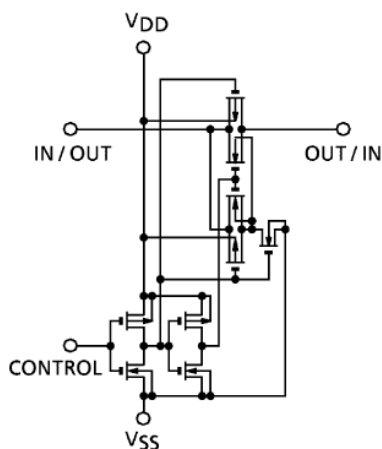
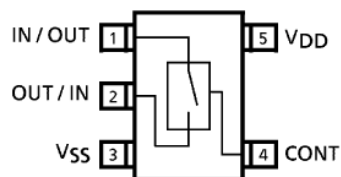


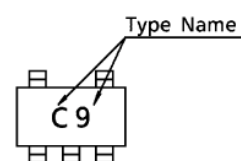
CIRCUIT DIAGRAM



PIN ASSIGNMENT (TOP VIEW)



MARKING



Operating Ranges ($V_{SS} = 0 \text{ V}$)

CHARACTERISTIC	SYMBOL		MIN.	TYP.	MAX.	UNIT
DC Supply Voltage	V_{DD}	—	3	—	18	V
Input / Output Voltage	V_{IN}/V_{OUT}	—	0	—	V_{DD}	V

STATIC ELECTRICAL CHARACTERISTICS (In case not specifically appointed, $V_{SS} = 0 \text{ V}$)

CHARACTERISTIC		SYM- BOL	TEST CONDITION	V _{DD} (V)	- 40°C		25°C			85°C		UNIT
					MIN.	MAX.	MIN.	TYP.	MAX.	MIN.	MAX.	
Control Input High Voltage		V _{IH}	I _{IS} = 10 μA	5	3.5	—	3.5	2.75	—	3.5	—	V
				10	7.0	—	7.0	5.50	—	7.0	—	
				15	11.0	—	11.0	8.25	—	11.0	—	
Control Input Low Voltage		V _{IL}	I _{IS} = 10 μA	5	—	1.5	—	2.25	1.5	—	1.5	V
				10	—	3.0	—	4.5	3.0	—	3.0	
				15	—	4.0	—	6.75	4.0	—	4.0	
On-State Resistance		R _{ON}	0 ≤ V _{IS} ≤ V _{DD} R _L = 10 kΩ	5	—	800	—	290	950	—	1200	Ω
				10	—	210	—	120	250	—	300	
				15	—	140	—	85	160	—	200	
Input / Output Leakage Current		I _{OFF}	V _{IN} = 18 V V _{OUT} = 0 V V _{IN} = 0 V V _{OUT} = 18 V	18	—	± 100	—	± 0.1	± 100	—	± 1000	nA
				18	—	± 100	—	± 0.1	± 100	—	± 1000	
Quiescent Device Current		I _{DD}	V _{IN} = V _{DD} , V _{SS}	5	—	0.25	—	0.001	0.25	—	7.5	μA
				10	—	0.5	—	0.001	0.5	—	15	
				15	—	1.0	—	0.002	1.0	—	30	
Input Current	H Level	I _{IH}	V _{IH} = 18 V	18	—	0.1	—	10 ⁻⁵	0.1	—	1.0	μA
	L Level	I _{OL}	V _{IL} = 0 V	18	—	-0.1	—	-10 ⁻⁵	-0.1	—	-1.0	

