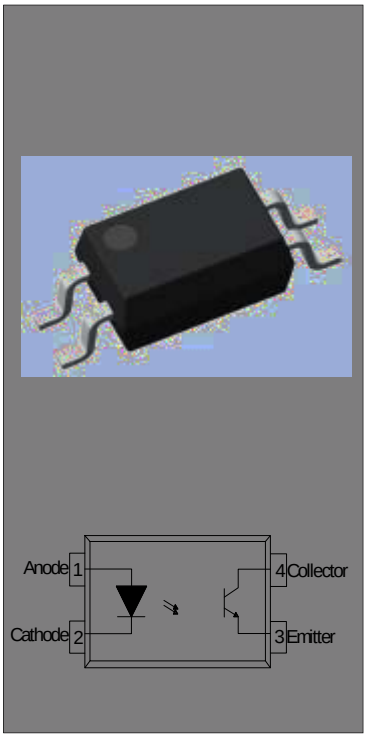
DESCRIPTION:

The products are transistor opto-couplers in a SSOP4 package. The device is a photoelectric coupler composed of light-emitting diode and phototransistor. The products are widely used in switching power supply, intelligent meter, industrial control, measuring instruments, office equipment such as copiers, household appliances: such as air conditioners, fans, water heaters,etc.



MAIN FEATURES

High isolation 3750 VRMS
Operating temperature range -55°C to 125°C
RoHS & REACH Compliance
HBM: H3A; 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	Collector-emitter Voltage	V_{CEO}	80	V
	Emitter-collector Voltage	V_{ECO}	7	V
	Collector Current	I_C	50	mA
	Power Dissipation	P_C	150	mW
Total Power Dissipation		P_{tot}	225	mW
Isolation Voltage		V_{iso}	3750	Vrms
Operating Temperature		T_{opr}	-55~+125	
Junction Temperature		T_j	135	
Storage Temperature		T_{stg}	-55~+125	
Soldering Temperature		T_{sol}	260	

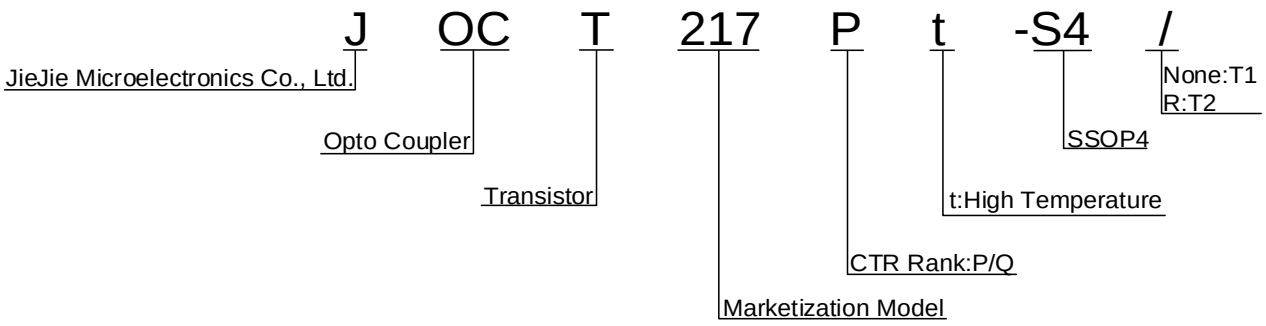
NOTE1 1 μs pulse **NOTE2** AC for 1minute, R.H.=40~60%

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
	Terminal Capacitance	C_t	V=0, f=1MHz	-	30	250	pF
Output	Collector-Emitter dark current	I_{CEO}	V_{CE}=20V, I_F=0	-	-	50	nA
	Collector-Emitter breakdown voltage	BV_{CEO}	I_C=0.1mA I_F=0	80	-	-	V
	Emitter-Collector breakdown voltage	BV_{ECO}	I_E=0.1mA I_F=0	7	-	-	V
	Current transfer ratio	CTR					

