

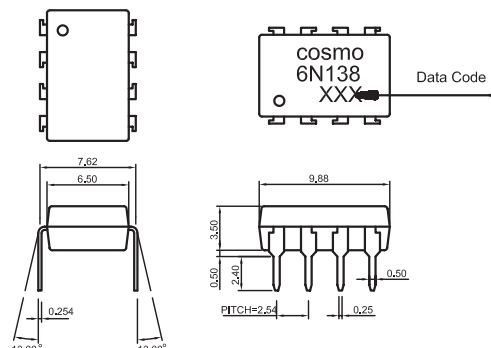
Features

1. High current transfer ratio
(CTR:MIN.300% at $I_F=1.6\text{mA}$)
2. High speed response
(t_{PHL} :TYP.2us at $R=2\text{k}\Omega$)
3. Instantaneous common mode rejection voltage (CM_H :TYP500V/us)
4. TTL compatible output
5. Overseas standard model

Applications

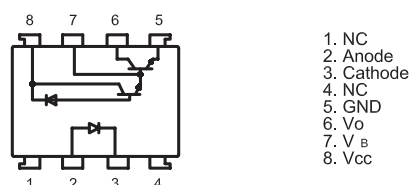
1. Interfaces for computer peripherals
2. Electronic calculators, measuring instruments, control equipment
3. Telephone sets.
4. Signal transmission between circuits of different potentials and impedances.

Outside Dimension:Unit (mm)



Tolerance:±0.2 mm

Schematic:Top View



Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Input	Forward current	I_F	20
	*1 Peak forward current	I_F	40
	*2 Peak transient forward current	I_{FM}	1
	Reverse voltage	V_R	5
	Power dissipation	P	35
Output	Supply voltage	V_{CC}	-0.5 to 7
	Output voltage	V_O	-0.5 to 7
	Emitter-base reverse withstand voltage (Pin 5 to 7)	V_{EBO}	0.5
	*3 Average output current	I_O	60
	Power dissipation	P_O	100
*4 Isolation voltage	V_{ISO}	2500	Vrms
Operating temperature	T_{opr}	0 to +70	°C
Storage temperature	T_{stg}	-55 to +125	°C
*5 Soldering temperature	T_{sol}	260	°C

*1 50% duty cycle,Pulse width : 1ms

*2 Pulse width≤1us,300pps

*3 Decreases at the rate of 0.7mA/°C if the external temperature is 25°C or more.

*4 40 to 60% RH,AC for 1 minute

*5 For 10 seconds

Electro-optical Characteristics

(Ta=0 to +70°C unless otherwise specified)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*6 Current transfer ratio	CTR	$I_F=1.6\text{mA}$, $V_O=0.4\text{V}$, $V_{CC}=4.5\text{V}$	300	1600	-	%
Logic (0) output volage	V_{OL}	$I_F=1.6\text{mA}$, $I_O=4.8\text{mA}$, $V_{CC}=4.5\text{V}$	-	0.1	0.4	V
Logic (1) output current	I_{OH}	$I_F=0$, $V_{CC}=V_O=7\text{V}$	-	0.1	250	μA
Logic (0) supply current	I_{CCL}	$I_F=1.6\text{mA}$, $V_{CC}=5\text{V}$, $V_O=\text{open}$	-	0.5	-	mA
Logic (1) supply current	I_{CCH}	$I_F=0$, $V_{CC}=5\text{V}$, $V_O=\text{open}$	-	10	-	nA
Input forward voltage	V_F	$I_F=1.6\text{mA}$, $T_a=25^\circ\text{C}$	-	1.5	1.7	V
Input forward voltage temperature coefficient	$\Delta V_F/\Delta T_a$	$I_F=1.6\text{mA}$	-	-1.9	-	mV/°C
Input reverse voltage	BV_R	$I_R=10\mu\text{A}$, $T_a=25^\circ\text{C}$	5.0	-	-	V
Input capacitance	C_{IN}	$V_F=0$, $f=1\text{MHz}$	-	60	-	pF
*7 Leak current(input-output)	I_{I-O}	$V_{I-O}=3\text{kV DC}$, 45%RH, $t=5\text{s}$, $T_a=25^\circ\text{C}$	-	-	1.0	μA
*7 Isolation resistance(input-output)	R_{I-O}	$V_{I-O}=500\text{V DC}$	-	10^{12}	-	Ω
*7 Capacitance(input-output)	C_{I-O}	$f=1\text{MHz}$	-	0.6	-	pF

*6 Current transfer ratio is a ratio of input current and output current expressed in %.

*7 Measured as 2-pin element (Short 1, 2, 3, 4 and 5, 6, 7, 8)

Switching Characteristics

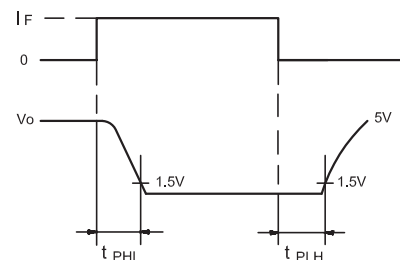
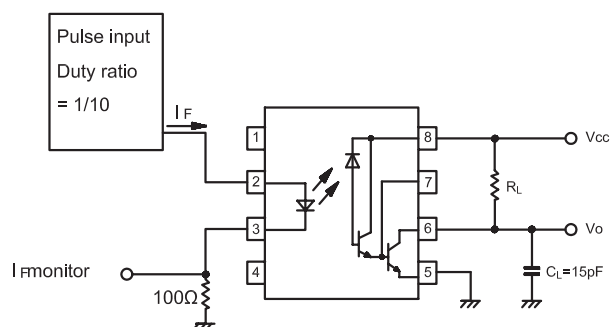
(Ta=25°C, Vcc=5V)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*8 Propagation delay time Output (1) $\rightarrow$ (0)	t_{PHL}	$R_L=2.2\text{k}\Omega$, $I_F=1.6\text{mA}$	-	2	10	μs
*8 Propagation delay time Output (0) $\rightarrow$ (1)	t_{PLH}	$R_L=2.2\text{k}\Omega$, $I_F=1.6\text{mA}$	-	7	35	μs
*9 *10 Instantaneous common mode rejection voltage "Output (1)"	CM_H	$I_F=0$, $V_{CM}=10\text{V}_{p-p}$, $R_L=2.2\text{k}\Omega$	-	500	-	V/ μs
*9 *10 Instantaneous common mode rejection voltage "Output (0)"	CM_L	$I_F=1.6\text{mA}$, $V_{CM}=10\text{V}_{p-p}$, $R_L=2.2\text{k}\Omega$	-	-500	-	V/ μs

*9 Instantaneous common mode rejection voltage "output(1)" represents a common voltage variation that can hold the output above (1) level ($V_O>2.0\text{V}$).

*10 Instantaneous common mode rejection voltage "output(1)" represents a common voltage variation that can hold the output above (0) level ($V_O<0.8\text{V}$).

*8 Tset Circuit Propagation Delay Time



*10 Tset Circuit for Instantaneous Common Mode Rejection Voltage