DYNAMIC ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	V _{SS} (V) V _{DD} (V)		MIN.	TYP.	MAX.	UNIT
			V _{SS} (V)	V _{DD} (V)				
Propagation Delay Time (IN-OUT)	t _{pLH} t _{pHL}	C _L = 50 pF	0	5	—	15	40	ns
			0	10	—	8	20	
			0	15	—	5	15	
Propagation Delay Time (CONTROL-OUT)	t _{pZL} t _{pZH}	R _L = 1 kΩ C _L = 50 pF	0	5	—	55	120	
			0	10	—	25	40	
			0	15	—	20	30	
Propagation Delay Time (CONTROL-OUT)	t _{pLZ} t _{pHZ}	R _L = 1 kΩ C _L = 50 pF	0	5	—	45	80	
			0	10	—	30	70	
			0	15	—	25	60	
Max. Control Input Repetition Rate	f _{MAX} (C)	R _L = 1 kΩ C _L = 50 pF	0	5	—	10	—	MHz
			0	10	—	12	—	
			0	15	—	12	—	
– 3dB Cut Off Frequency	f _{MAX} (I-O)	R _L = 1 kΩ C _L = 50 pF (*1)	–5	5	—	30	—	
Total Harmonic Distortion	—	R _L = 10 kΩ f = 1 kHz (*2)	–5	5	—	0.03	—	%
– 50dB Feedthrough Frequency	—	R _L = 1 kΩ (*3)	–5	5	—	600	—	kHz
Crosstalk (CONTROL-OUT)	—	R _{IN} = 1 kΩ R _{OUT} = 10 kΩ C _L = 15 pF	0	5	—	200	—	mV
			0	10	—	400	—	
			0	15	—	600	—	
Input Capacitance	C _{IN}	Control Input	—	—	—	5	7.5	pF
		Switch I/O	—	—	—	10	—	
Feedthrough Capacitance	C _{IN-OUT}	—	—	—	—	0.5	—	

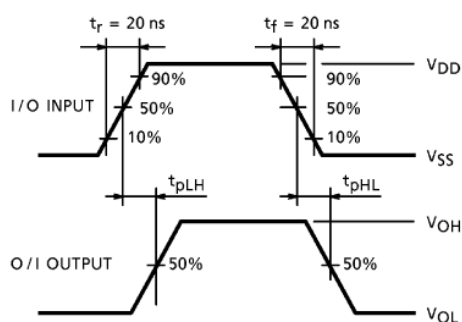
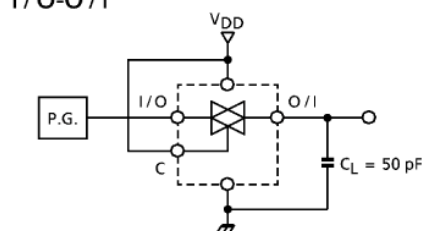
*1 : The frequency at $20\log_{10} \frac{V_{OS}}{V_{IS}} = -3 \text{ dB}$ shall be f_{MAX} (I/O) using sine wave of $\pm 2.5 V_{p-p}$ for V_{IS}.

*2 : V_{IS} shall be sine wave of $\pm 2.5 V$.

*3 : The frequency at $20\log_{10} \frac{V_{OS}}{V_{IS}} = 50 \text{ dB}$ shall be the feed through using of $\pm 2.5 V_{p-p}$.

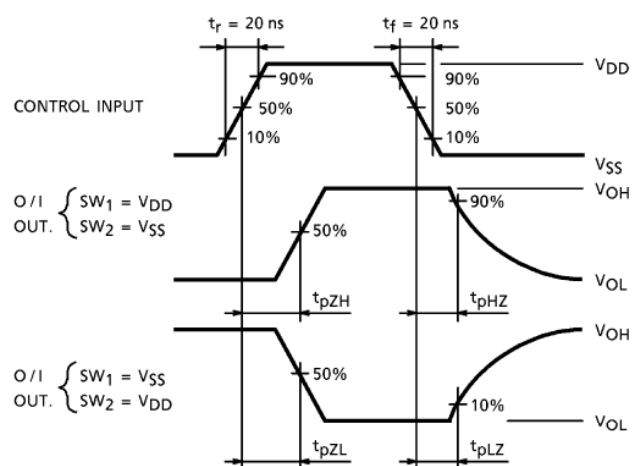
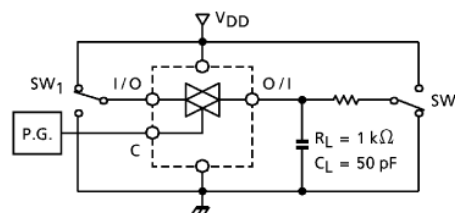
1. t_{pLH} , t_{pHL}

