

CHANGE NOTIFICATION

Analog Devices, Inc.
1630 McCarthy Blvd., Milpitas CA
(408) 432-1900

January 31, 2018

PCN_013118

Dear Sir/Madam:

Subject: Notification of Change to LTC2358-16 Datasheet

Please be advised that Analog Devices, Inc. Milpitas, California has made a minor change to the LTC2358-16 product datasheet to facilitate improvement in our manufacturing capability. The changes are shown on the attached page of the mark-up datasheet. There was no change in form, fit, function, quality or reliability of the product. The product shipped after March 31, 2018 will be tested to the new limits.

Should you have any questions or concerns please contact your local Analog Devices sales representatives or you may contact me at 408-432-1900 ext. 2077, or by e-mail at JASON.HU@ANALOG.COM. If I do not hear from you by March 31, 2018, we will consider this change to be approved by your company.

Sincerely,

Jason Hu
Quality Assurance Engineer

For questions on this PCN, please contact Jason Hu or you may send an email to your regional contacts below or contact your local ADI sales representatives.

Americas: PCN_Americas@analog.com	Europe: PCN_Europe@analog.com	Japan: PCN_Japan@analog.com
		Rest of Asia: PCN_ROA@analog.com

LTC2358-16

ELECTRICAL CHARACTERISTICS

The ● denotes the specifications which apply over the full operating temperature range, otherwise specifications are at $T_A = 25^\circ\text{C}$. (Note 6)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
V_{IN+}	Absolute Input Range ($IN0^+$ to $IN7^+$)	(Note 7)	●	$V_{EE} + 4$	$V_{CC} - 4$	V
V_{IN-}	Absolute Input Range ($IN0^-$ to $IN7^-$)	(Note 7)	●	$V_{EE} + 4$	$V_{CC} - 4$	V
$V_{IN+} - V_{IN-}$	Input Differential Voltage Range	SoftSpan 7: $\pm 2.5 \cdot V_{REFBUF}$ Range (Note 7) SoftSpan 6: $\pm 2.5 \cdot V_{REFBUF}/1.024$ Range (Note 7) SoftSpan 5: 0V to $2.5 \cdot V_{REFBUF}$ Range (Note 7) SoftSpan 4: 0V to $2.5 \cdot V_{REFBUF}/1.024$ Range (Note 7) SoftSpan 3: $\pm 1.25 \cdot V_{REFBUF}$ Range (Note 7) SoftSpan 2: $\pm 1.25 \cdot V_{REFBUF}/1.024$ Range (Note 7) SoftSpan 1: 0V to $1.25 \cdot V_{REFBUF}$ Range (Note 7)	● ● ● ● ● ● ●	$-2.5 \cdot V_{REFBUF}$ $-2.5 \cdot V_{REFBUF}/1.024$ 0 0 $-1.25 \cdot V_{REFBUF}$ $-1.25 \cdot V_{REFBUF}/1.024$ 0	$2.5 \cdot V_{REFBUF}$ $2.5 \cdot V_{REFBUF}/1.024$ $2.5 \cdot V_{REFBUF}$ $2.5 \cdot V_{REFBUF}/1.024$ $1.25 \cdot V_{REFBUF}$ $1.25 \cdot V_{REFBUF}/1.024$ $1.25 \cdot V_{REFBUF}$	V V V V V V V
V_{CM}	Input Common Mode Voltage Range	(Note 7)	●	$V_{EE} + 4$	$V_{CC} - 4$	V
$V_{IN+} - V_{IN-}$	Input Differential Overdrive Tolerance	(Note 8)	●	$-(V_{CC} - V_{EE})$	$(V_{CC} - V_{EE})$	V
$I_{OVERDRIVE}$	Input Overdrive Current Tolerance	$V_{IN+} > V_{CC}$, $V_{IN-} > V_{CC}$ (Note 8) $V_{IN+} < V_{EE}$, $V_{IN-} < V_{EE}$ (Note 8)	● ●	0	10	mA mA
I_{IN}	Analog Input Leakage Current	C-Grade and I-Grade H-Grade	● ●	5	400 4 500 12	pA pA nA
R_{IN}	Analog Input Resistance	For Each Pin		>1000		G Ω
C_{IN}	Analog Input Capacitance			3		pF
CMRR	Input Common Mode Rejection Ratio	$V_{IN+} = V_{IN-} = 18\text{V}_{p-p}$ 200Hz Sine	●	100	128	dB
V_{IHCNV}	CNV High Level Input Voltage		●	1.3		V
V_{ILCNV}	CNV Low Level Input Voltage		●		0.5	V
I_{INCNV}	CNV Input Current	$V_{IN} = 0\text{V}$ to V_{DD}	●	-10	10	μA

CONVERTER CHARACTERISTICS

The ● denotes the specifications which apply over the full operating temperature range, otherwise specifications are at $T_A = 25^\circ\text{C}$. (Note 9)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS	
	Resolution		●	16		Bits	
	No Missing Codes		●	16		Bits	
	Transition Noise	SoftSpans 7 and 6: $\pm 10.24\text{V}$ and $\pm 10\text{V}$ Ranges SoftSpans 5 and 4: 0V to 10.24V and 0V to 10V Ranges SoftSpans 3 and 2: $\pm 5.12\text{V}$ and $\pm 5\text{V}$ Ranges SoftSpan 1: 0V to 5.12V Range		0.35 0.7 0.5 1.1		LSB _{RMS} LSB _{RMS} LSB _{RMS} LSB _{RMS}	
INL	Integral Linearity Error	SoftSpans 7 and 6: $\pm 10.24\text{V}$ and $\pm 10\text{V}$ Ranges (Note 10) SoftSpans 5 and 4: 0V to 10.24V and 0V to 10V Ranges (Note 10) SoftSpans 3 and 2: $\pm 5.12\text{V}$ and $\pm 5\text{V}$ Ranges (Note 10) SoftSpan 1: 0V to 5.12V Range (Note 10)	● ● ● ●	-1 -1.25 -1 -1.5	± 0.3 ± 0.4 ± 0.4 ± 0.5	1 1.25 1 1.5	LSB LSB LSB LSB
DNL	Differential Linearity Error	(Note 11)	●	-0.9	± 0.1	0.9	LSB
ZSE	Zero-Scale Error	(Note 12)	●	-700	± 160	700	μV
	Zero-Scale Error Drift				± 4		$\mu\text{V}/^\circ\text{C}$
FSE	Full-Scale Error	$V_{REFBUF} = 4.096\text{V}$ (REFBUF Overdriven) (Note 12)	●	-0.1	± 0.025	0.1	%FS
	Full-Scale Error Drift	$V_{REFBUF} = 4.096\text{V}$ (REFBUF Overdriven) (Note 12)			± 2.5		ppm/ $^\circ\text{C}$

235816f

For more information www.linear.com/LTC2358-16

3