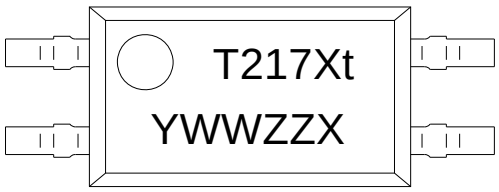
Transfer
Characteristics

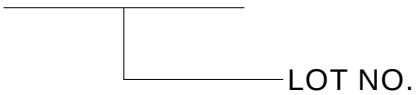
ORDERING INFORMATION



Packing Quantity	
Option	**Quantity**
None/R	3000 Units/Reel

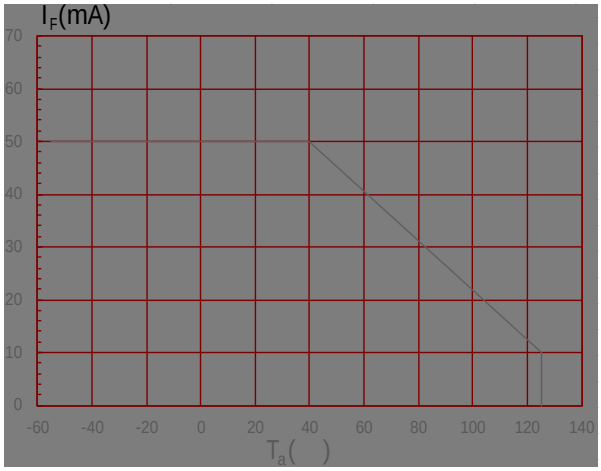
MARKING



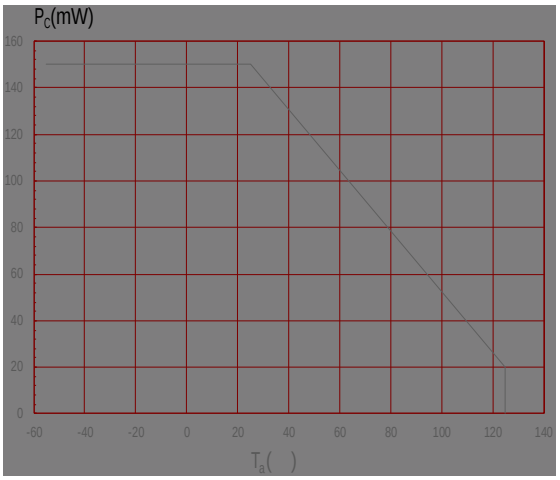


Characteristics Curves

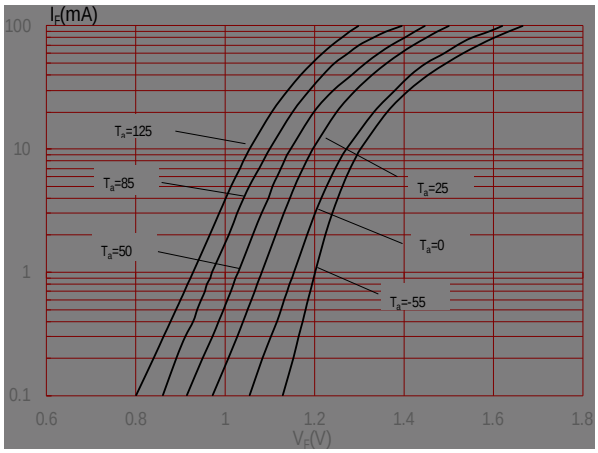
Max. Allowable LED Forward Current vs. Ambient Temperature



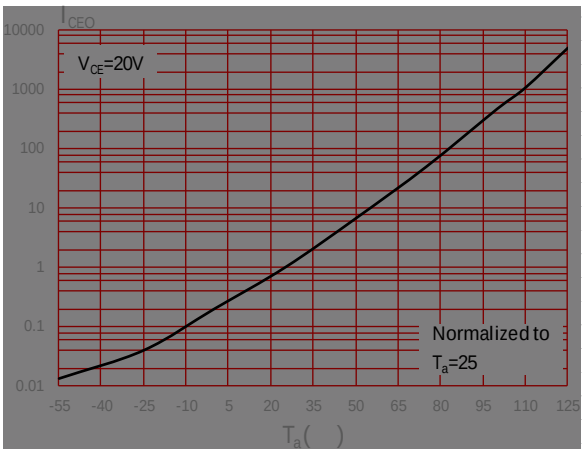
Collector Power Dissiption vs. Ambient Temperature



