



The products are gate driver opto-couplers in the SOP5 package. The device consists of an infrared LED optically coupled to an integrated high-gain, high-speed photodetector IC chip. It provides guaranteed performance and specifications at temperature up to 110 °C. It is physically smaller and compliant with international safety standards for reinforced insulation. It thus provides a smaller footprint solution for applications that require safety standard certification. An internal noise shield provides a guaranteed common-mode transient immunity of ± 20 kV/ μ s. It is ideal for small class IGBT and power MOSFET gate drive. The products are widely used in industrial inverters, IGBT gate drivers, MOSFET gate drivers, induction cooktop and home appliances.

High isolation 3750 VRMS

Buffer logic type

Operating temperature range -40°C to 110°C

REACH & RoHS compliance

HBM: H3A; MM: M4; CDM: C3

CQC approved

VDE approved

UL approved



Input	LED	Output
H	ON	H
L	OFF	L

(Temperature=25°C)

LED	Forward Current	I_F	50	mA
	Peak Forward Current	I_{FP}	1	A
	Reverse Voltage	V_R	6	V
	Power Dissipation	P_D	100	mW



Detector	Output Voltage	V_o	30	V
	Supply Voltage	V_{cc}	30	V
	Power Dissipation	P_c	400	mW
Isolation Voltage		V_{iso}	3750	Vrms
Operating Temperature		T_{opr}	-40~110	
Junction Temperature		T_j	125	
Storage Temperature		T_{stg}	-55~125	
Total Power Dissipation		P_{tot}	500	mW
Soldering Temperature		T_{sol}	260	

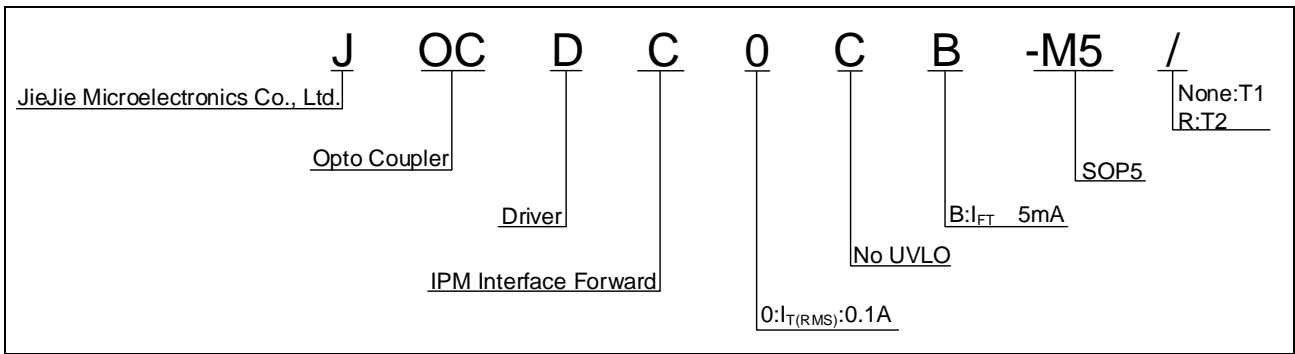
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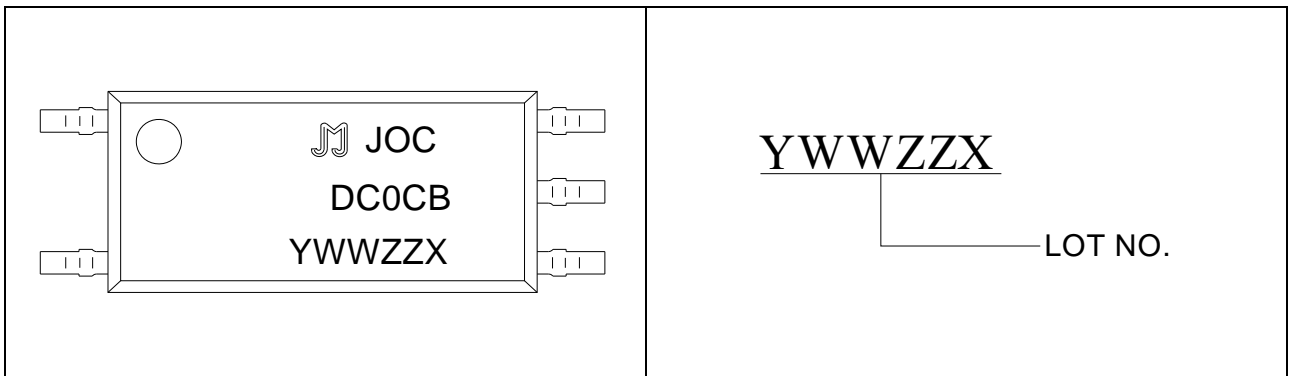
(Temperature=25°C)

