

Remote 8-bit I/O expander for I²C-bus

PCF8574

8 LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
V _{DD}	supply voltage	−0.5	+7.0	V
V _I	input voltage	V _{SS} − 0.5	V _{DD} + 0.5	V
I _I	DC input current	−	±20	mA
I _O	DC output current	−	±25	mA
I _{DD}	supply current	−	±100	mA
I _{SS}	supply current	−	±100	mA
P _{tot}	total power dissipation	−	400	mW
P _O	power dissipation per output	−	100	mW
T _{stg}	storage temperature	−65	+150	°C
T _{amb}	ambient temperature	−40	+85	°C

9 HANDLING

Inputs and outputs are protected against electrostatic discharge in normal handling. However it is good practice to take normal precautions appropriate to handling MOS devices (see “Handling MOS devices”).

10 DC CHARACTERISTICSV_{DD} = 2.5 to 6 V; V_{SS} = 0 V; T_{amb} = −40 to +85 °C; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Supply						
V _{DD}	supply voltage		2.5	−	6.0	V
I _{DD}	supply current	operating mode; V _{DD} = 6 V; no load; V _I = V _{DD} or V _{SS} ; f _{SCL} = 100 kHz	−	40	100	μA
I _{stb}	standby current	standby mode; V _{DD} = 6 V; no load; V _I = V _{DD} or V _{SS}	−	2.5	10	μA
V _{POR}	Power-on reset voltage	V _{DD} = 6 V; no load; V _I = V _{DD} or V _{SS} ; note 1	−	1.3	2.4	V
Input SCL; input/output SDA						
V _{IL}	LOW level input voltage		−0.5	−	+0.3V _{DD}	V
V _{IH}	HIGH level input voltage		0.7V _{DD}	−	V _{DD} + 0.5	V
I _{OL}	LOW level output current	V _{OL} = 0.4 V	3	−	−	mA
I _L	leakage current	V _I = V _{DD} or V _{SS}	−1	−	+1	μA
C _i	input capacitance	V _I = V _{SS}	−	−	7	pF