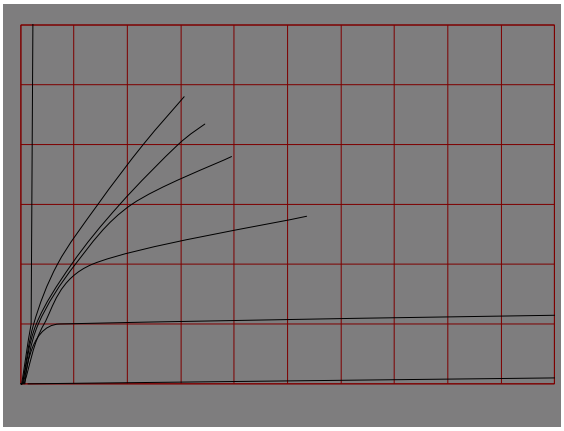
Forward Current vs. Forward Voltage



Normalized Collector Dark Current vs. Ambient Temperature

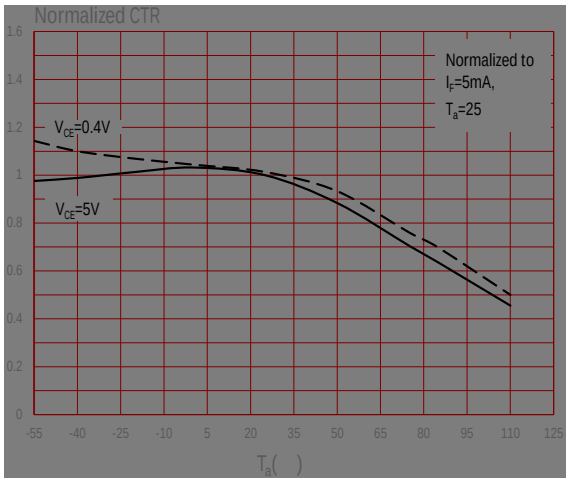


Collector Current vs. Collector-emitter Voltage

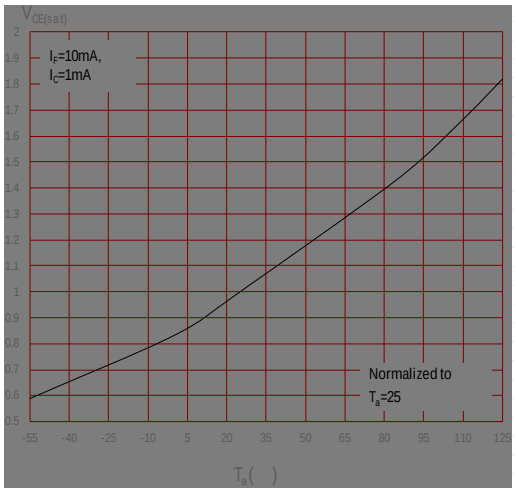


Normalized Current Transfer Ratio vs. Forward Current

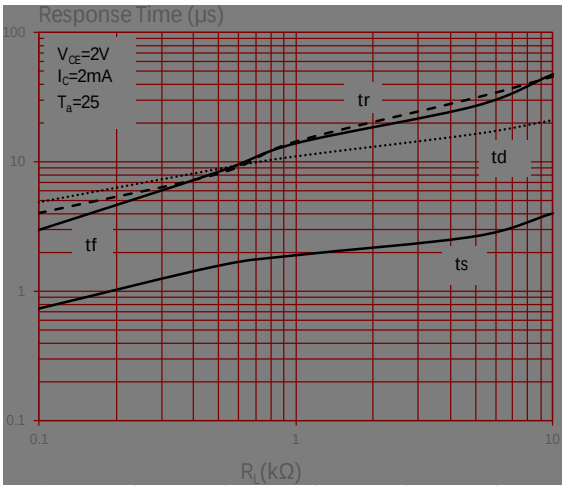
Normalized Current Transfer Ratio vs. Ambient Temperature



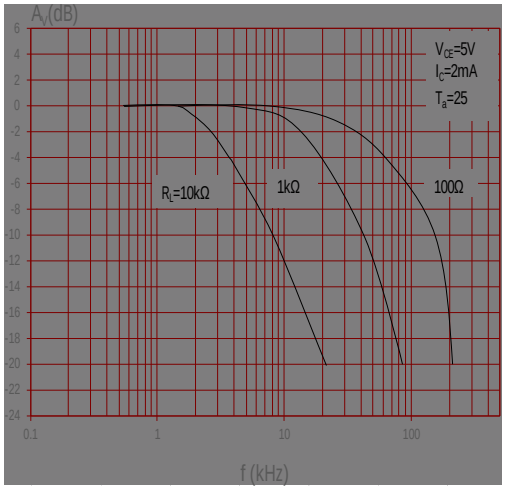
Normalized Collector-emitter Saturation Voltage vs. Ambient Temperature



