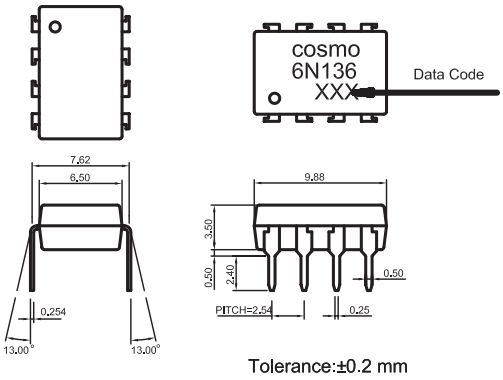
Features

1. High speed response t_{PLH}, t_{PHL}
   (MAX.0.8us at R_L=1.9kΩ)
2. High common mode reiection voltage
   (CM:TYP.1kV/us)
3. Standard dual-in-line package
4. Recognized by UL, file No.

Applications

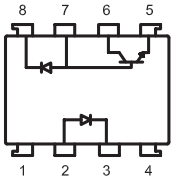
1. Computers,measuring instruments,control equipment.
2. High speed line receivers high speed logic.
3. Telephone sets.
4. Signal transmission between circuits of
   different potentials and impedances.

Outside Dimension:Unit (mm)



Tolerance:±0.2 mm

Schematic:Top View



1. NC
2. Anode
3. Cathode
4. NC
5. GND
6. Vo
7. V_B
8. Vcc

Absolute Maximum Ratings

(Ta=25℃)

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	25	mA
	*1 Peak forward current	I_F	50	mA
	*2 Peak transient forward current	I_{FM}	1	A
	Reverse voltage	V_R	5	V
	Power dissipation	P	45	mW
Output	Supply voltage	Vcc	-0.5 to 15	V
	Output voltage	Vo	-0.5 to 15	V
	Emitter-base reverse with-stand voltage (Pin 5 to 7)	V_{EBO}	5	V
	Average output current	Io	8	mA
	Peak output current	Iop	16	mA
	Base current (Pin 7)	I_B	5	mA
	Power dissipation	Po	100	mW
*3 Isolation voltage 1 minute		Viso	2500	Vrms
Operating temperature		Topr	-55 to +100	°C
Storage temperature		Tstg	-55 to +125	°C
*4 Soldering temperature		Tsol	260	°C

*1 50% duty cycle,Pulse width : 1mS
Decreases at the rate of 1.6mA/℃ if the external temperature is 70℃ or more.
*2 Pulse width<=1uS,300pulse/sec
*3 40 to 60% RH,AC for 1 minute
*4 For 10 seconds

Electro-optical Characteristics

(Ta=0 to +70℃ unless otherwise specified)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*5 Current transfer ratio	CTR (1)	Ta= 25℃ , I_F = 16mA Vo = 0.4V , Vcc = 4.5V	19	40	-	%
	CTR (2)	I_F = 16mA Vo = 0.5V , Vcc = 4.5V	15	43	-	%
Logic (0) output volage	V_{OL}	*6 Vcc = 4.5V,I_F = 16mA	-	0.1	0.4	V
Logic (1) output current	I_{OH}(1)	Ta= 25℃ , I_F = 0 Vo = Vcc = 5.5V	-	3.0	500	nA
	I_{OH}(2)	Ta'= 25℃ , I_F = 0 Vo = Vcc = 15V	-	0.01	1.0	uA
	I_{OH}(3)	Vcc = Vo = 15V,I_F = 0	-	-	50	uA
Logic (0) supply current	I_{CCL}	I_F = 16mA Vo = open , Vcc = 15V	-	200	-	uA
Logic (1) supply current	I_{CCH}(1)	Ta = 25℃ , I_O = 0 V_F = open , Vcc = 15V	-	0.02	1.0	uA
	I_{CCH}(2)	I_O = 0 Vo = open , Vcc = 15V	-	-	2.0	uA
Input forward voltage	V_F	Ta = 25℃ , I_F = 16mA	-	1.7	1.95	V
Input forward voltage temperature coefficient	$\triangle V_F/\triangle Ta$	I_F = 16mA	-	-1.9	-	mV/℃
Input reverse voltage	BV_R	Ta = 25℃ , I_R = 10uA	5.0	-	-	V
Input capacitance	C_{IN}	V_F=0 , f=1MHz	-	60	-	pF
*7 Leak current(input-output)	I_{I-O}	Ta = 25℃ , 45 % RH V_{I-O}= 3kVDC , t = 5s	-	-	1.0	uA
*7 Isolation resistance(input-output)	R_{I-O}	V_{I-O}= 500VDC	-	10^{12}	-	Ω
*7 Capacitance(input-output)	C_{I-O}	f=1MHz	-	0.6	-	pF
Transistor current amplification factor	h_{FE}	Vo = 5V , Io = 3mA	-	70	-	

*5 Current transfer ratio is the ratio of input current and output current expressed in %
*6 Io = 2.4mA
*7 Measured as 2-pin element (Short 1,2,3,4 and 5,6,7,8)

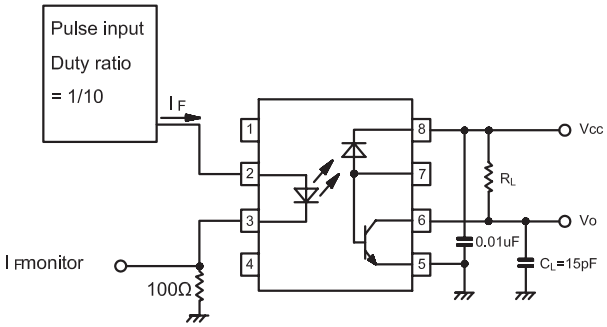
Switching Characteristics

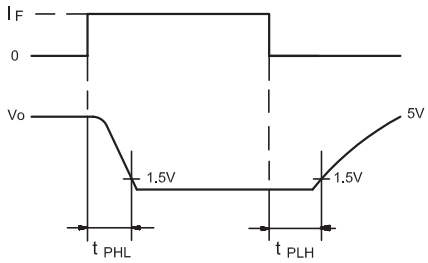
(Ta=25℃,Vcc=5V,I_F=16mA)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*8 *9 Propagation delay time Output (1)-->(0)	t_{PHL}	R_L=1.9kΩ	-	0.3	0.8	uS
*8 *9 Propagation delay time Output (0)-->(1)	t_{PLH}	R_L=1.9kΩ	-	0.3	0.8	uS
*10 *11 Instantaneous common mode rejection voltage "Output (1)"	CM_H	I_F=0,V_{CM}=10V_{p-p}	-	1000	-	V/uS
*10 *11 Instantaneous common mode rejection voltage "Output (0)"	CM_L	I_F=16mA,V_{CM}=10V_{p-p}	-	-1000	-	V/uS
*12 Bandwidth	BW	R_L=100Ω	-	2.0	-	MHz

*8 R_L=1.9kΩ is equivalent to one LSTTL and 5.6kΩ pull-up resistor.
*10 Instantaneous common mode rejection voltage "output(1)" represents a common mode voltage variation that can hold the output above (1) level (Vo > 2.0V)
Instantaneous common mode rejection voltage "output(0)" represents a common mode voltage variation that can hold the output above (0) level (Vo < 0.8V)
*12 Bandwidth represents a point where AC input gose down by 3dB.

*9 Tset Circuit Propagation Delay Time





*11 Tset Circuit for Instantaneous Common Mode Rejection Voltage