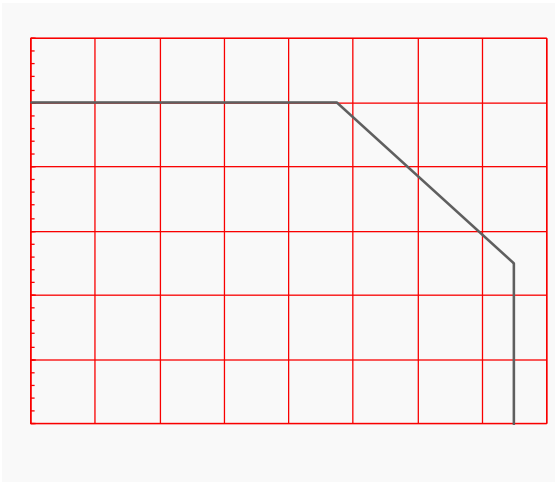
MARKING





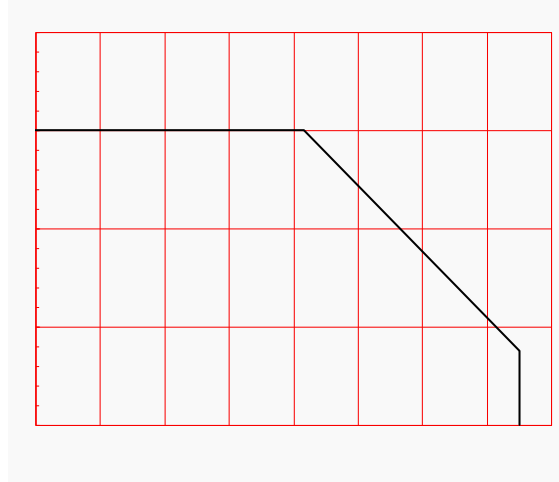
Characteristics Curves

Max. Allowable LED Forward Current vs. Ambient Temperature

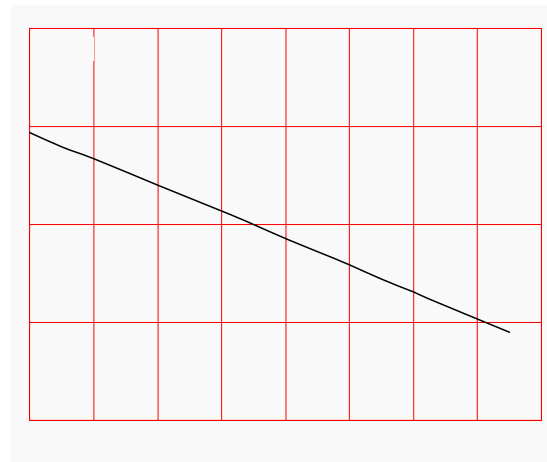
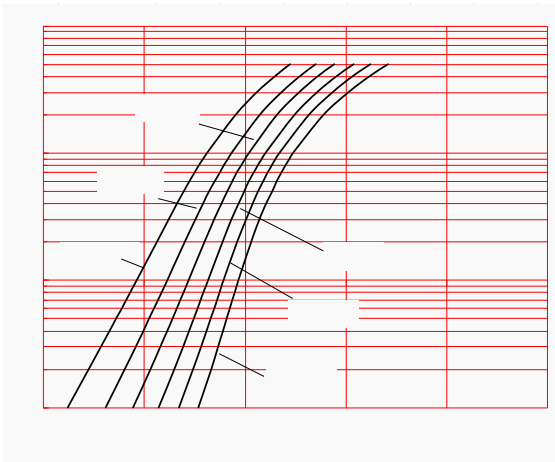


Forward Current vs. Forward Voltage

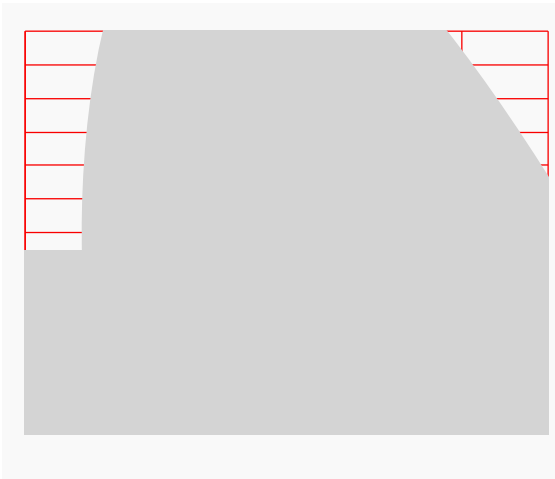
On-state Terminal Current vs. Ambient Temperature



