

PRODUCT SPECIFICATION

DATE:04/24/2012

cosmo ELECTRONICS CORPORATION	Photocoupler : KPS2832	NO.61P25009	REV.
		SHEET 1 OF 6	3

High Isolation Voltage DC Input Response Type SSOP Photocoupler

●Features

- 1.Halogen Free.
- 2.Pb free and RoHS compliant.
- 3.High isolation voltage(BV=3750Vrms).
- 4.Small and thin package(4pin SOP,Pin pitch 1.27mm).
- 5.High collector to emitter voltage ($V_{CE0}=300\text{ V}$)
- 6.High current transfer ratio (CTR=2000%TYP.@ IF=1 mA, VCE=2V)
- 7.Agency Approvals
 - UL approved : No.E169586
 - CUL approved : No.E169586
 - VDE approved : No.40010469
 - FIMKO approved : EN 60065 , EN 60950-1 No.FI23460

●Applications

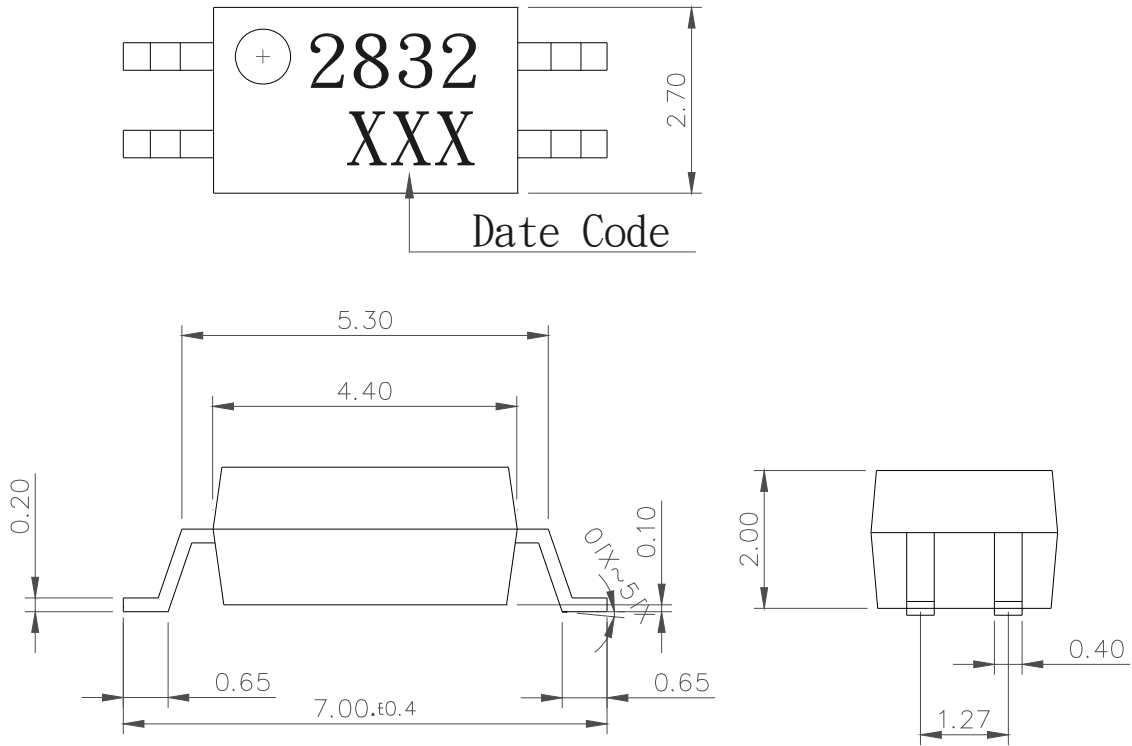
1. Hybrid IC
2. Telephone/Telegraph Receiver
3. FAX

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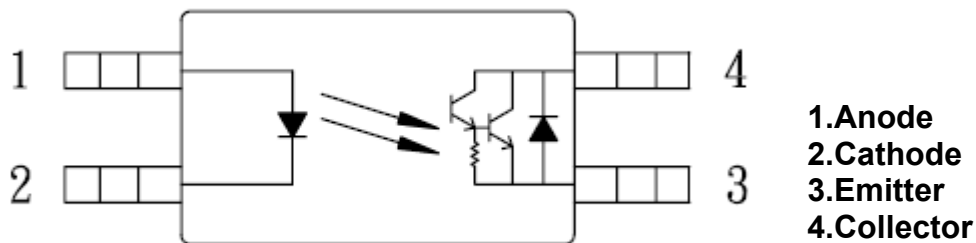
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1. OUTSIDE DIMENSION : UNIT (mm)



TOLERANCE : ±0.2mm

2. SCHEMATIC : TOP VIEW



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●Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit	
Input	Forward current	I_F	50	mA
	Peak forward current(*1)	I_{FP}	1	A
	Reverse voltage	V_R	6	V
	Power dissipation	P_D	60	mW
	Power dissipation derating	$P_D/^\circ C$	0.6	mW/ $^\circ C$
Output	Collector-emitter voltage	V_{CEO}	300	V
	Emitter-collector voltage	V_{ECO}	0.3	V
	Collector current	I_C	60	mA
	Collector power dissipation	P_C	120	mW
	Collector power dissipation derating	$P_C/^\circ C$	1.2	mW/ $^\circ C$
Isolation voltage 1 minute(*2)	V_{iso}	3750	Vrms	
Operating temperature	T_{opr}	-30 to +115	$^\circ C$	
Storage temperature	T_{stg}	-55 to +150	$^\circ C$	

*1 PW=100 μ s,Duty Cycle=1%.