Input	Forward Voltage	V_F	$I_F=10mA$	-	1.35	1.6	V
	Reverse Current	I_R	$V_R=6V$	-	-	1	μA
	Terminal Capacitance	C_t	$V=0, f=1MHz$	-	60	-	pF
Output	Peak High-level Output Current	I_{OPH}	$I_F=3mA,$ $V_{CC}=5.5V,$ $V_O=GND$	-	-350	-150	mA
			$I_F=3mA,$ $V_{CC}=20V,$ $V_O=GND$	-	-350	-160	mA
	Peak Low-level Output Current	I_{OPL}	$V_{CC}=V_O=5.5V$	150	270	-	mA
			$V_{CC}=V_O=20V$	160	300	-	mA
	High Level Supply Current	I_{CCH}	$I_F=3mA,$ $V_{CC}=5.5V$	-	2.1	3	mA
			$I_F=3mA,$ $V_{CC}=30V$	-	2.35	3	mA
	Low Level Supply Current	I_{CCL}	$V_{CC}=5.5V$	-	2.1	3	mA
			$V_{CC}=30V$	-	2.35	3	mA
	High Level Output Voltage	V_{OH}	$I_F=3mA,$ $I_O=-3.5mA$	$V_{CC}-0.2$	$V_{CC}-0.03$	-	V
$I_F=3mA,$ $I_O=-6.5mA$			$V_{CC}-0.4$	$V_{CC}-0.05$	-	V	
Low Level Output Voltage	V_{OL}	$V_F=0.8V,$ $I_O=3.5mA$	-	0.026	0.2	V	



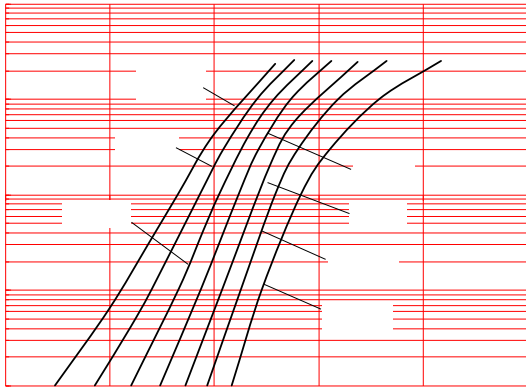
Input On-state Current	$I_{F(ON)}$	7	-	15	mA
Input Off-state Voltage	$V_{F(OFF)}$	0	-	0.8	V
Supply Voltage	V_{CC}	4.5	-	30	V
Operating Frequency	f	-	-	25	kHz



