

DM7416 Hex Inverting Buffers with High Voltage Open-Collector Outputs

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DM7416

Absolute Maximum Ratings(Note 1)

Supply Voltage	7V
Input Voltage	5.5V
Output Voltage	15V
Operating Free Air Temperature Range	$0^{\circ}C$ to $+70^{\circ}C$
Storage Temperature Range	$-65^{\circ}C$ to $+150^{\circ}C$
Operating Free Air Temperature Range	0°C to +70°C

Note 1: The "Absolute Maximum Ratings" are those values beyond which the safety of the device cannot be guaranteed. The device should not be operated at these limits. The parametric values defined in the Electrical Characteristics tables are not guaranteed at the absolute maximum ratings. The "Recommended Operating Conditions" table will define the conditions for actual device operation.

Recommended Operating Conditions

Symbol	Parameter	Min	Nom	Max	Units
V _{CC}	Supply Voltage	4.75	5	5.25	V
V _{IH}	HIGH Level Input Voltage	2			V
V _{IL}	LOW Level Input Voltage			0.8	V
V _{OH}	HIGH Level Output Voltage			15	V
I _{OL}	LOW Level Output Current			40	mA
T _A	Free Air Operating Temperature	0		70	°C

Electrical Characteristics

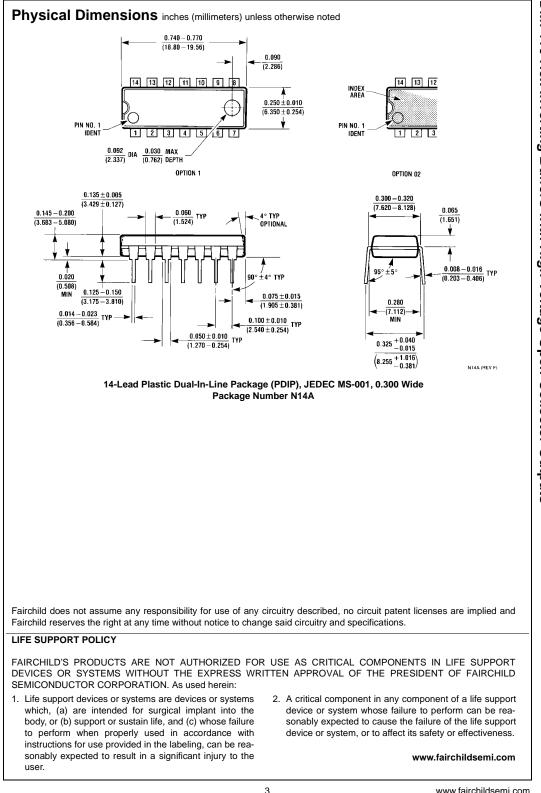
over recommended operating free air temperature range (unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ (Note 2)	Max	Units
VI	Input Clamp Voltage	$V_{CC} = Min, I_I = -12 \text{ mA}$			-1.5	V
ICEX	HIGH Level	$V_{CC} = Min, V_O = 15V$			250	μΑ
	Output Current	V _{IL} = Max				
OL	LOW Level	V _{CC} = Min, I _{OL} = Max			0.7	v
	Output Voltage	$V_{IH} = Min$				
		$I_{OL} = 16 \text{ mA}, V_{CC} = \text{Min}$			0.4	
l _l	Input Current @ Max Input Voltage	$V_{CC} = Max, V_I = 5.5V$			1	mA
I _{IH}	HIGH Level Input Current	$V_{CC} = Max, V_I = 2.4V$			40	μA
IIL	LOW Level Input Current	$V_{CC} = Max, V_I = 0.4V$			-1.6	mA
I _{CCH}	Supply Current with Outputs HIGH	V _{CC} = Max	İ	30	48	mA
I _{CCL}	Supply Current with Outputs LOW	V _{CC} = Max	İ	27	51	mA
	vpicals are at $V_{CC} = 5V$. $T_A = 25^{\circ}C$.					

Note 2: All typicals are at $V_{CC}=5V,\,T_A=25^\circ C.$

Switching Characteristics

at $V_{CC}=5V$ and $T_A=25^\circ C$ Symbol Parameter Conditions Min Max Units $C_L = 15 \text{ pF}$ Propagation Delay Time t_{PLH} 15 ns LOW-to-HIGH Level Output $R_L = 110\Omega$ Propagation Delay Time t_{PHL} 23 ns HIGH-to-LOW Level Output



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