



PRODUCT BULLETIN # 20469

Generic Copy

Issue Date: 21-May-2014

TITLE: CAT9532 Datasheet Changes

PROPOSED FIRST SHIP DATE: 21-May-2014

AFFECTED CHANGE CATEGORY(S): Datasheet Changes

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor sales office or <charlie.yu@onsemi.com>

NOTIFICATION TYPE:

ON Semiconductor considers this change approved unless specific conditions of acceptance are provided in writing. To do so, contact <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

As a result of additional device characterization the CAT9532 Datasheet is update to reflect the performance of the device. There are no changes to the form/fit/function of the devices. There are no changes to the manufacturing of the devices.

Changes to the Datasheet

Table 2. ABSOLUTE MAXIMUM RATINGS

From

Parameters	Ratings	Units
V _{CC} with Respect to Ground	-2.0 to +7.0	V
Voltage on Any Pin with Respect to Ground	-0.5 to +5.5	V

To

Parameters	Ratings	Units
V _{CC} with Respect to Ground	-0.3 to +7.0	V
Voltage on Any Pin with Respect to Ground	-0.3 to +5.5	V

A.C. CHARACTERISTICS

SCL, SDA

From

Symbol	Parameter	Min	Typ	Max	Unit
V _{IL} ⁽²⁾	Low Level Input Voltage	-0.5	—	0.3 VCC	V

To

Symbol	Parameter	Min	Typ	Max	Unit
V _{IL} ⁽²⁾	Low Level Input Voltage	-0.3	—	0.3 VCC	V



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A0, A1, A2, I/O

From

Symbol	Parameter	Min	Typ	Max	Unit
$V_{IL}^{(2)}$	Low Level Input Voltage	-0.5	—	0.8	V

To

Symbol	Parameter	Min	Typ	Max	Unit
$V_{IL}^{(2)}$	Low Level Input Voltage	-0.3	—	0.8	V

/RESET

From

Symbol	Parameter	Min	Typ	Max	Unit
$V_{IL}^{(2)}$	Low Level Input Voltage	-0.5	—	0.3 VCC	V

To

Symbol	Parameter	Min	Typ	Max	Unit
$V_{IL}^{(2)}$	Low Level Input Voltage	-0.3	—	0.2 VCC	V

A.C. CHARACTERISTICS

From

Symbol	Parameter	Standard I ² C		Fast I ² C		Units
		Min	Max	Min	Max	
$T_i^{(2)}$	Noise Pulse Filtered at SCL and SDA Inputs		100		100	ns
$t_w^{(2)}$	Reset Pulse Width	10				ns

To

Symbol	Parameter	Standard I ² C		Fast I ² C		Units
		Min	Max	Min	Max	
$T_i^{(2)}$	Noise Pulse Filtered at SCL and SDA Inputs		50		50	ns
$t_w^{(2)}$	Reset Pulse Width	20				ns

RELIABILITY DATA SUMMARY:

Qualification Results and Analysis:

Test:	Conditions:	Interval:	Results
HTOL	TA=150°C, Biased	1008 hrs	0/240
ELFR	TA=125°C, Biased	48 hrs	0/2400
HAST+PC	Ta=130C RH=85%, unbiased	96 hrs	0/240
TC+PC	Ta= -65 C to 150 C	500 cyc	0/235
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/240

Conclusion: All reliability requirements have been met.



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ELECTRICAL CHARACTERISTIC SUMMARY:

		NoDuts	30	Ta = 25 °C				
Symbol & Limit	Parameter	V _{CC} (V)	Unit	Min	Average	Max	Stdev	Cpk
Pins SDA, SCL, /RESET								
I ² C V _{IL}	I2C Input Low Voltage	2.3	mV	915	926	935	5.88	13.36
		3.0		1290	1301	1310	6.31	21.18
		4.0		1820	1834	1850	8.27	25.54
		5.0		2345	2364	2380	10.58	27.21
		5.6		2660	2680	2700	11.67	28.58
RESET V _{IL}	Input Low Voltage on RESET	2.3	mV	940	957	975	11.04	15.01
		3.0		1100	1119	1140	12.01	14.40
		4.0		1310	1340	1360	14.23	12.65
		5.0		1520	1548	1570	15.00	12.18
		5.6		1625	1664	1690	17.71	10.23
Addr V _{IL}	Address Pins' Input Low Voltage	2.3	mV	919	941	964	11.50	4.08
		3.0		1076	1101	1117	12.35	8.12
		4.0		1282	1314	1337	14.39	11.91
		5.0		1489	1520	1547	14.82	16.19
		5.6		1595	1632	1660	16.35	16.97
I/Os V _{IL}	I/Os Input Low Voltage	2.3	mV	845	864	875	7.98	2.66
		3.0		1005	1023	1040	7.85	9.45
		4.0		1220	1237	1255	9.32	15.62
		5.0		1425	1443	1465	10.28	20.85
		5.6		1540	1557	1580	10.77	23.41
ti	Noise Pulse Filtered at SCL and SDA Inputs	2.3	nS	254.00	263.53	276.00	5.18	16.97
		3.0		162.00	168.53	176.00	3.23	17.37
		4.0		116.00	120.13	125.00	2.16	18.53
		5.0		94.00	97.90	102.00	1.77	18.45
		5.6		86.00	89.03	93.00	1.63	18.22
tW	Reset Pulse Width	2.3	nS	11.00	12.00	13.00	0.26	10.15
		3.0		8.00	8.50	9.00	0.51	7.54
		4.0		7.00	7.00	7.00	0.00	#DIV/0!
		5.0		7.00	7.00	7.00	0.00	#DIV/0!
		5.6		7.00	7.00	7.00	0.00	#DIV/0!

List of affected General Parts:

CAT9532WI-T1
 CAT9532YI-T2
 CAT9532HV6I-GT2