PCN # 1486

DATE: January 15, 2015

Quality Assurance
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San Jose, CA 95134

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☐ **PROCESS CHANGE NOTICE**

☒ **PRODUCT CHANGE NOTICE**

MAXIM INTEGRATED HEREBY ISSUES NOTIFICATION OF CHANGE THAT MAY AFFECT THE FOLLOWING CATEGORIES:

☐ DESIGN	☒ WAFER FAB	☐ ASSEMBLY	☐ TEST	☐ ELEC/MECH SPECS

AFFECTED PRODUCT:

Ordering P/N: (See PN listing XLS in PCN ZIP file)

CHANGE FROM:	CHANGE TO:
Devices fabricated at Maxim's X3 fabrication facility in San Jose, CA on the S18UM LV process	Devices moved to be fabricated at Maxim's San Antonio, TX facility on the S18UM LV process

JUSTIFICATION: Maxim will be closing its X3 fabrication facility located in San Jose, CA. Production is targeted to shut down by 25 JUN 2015. Maxim currently produces the following process technology families at this wafer fabrication site: C6, MBIC3 and S18. These process technologies are qualified and running in production volume at our San Antonio, TX facility and Epson in Japan, our foundry partner.

This PCN is specific to the devices in the S18U (up to 48V) fabrication process which was fully qualified and initially released to production at San Antonio in July, 2011. Each of these PCN devices has been transferred to San Antonio and completed the AEC-Q100 testing. Product shipments will commence starting mid July 2015 upon successful approval of the PCN.

There will be no change to the form, fit, function, die geometry or guaranteed electrical datasheet EC table performance of these devices.

Attached are the AEC-Q100 reports for the transfer to the San Antonio fabrication facility.

TRACEABILITY: Maxim Integrated maintains full traceability by device marking, packaging labels and shipment documents.

Maxim Integrated's Change Notification System is designed to keep our customer base apprised of major product, manufacturing, or facility improvements.

Deborah Meeker / PCN Coordinator

For further information, please contact either of the people listed below.

Contact your local Maxim Integrated Company Representative or Deborah Meeker, PCN Coordinator
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MAX16936xATEx/V+
36V, 220kHz to 2.2Mhz Step-Down Converter with 28µA Quiescent Current
Temperature Grade 1
16L TQFN 5x5
T1655+4

MAX16936xATEx/V+
36V, 220kHz to 2.2Mhz Step-Down Converter with 28µA Quiescent Current

Summary:

This report summarizes the results of the reliability tests performed by Maxim to qualify the MAX16936xATEx/V+ for automotive applications.

Conclusion:

The MAX16936xATEx/V+ successfully meets the reliability requirements performed by Maxim in accordance with the automotive qualification standard, AEC-Q100.

AEC-Q100 Qualification Requirements/Acceptance Criteria:

	Stress	ABV	AEC #	#of Lots	SS/Lot	ACC	ATE Temp	Method
Device Specific Tests	Electrostatic Discharge (Human Body/Machine Model)	ESD (HBM/MM)	E2	1	25	HBM:2000V MM:200V	RH	AEC-Q100-002 AEC-Q100-003
	Electrostatic Discharge (Device Model)	ESD (CDM)	E3	1	15	750V corner pins, 500V all other pins	RH	AEC-Q100-011
	Latch-Up	LU	E4	1	6	0	RH	AEC-Q100-004
	Electrical Distribution	ED	E5	3 (1)	30	Cpk > 1.33^	RHC	AEC-Q100-009
Package/ Process Related Tests	Preconditioning (Per MSL)	PC	A1	3	77	0	R	J-STD-020 JESD22- A113
	Temp Hum Bias (85°C / 85% RH, 1000hrs)	THB	A2	3	77	0	RH	JESD22-A101 or A110
	Biased HAST (130°C / 85% RH, 96hrs)	BHAST						
	Unbiased HAST (130°C / 85% RH, 96hrs)	UHAST	A3	3	77	0	R	JESD22- A102, A118, or A101
	Temperature Cycle (-65°C to 150°C, 500X)	TC	A4	3	77	0	RH	JESD22-A104 and Appendix 3
	Wire Bond Pull (Post – TC)	WBP	C2	3	5	0	N/A	MIL-STD883 Method 2011
	High Temp Storage (150°C, 1000hrs or 500hrs)	HTSL+	A6	1	45	0	RH	JESD22- A103
	Solderability	SD	C3	1	15	0	N/A	JESD22-B102
	High Temp Operating Life (2) T_{amb} = 135°C	HTOL	B1	3	77	0	RHC	JESD22-A108
	Early Life Failure Rate (3) T_{amb} = 135°C	ELFR	B2	3	800	0	RH	AEC Q100-008

Note1:
1 – One lot process skewed may be used
2 – Grade 1 (1000hrs), Grade 2 (500hrs), Grade 3 (192hrs)
3 – Grade 1 (48hrs), Grade 2 (24hrs), Grade 3 (12hrs)

Note2:
^ – Statistical process controls to Cpk ≥ 1.67 for new products introduced after February 2013.
+ – Stress duration per temperature grade of the part.