I/O-O/I

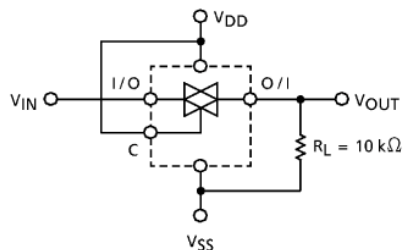


2. t_{pZL} , t_{pZH} , t_{pLZ} , t_{pHZ}

CONTROL-O/I

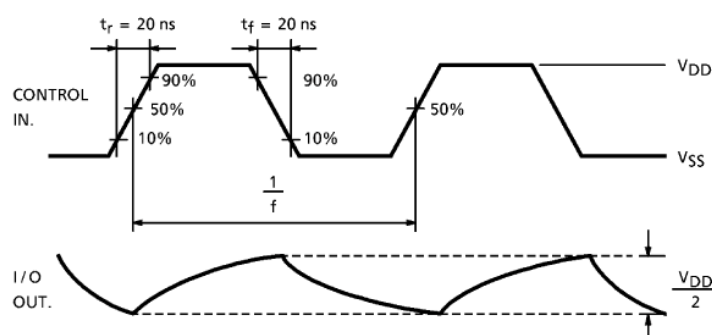
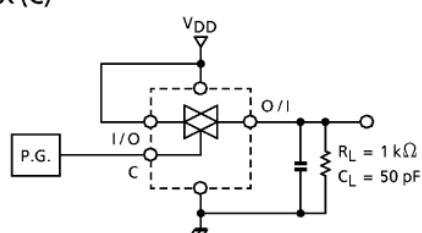


3. R_{ON}

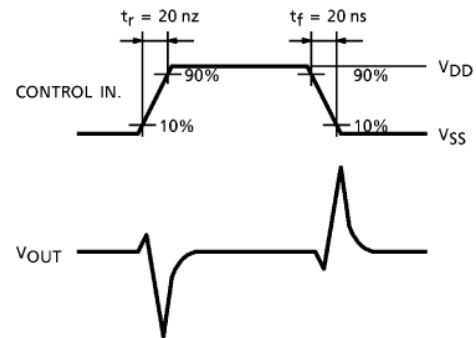
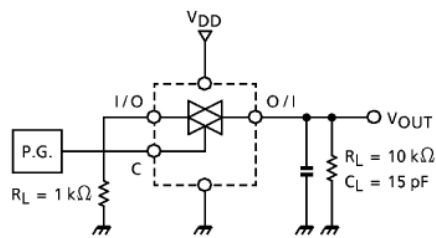


$$R_{ON} = 10 \times \frac{(V_{IN} - V_{OUT})}{V_{OUT}} \text{ (k}\Omega\text{)}$$

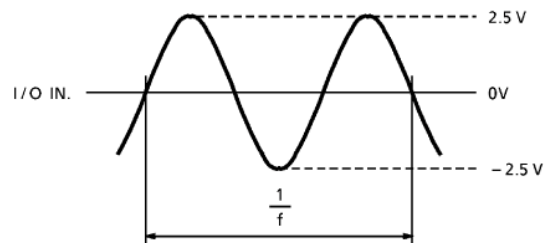
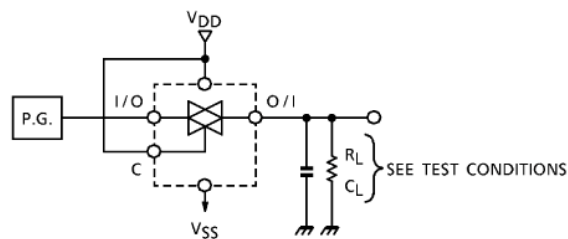
4. $f_{MAX}(C)$