*2 AC voltage for 1minute at T =25 $^\circ C$,RH=60% between input and output.

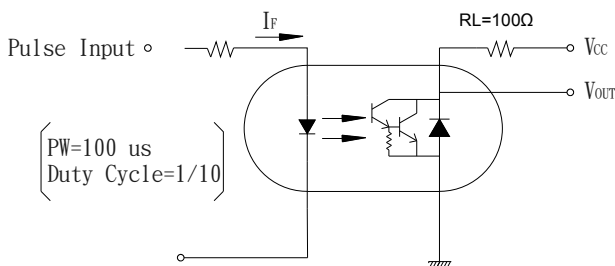
●Electro-optical Characteristics

Ta=25 $^\circ C$

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	V_F IF=10mA	-	1.2	1.4	V
	Reverse current	I_R VR=5V	-	-	5	μA
	Terminal capacitance	C_t V=0V, f=1.0MHz	-	30	-	pF
Output	Collector dark current	I_{CEO} VCE=300V,IF=0mA	-	-	400	nA
Transfer characteristics	Current transfer ratio(IC/IF)	CTR IF=1mA, VCE=2V	400	2000	-	%
	Collector-emitter saturation	VCE(sat) IF=1mA, Ic=2mA	-	-	1.0	V
	Isolation resistance	Riso DC500V	5×10^{10}	10^{11}	-	ohm
	Floating capacitance	C_f V=0V, f=1.0MHz	-	0.4	-	pF
	Response time (Rise)(*1)	t_r VCE=5V,Ic=10mA,RL=100ohm	-	40	-	μs
Response time (Fall)(*1)	t_f	-	10	-	μs	

*1 Test circuit for switching time

●Classification table of current transfer ratio is shown below.



CTR RANK	CTR(%)
KPS28320E	400 TO

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Fig.1 Current Transfer Ratio vs. Forward Current