Response Time vs. Load Resistance

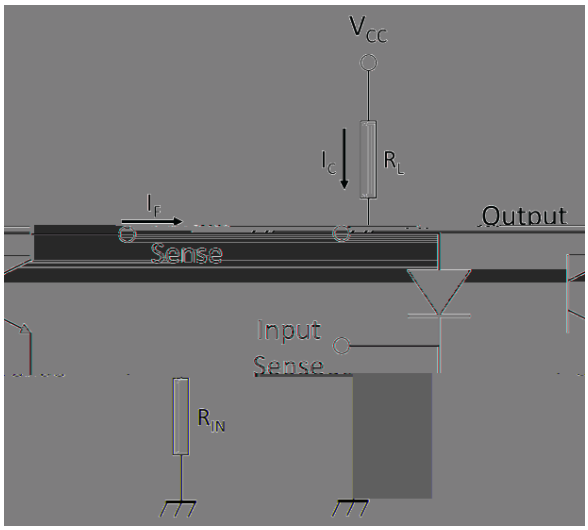


Frequency Response

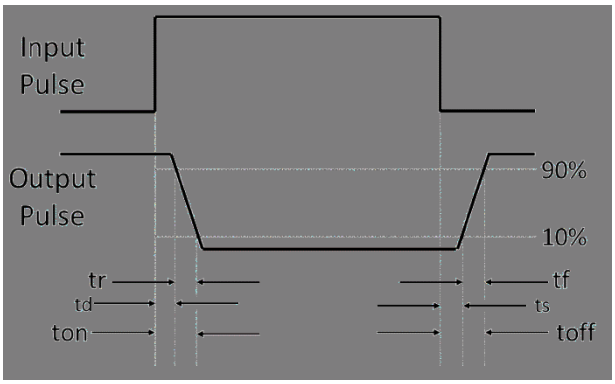


Test Circuits

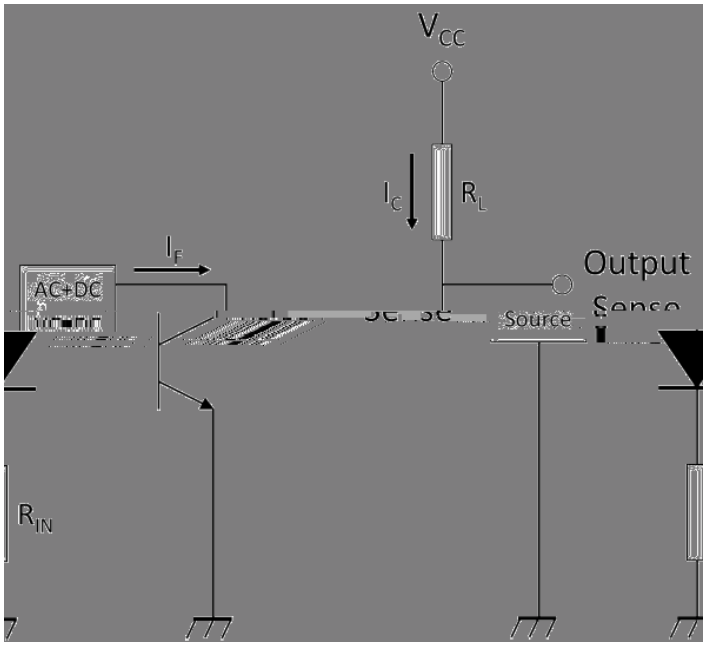
Test Circuits of Response Time



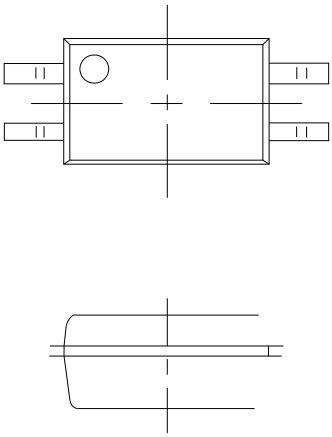
Curves of Response Time



Test Circuits of Frequency Response

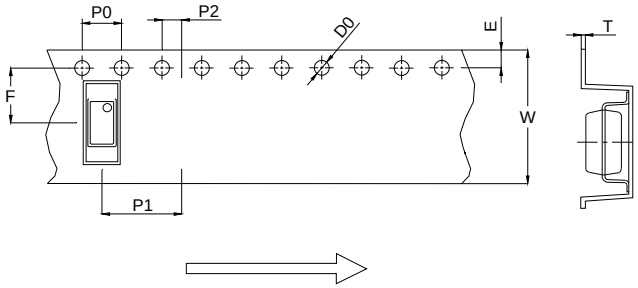


Package Dimension (Unit: mm)