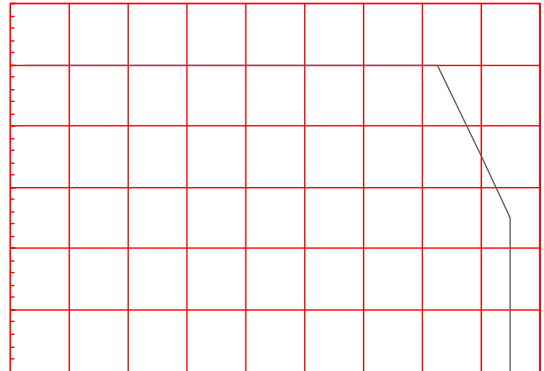




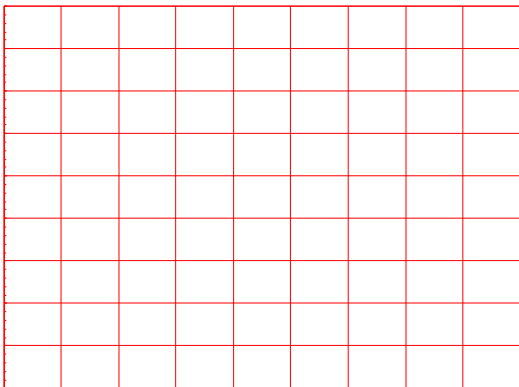
Forward Current vs. Forward Voltage



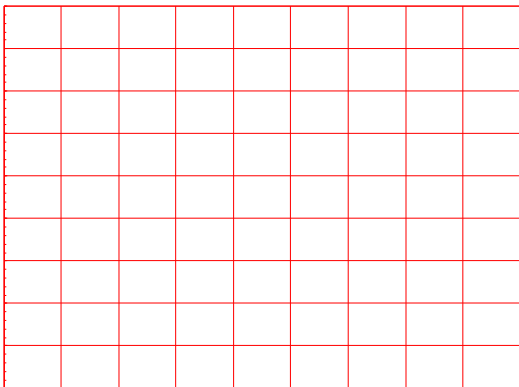
Max. Allowable LED Forward Current vs. Ambient Temperature