Forward Voltage vs. Ambient Temperature



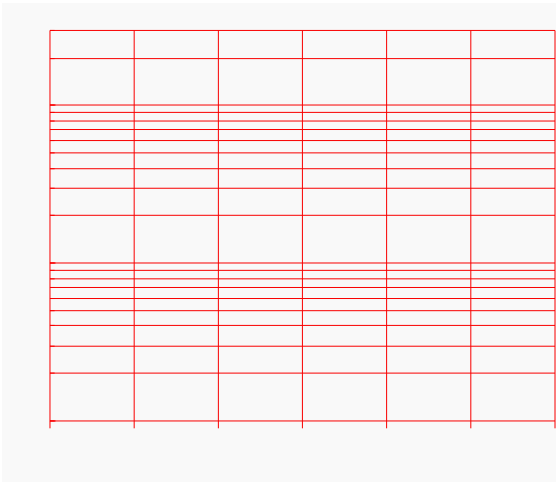
Off-state Terminal Current vs Off-state Terminal Voltage





On-state characteristics

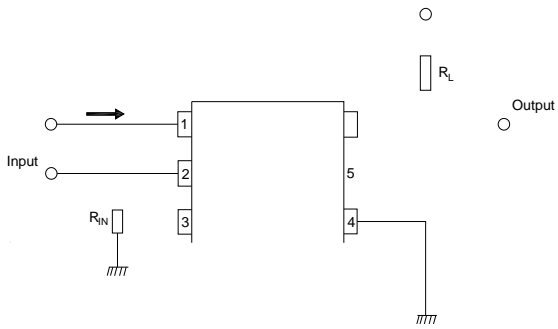
Normalized Holding Current vs.
Ambient Temperature





TEST CIRCUITS

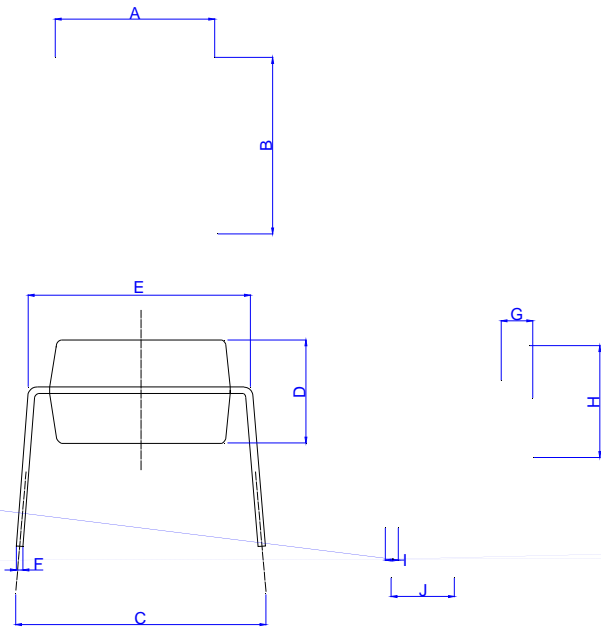
Test Circuits of Turn On Time



Waveforms of Turn On Time

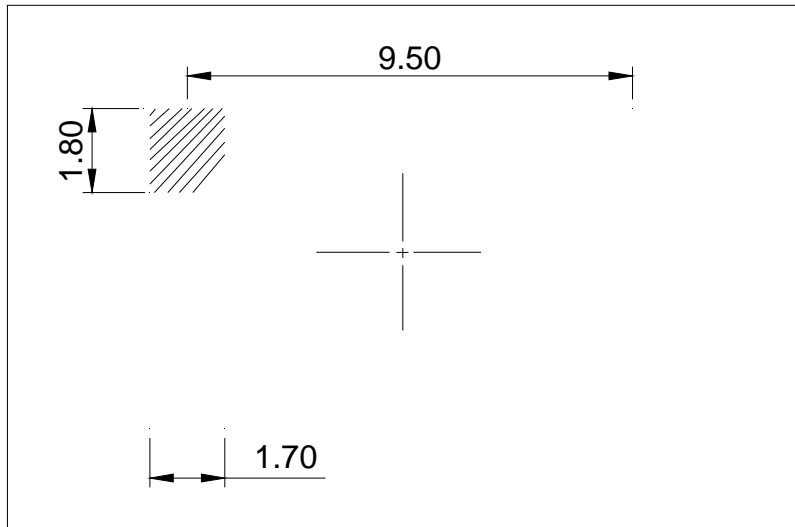


Package Dimension (Unit: mm)