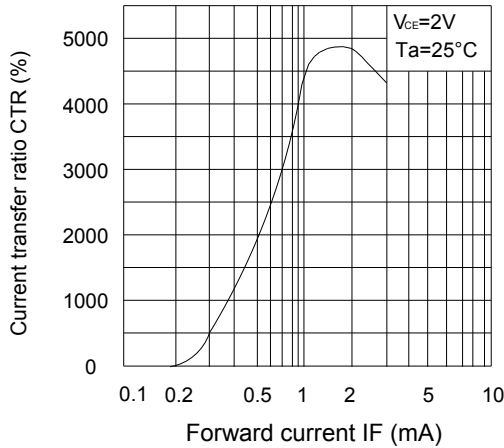


Fig.2 Collector Power Dissipation vs. Ambient Temperature

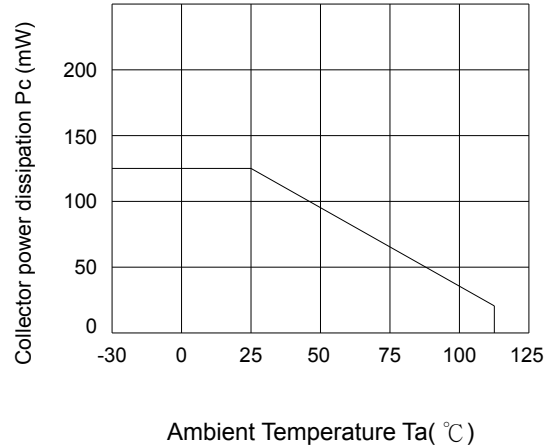


Fig.3 Collector Dark Current vs. Ambient Temperature

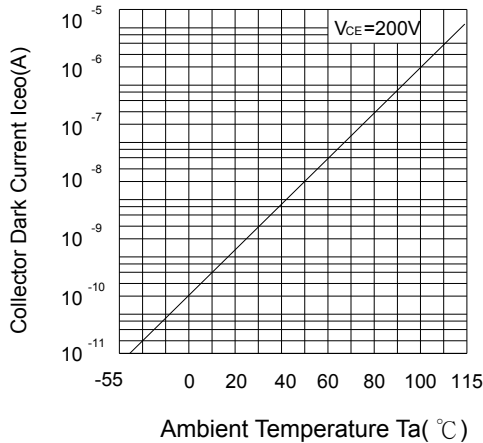


Fig.4 Forward Current vs. Ambient Temperature

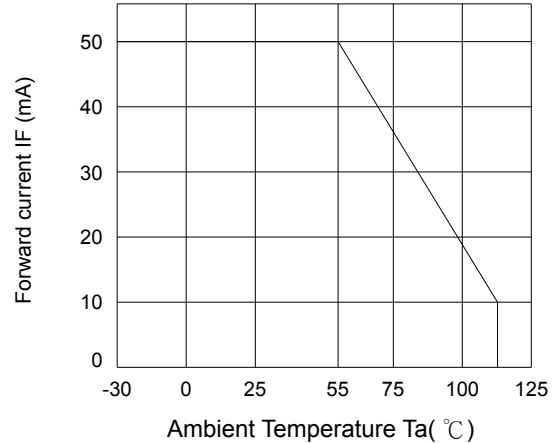


Fig.5 Forward Current vs. Forward Voltage

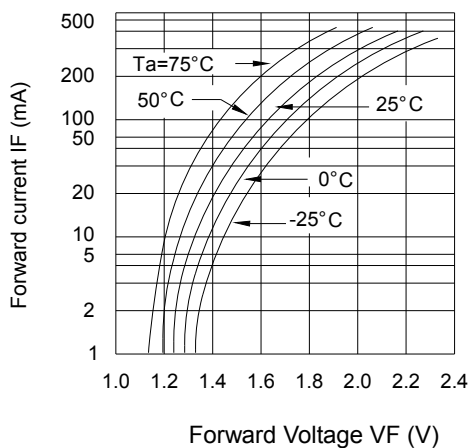
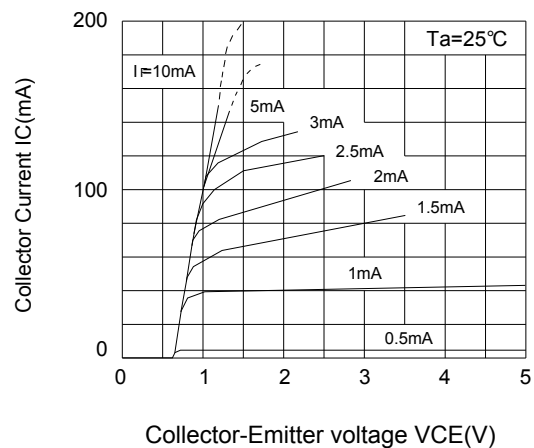


Fig.6 Collector Current vs. Collector-Emitter Voltage



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Fig.7 Collector-emitter Saturation Voltage vs.Forward Current

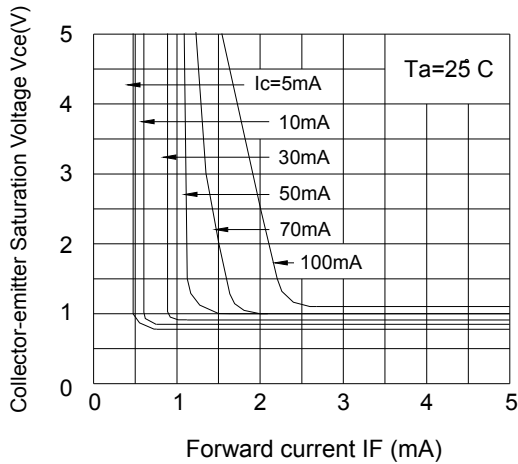


Fig.8 Relative Current Transfer Ratio vs. Ambient Temperature

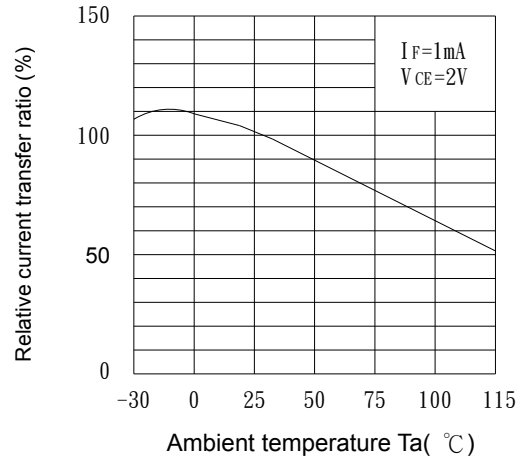
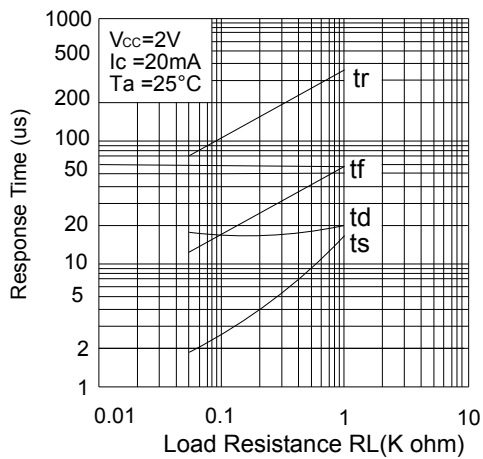


Fig.9 Response Time vs. Load Resistance



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