Collector Power Dissipation vs. Ambient Temperature

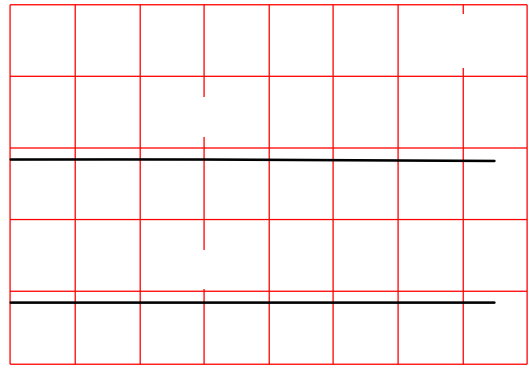


Threshold Input Current vs. Ambient Temperature

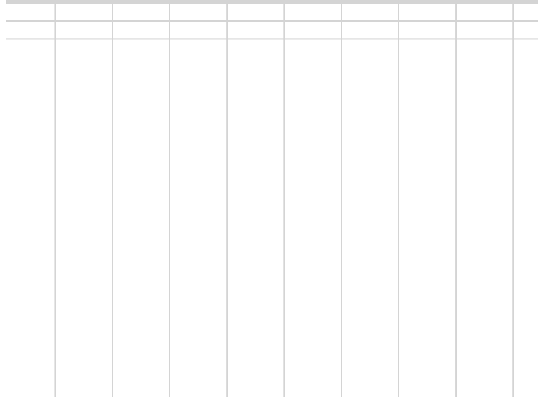


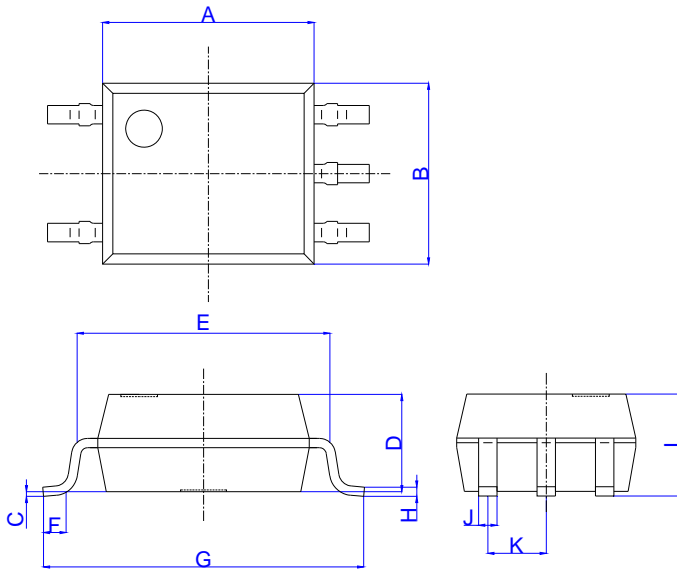


High-level Output Voltage vs. Ambient Temperature

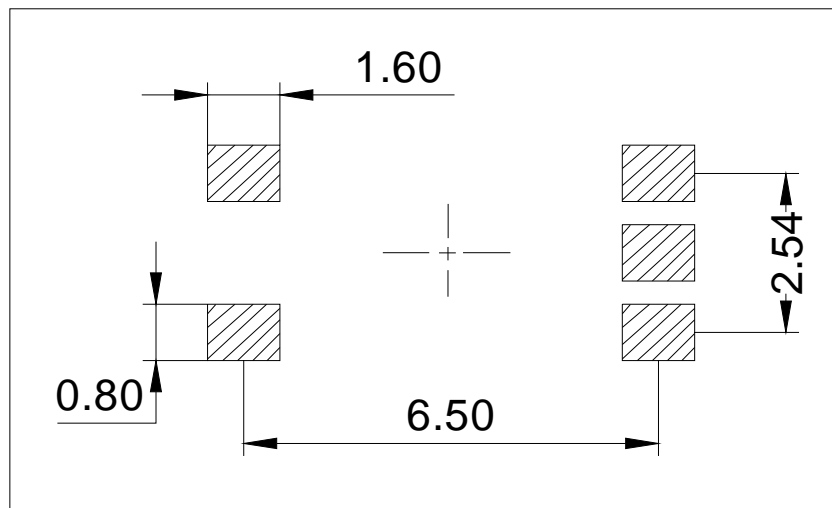


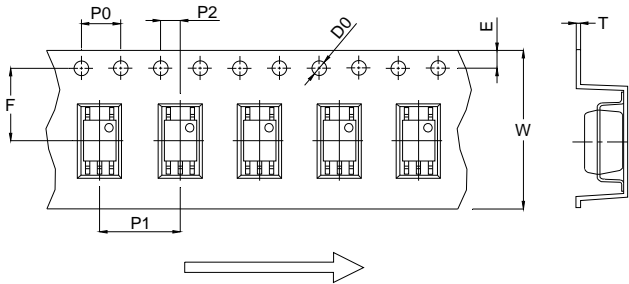
High-level Output Voltage Drop vs. Peak High-level Output Current



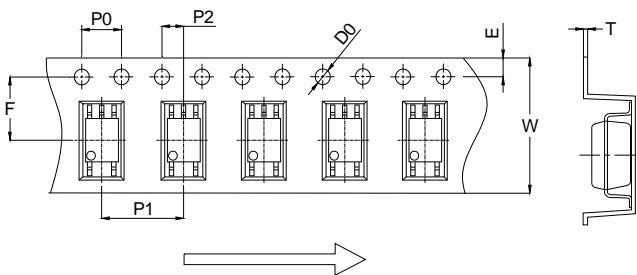


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.80	0.173		0.189
B	3.60		4.20	0.142		0.165
C	0.00		0.20	0.000		0.008
D	1.90		2.30	0.075		0.091
E	5.00		5.60	0.197		0.220
F	0.34		0.94	0.013		0.037
G	6.70		7.30	0.264		0.287
H	0.10		0.30	0.004		0.012
I	2.00		2.40	0.079		0.094
J	0.25		0.55	0.010		0.022
K	1.02		1.52	0.040		0.060