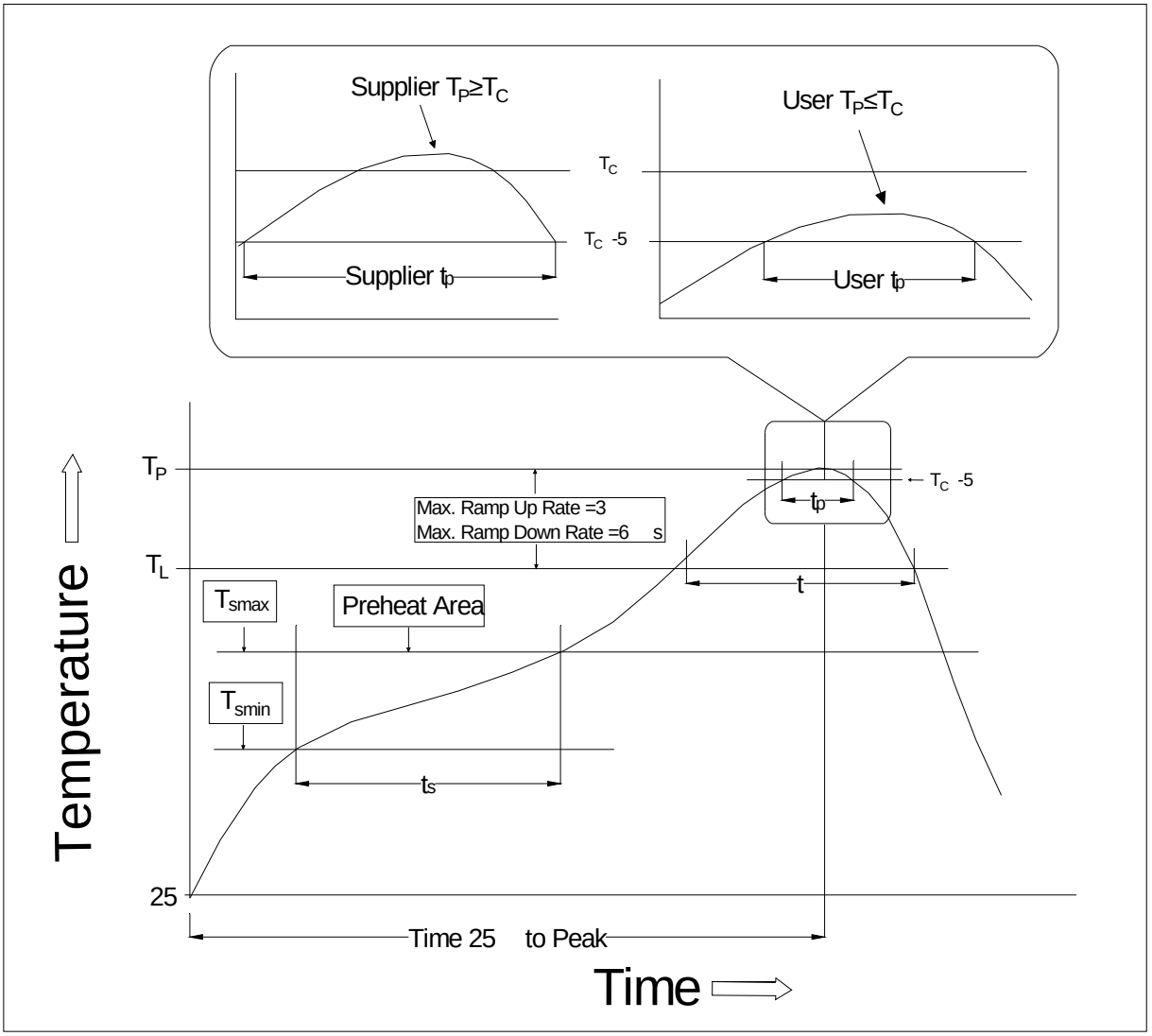
CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

Option None/R



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50	1.60		0.059	0.063
P0	3.90		4.10	0.154		0.161
P1	7.90		8.10	0.311		0.319
P2	1.90		2.10	0.075		0.083
E	1.65		1.85	0.065		0.073
F	5.40		5.60	0.213		0.220
T	0.20		0.30	0.008		0.012
W	11.90		12.30	0.469		0.484

REFLOW INFORMATION



Temperature Min. (Tsmin)	100	150
Temperature Max. (Tsmax)	150	200
Time (ts) from (Tsmin to Tsmax)	60-120 seconds	60-120 seconds
Ramp-up Rate (tL to tP)	3 /second max.	3 /second max.
Liquidus Temperature (TL)	183	217
Time (tL) Maintained Above (TL)	60-150 seconds	60-150 seconds
Peak Body Package Temperature	235 +0 /-5	260 +0 /-5
Time (tP) within 5 of 260	20 seconds	30 seconds
Ramp-down Rate (TP to TL)	6 /second max.	6 /second max.
Time 25 to Peak Temperature	6 minutes max.	8 minutes max.

Note:

E