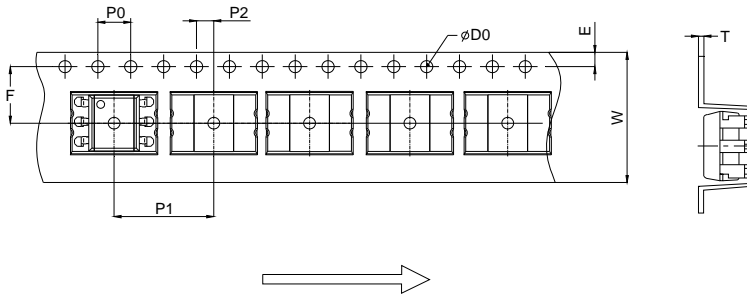


RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)





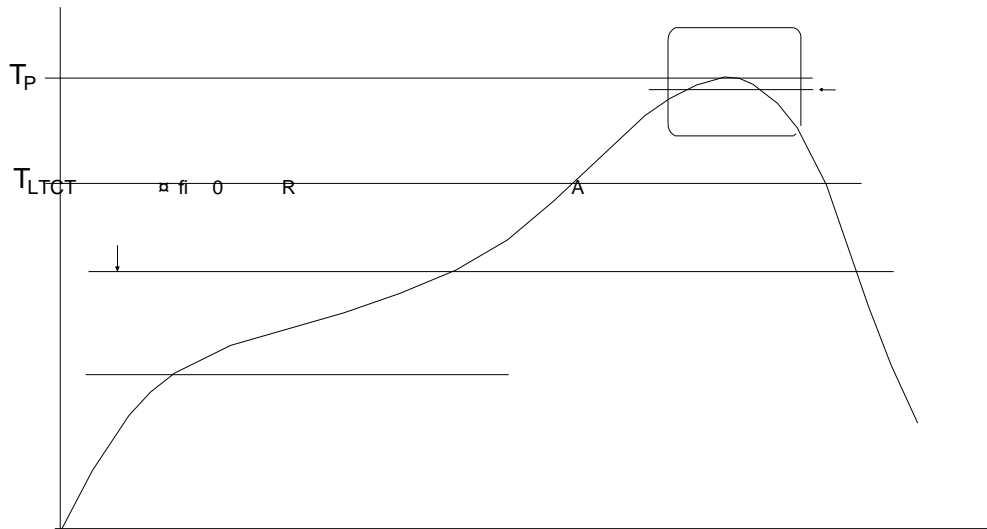
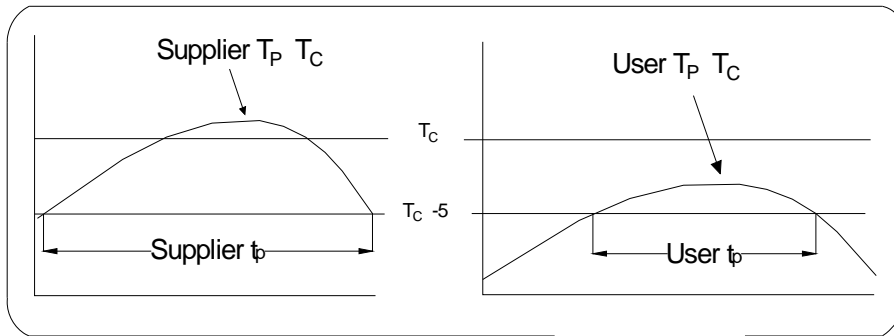
CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50	1.60	0.059	0.063	
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	11.90	12.00	12.10	0.469	0.472	0.476
P2	1.90	2.00	2.10	0.075	0.079	0.083
E	1.65	1.75	1.85	0.065	0.069	0.073
F	7.40	7.50	7.60	0.291	0.295	0.299
T	0.35	0.40	0.45	0.014	0.016	0.018
W	15.70	16.00	16.30	0.618	0.630	0.642