5. CROSSTALK (CONTROL INPUT)

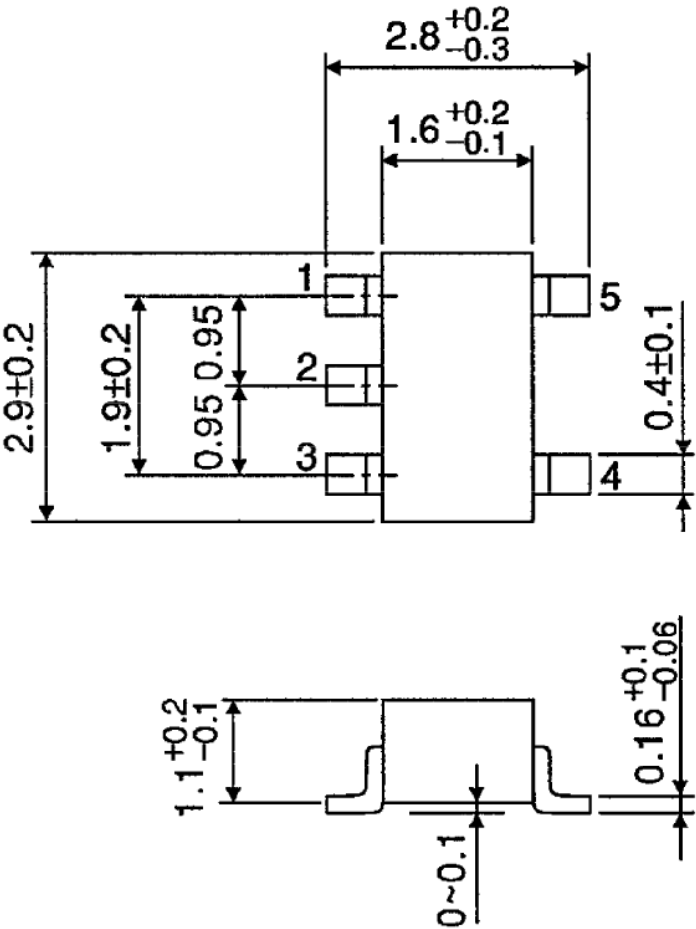


6. TOTAL HARMONIC DISTORTION, f_{MAX} (I/O-O/I), FEEDTHROUGH (SWITCH OFF)



PACKAGE DIMENSIONS
SSOP5-P-0.95

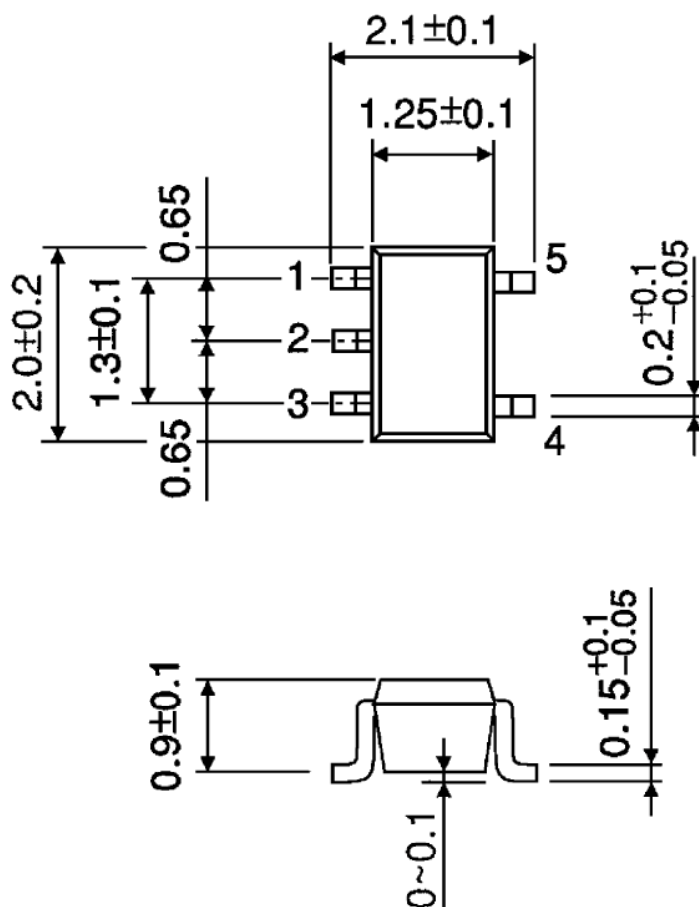
Unit : mm



Weight : 0.016 g (Typ.)

PACKAGE DIMENSIONS
SSOP5-P-0.65A

Unit : mm



Weight : 0.006 g (Typ.)

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