

**Absolute Maximum Ratings**

Case Temperature Under Bias	-25°C to +100°C
Case Storage Temperature	-40°C to +125°C
DC Supply Voltage (V <sub>CC</sub> )	0 to 7.0V
Voltage to any pin with respect to ground	-0.5V to V <sub>CC</sub> +0.5V

**Operating Conditions**

Symbol	Parameter	Min.	Max.	Unit
V <sub>CC</sub>	Supply Voltage (5 volt)	4.75	5.25	V
V <sub>CC</sub>	Supply Voltage (3.3 volt) <sup>3</sup>	3.15	3.45	V
Freq	Operating Frequency	-	30	MHz
T <sub>a</sub>	Ambient Temperature	0	70	C

**Capacitance DC Specifications**

Symbol	Parameter	Min.	Max.	Unit	Note
C <sub>in</sub>	Input Capacitance	-	10	pF	1
C <sub>out</sub>	Output Capacitance	-	10	pF	1

**ICC Specifications**

Symbol	Parameter	Min.	Max.	Unit	Note
I <sub>CC</sub>	Supply Current	-	30	mA	2
I <sub>CC1</sub>	Supply Current/ SLEEP Mode	-	1	mA	2
I <sub>CC2</sub>	Supply Current/ SUSPEND Mode	-	100	μA	2

- Notes: 1. @ 1MHz  
 2. Typical conditions  
 3. VG-660-L version only

# VADEM VG-660

## VGA LCD/CRT CONTROLLER

### DC Characteristics

Parameter	Min.	Max.	Unit	Conditions
$V_{IH}$	$.7V_{CC}$	$V_{CC}+0.5$	V	-
$V_{IL}$	-0.5	$.15V_{CC}$	V	-
$V_{IH_{CLK}}$	$.8V_{CC}$		V	-
$V_{IL_{CLK}}$	-	$.1V_{CC}$	V	-
$V_{OL}$	-	0.1 0.4	V V	$I_{OL} = 20\mu A$ $I_{OL}$ = defined by the selected output type.
$V_{OH}$	$V_{CC}-0.1$ 2.4V	-	V V	$I_{OH} = -20\mu A$ $I_{OH}$ = defined by the selected output type.
$I_{IL}$	-	-10	$\mu A$	$V_{IL} = V_{CC}$
$I_{IH}$	-	10	$\mu A$	$V_{IH} = V_{SS}$
$I_{IL_{CLK}}$	-	-1.0	$\mu A$	$V_{IL} = 0.2V$
$I_{IH_{CLK}}$	-	1.0	$\mu A$	$V_{IH} = 0.95V_{CC}$