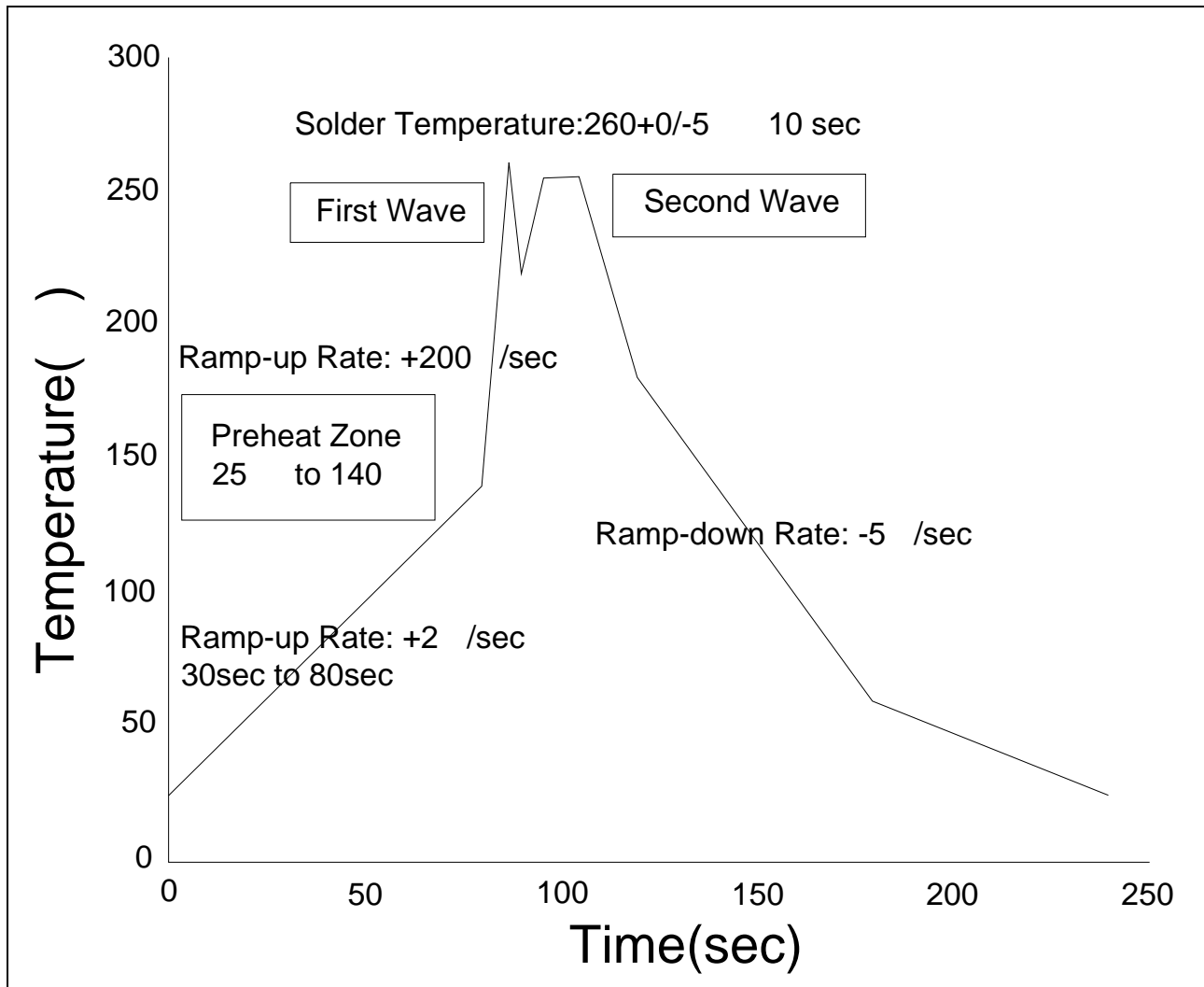
REFLOW INFORMATION



A



WAVE SOLDERING



HAND SOLDERING BY SOLDERING IRON

Soldering Temperature	360± 5
Soldering Time	3s max.




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

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