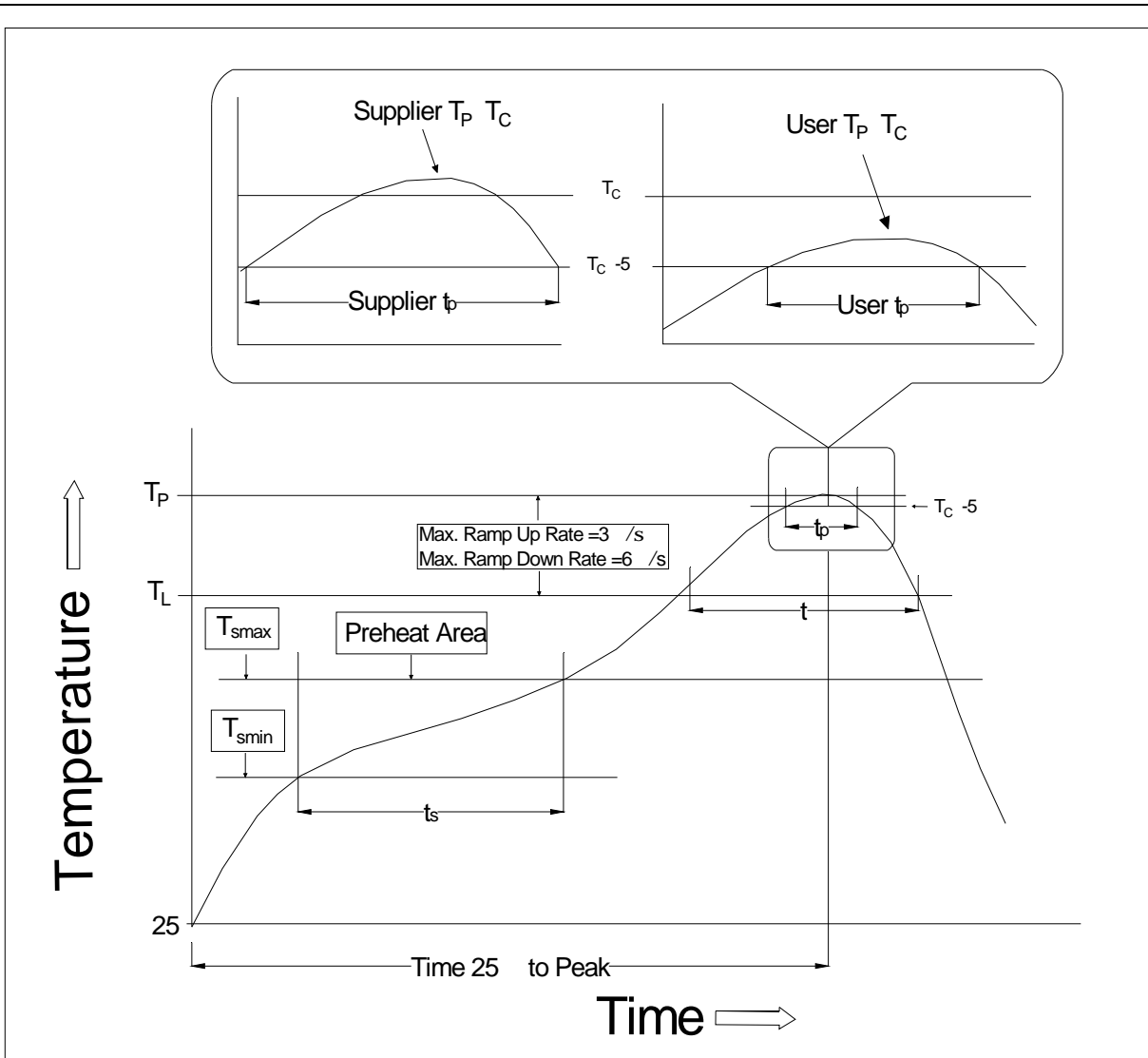




Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50	1.60		0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	7.90	8.00	8.10	0.311	0.315	0.319
P2	1.90	2.00	2.10	0.075	0.079	0.083
E	1.65	1.75	1.85	0.065	0.069	0.073
F	7.40	7.50	7.60	0.291	0.295	0.299
T	0.27	0.30	0.33	0.011	0.012	0.013
W	15.80	16.00	16.20	0.622	0.630	0.638



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	7.90	8.00	8.10	0.311	0.315	0.319
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	4.40	4.50	4.60	0.173	0.177	0.181
T	0.25	0.30	0.35	0.010	0.012	0.014
W	11.90	12.00	12.30	0.469	0.472	0.484



Temperature Min. (T _{smin})	100	150
Temperature Max. (T _{smax})	150	200
Time (t _s) from (T _{smin} to T _{smax})	60-120 seconds	60-120 seconds
Ramp-up Rate (t _L to t _P)	3 °/second max.	3 °/second max.
Liquidus Temperature (T _L)	183	217
Time (t _L) Maintained Above (T _L)	60-150 seconds	60-150 seconds
Peak Body Package Temperature	235 +0 /-5	260 +0 /-5
Time (t _P) within 5 ° of 260	20 seconds	30 seconds
Ramp-down Rate (T _P to T _L)	6 °/second max.	6 °/second max.
Time 25 ° to Peak Temperature	6 minutes max.	8 minutes 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~

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