Test Results/Lot information (Device Specific):

Table 1:

Lot Number:	TAQT1Q001A
Part Number:	MAX16936RATEA/V+CA
Temperature Grade:	1
Fab Site:	SAN ANTONIO
Fab Process Core:	S18
Fab Process Tech:	S18UM4S 8" 0.18um
Metallization/# Layers:	AlCu / 4
Passivation:	SiN / SiO2
Die Type:	AP33A-0E
Package Assembly Site:	ASECL
Die Size:	64.17 X 66.14
Package Type:	16L TQFN 5X5
Wire Bond Material/Dia.:	Au 1.3 mil
Mold Compound:	G770HJ
Die Attach:	EN4900G
Leadframe Material:	COPPER
Lead Finish:	100% MATTE TIN
Date Code:	1415
Rel Lot Number:	R26410G

AEC #	Test	Results *SS*		*Temp*
E2	**ESD (HBM)**	2000V		RH
E3	**ESD (CDM)**	750V		RH
E4	**Latch-Up**	CI 0/6	OV 0/6	RH
E5	**Electrical Distribution (1)**	Cpk >1.33		RHC

Note:

(1) One lot process skewed.

Test Results/Lot information (Package Technology): ASECL

Table 2:

Lot Number:		TAQT1Q001A		TAQT1Q002BA		TAQT1Q003BA	
Part Number:		MAX16936RATEA/V+CA		MAX16936RATEA/V+CA		MAX16936RATEA/V+CA	
Temperature Grade:		1		1		1	
Fab Site:		SAN ANTONIO		SAN ANTONIO		SAN ANTONIO	
Fab Process Core:		S18		S18		S18	
Fab Process Tech:		S18UM4S 8" 0.18um		S18UM4S 8" 0.18um		S18UM4S 8" 0.18um	
Metallization/# Layers:		AlCu / 4		AlCu / 4		AlCu / 4	
Passivation:		SiN / SiO2		SiN / SiO2		SiN / SiO2	
Die Type:		AP33A-0E		AP33A-0E		AP33A-0E	
Package Assembly Site:		ASECL		ASECL		ASECL	
Die Size:		64.17 X 66.14		64.17 X 66.14		64.17 X 66.14	
Package Type:		16L TQFN 5X5		16L TQFN 5X5		16L TQFN 5X5	
Wire Bond Material/Dia.:		Au 1.3 mil		Au 1.3 mil		Au 1.3 mil	
Mold Compound:		G770HJ		G770HJ		G770HJ	
Die Attach:		EN4900G		EN4900G		EN4900G	
Leadframe Material:		COPPER		COPPER		COPPER	
Lead Finish:		100% MATTE TIN		100% MATTE TIN		100% MATTE TIN	
Date Code:		1415		1426		1425	
Rel Lot Number:		R26410G		R27254A		R27254B	
AEC #	**Test**	**Results** *SS*	*Temp*	**Results** *SS*	*Temp*	**Results** *SS*	*Temp*
A1	**Preconditioning**	0/231	R	0/231	R	0/231	R
A2	**HAST**	0/77	RH	0/77	RH	0/77	RH
A3	**Unbiased HAST**	0/77	R	0/77	R	0/77	R
A4	**Temperature Cycle**	500x – 0/77	RH	500x – 0/77	RH	500x – 0/77	RH
C2	**Wire Bond Pull**	-	N/A	0/105	N/A	-	N/A
A6	**High Temp Storage**	1000hrs – 0/45	RH	-	N/A	-	N/A
C3	**Solderability**	-	N/A	-	N/A	-	N/A
B1	**High Temp Op/Life**	1000hrs – 0/77	RHC	1000hrs – 0/77	RHC	1000hrs – 0/77	RHC

Test Results/Lot information (Package Technology): UTL

Table 3:

Lot Number:		SAE9Q001FA		SAKZ3A004AA		SAKZ3Q003DA	
Part Number:		MAX16936RATEA/V+		MAX16936RATEA/V+		MAX16936RATEA/V+	
Temperature Grade:		1		1		1	
Fab Site:		SAN JOSE		SAN JOSE		SAN JOSE	
Fab Process Core:		S18		S18		S18	
Fab Process Tech:		S18UM4 8" 0.18 um		S18UM4 8" 0.18 um		S18UM4 8" 0.18 um	
Metallization/# Layers:		AlCu / 4		AlCu / 4		AlCu / 4	
Passivation:		SiN/SiO2		SiN/SiO2		SiN/SiO2	
Die Type:		AP33A-0B		AP33A-0B		AP33A-0B	
Package Assembly Site:		UTL		UTL		UTL	
Die Size:		64.17 X 66.14		64.17 X 66.14		64.17 X 66.14	
Package Type:		16L TQFN 5X5		16L TQFN 5X5		16L TQFN 5X5	
Wire Bond Material/Dia.:		Au 1.3 mils		Au 1.3 mils		Au 1.3 mils	
Mold Compound:		G770HCD		G770HCD		G770HCD	
Die Attach:		AB8200T		AB8200T		AB8200T	
Leadframe Material:		COPPER		COPPER		COPPER	
Lead Finish:		100% MATTE TIN		100% MATTE TIN		100% MATTE TIN	
Date Code:		1305		1318		1318	
Rel Lot Number:		R26114E		R26114F		R26114G	
AEC #	**Test**	**Results** *SS*	*Temp*	**Results** *SS*	*Temp*	**Results** *SS*	*Temp*
A1	**Preconditioning**	0/231	R	0/231	R	0/231	R
A2	**HAST**	0/77	RH	0/77	RH	0/77	RH
A3	**Unbiased HAST**	0/77	R	0/77	R	0/77	R
A4	**Temperature Cycle**	500x – 0/77	RH	500x – 0/77	RH	500x – 0/77	RH
C2	**Wire Bond Pull**	0/102	N/A	-	N/A	-	N/A
A6	**High Temp Storage**	1000hrs – 0/45	RH	-	N/A	-	N/A
C3	**Solderability**	0/15 (1)	N/A	-	N/A	-	N/A
B1	**High Temp Op/Life**	1000hrs – 0/77	RHC	-	N/A	-	N/A

Note:

(1) MAX16907RATE/V+, R26327CS1, T1655+4 – test vehicle for solderability.

Test Results/Lot information (Wafer Process Technology):

Table 4:

Lot Number:		TAQJ4Q001F		TAQT1Q001A		TAQT1Q002BA	
Part Number:		MAX16990ATCD/V+		MAX16936RATEA/V+CA		MAX16936RATEA/V+CA	
Temperature Grade:		1		1		1	
Fab Site:		SAN ANTONIO		SAN ANTONIO		SAN ANTONIO	
Fab Process Core:		S18		S18		S18	
Fab Process Tech:		S18UM4S 8" 0.18um		S18UM4S 8" 0.18um		S18UM4S 8" 0.18um	
Metallization/# Layers:		AlCu / 4		AlCu / 4		AlCu / 4	
Passivation:		SiN / SiO2		SiN / SiO2		SiN / SiO2	
Die Type:		AP37A-0C		AP33A-0E		AP33A-0E	
Package Assembly Site:		ASE CHUNG-LI		ASE CHUNG-LI		ASECL	
Die Size:		50 X 50		64.17 X 66.14		64.17 X 66.14	
Package Type:		12L TQFN 3X3		16L TQFN 5X5		16L TQFN 5X5	
Wire Bond Material/Dia.:		Au 1.0 mil		Au 1.3 mil		Au 1.3 mil	
Mold Compound:		G770HJ		G770HJ		G770HJ	
Die Attach:		EN4900G		EN4900G		EN4900G	
Leadframe Material:		COPPER		COPPER		COPPER	
Lead Finish:		100% MATTE TIN		100% MATTE TIN		100% MATTE TIN	
Date Code:		1424		1415		1426	
Rel Lot Number:		R27202A		R26410G		R27254A	
AEC #	**Test**	**Results** *SS*	*Temp*	**Results** *SS*	*Temp*	**Results** *SS*	*Temp*
A1	**Preconditioning**	0/231	R	0/231	R	0/231	R
A2	**HAST**	0/77	RH	0/77	RH	0/77	RH
A3	**Unbiased HAST**	0/77	R	0/77	R	0/77	R
A4	**Temperature Cycle**	500x – 0/77	RH	500x – 0/77	RH	500x – 0/77	RH
A6	**High Temp Storage**	1000hrs – 0/45	RH	1000hrs – 0/77	RH	-	N/A
B1	**High Temp Operating Life**	1000hrs – 0/77	RHC	1000hrs – 0/77	RHC	1000hrs – 0/77	RHC
B2	**Early Life Failure Rate**	48hrs – 0/800	RH	48hrs – 0/800	RH	48hrs – 0/800	RH

Test Results/Lot information (Wafer Process Technology):

Table 5:

Lot Number:		TAQT1Q003BA		TAMB0Z001BC		TAMC4U005P	
Part Number:		MAX16936RATEA/V+CA		MAX5704AUB+		MAX16840ATB+T	
Temperature Grade:		1		1		1	
Fab Site:		SAN ANTONIO		SAN ANTONIO		SAN ANTONIO	
Fab Process Core:		S18		S18		S18	
Fab Process Tech:		S18UM4S 8" 0.18um		S18UM4S 8" 0.18um		S18UM3S 8" 0.18um	
Metallization/# Layers:		AlCu / 4		AlCu / 4		AlCu / 3	
Passivation:		SiN / SiO2		SiN / SiO2		SiN / SiO2	
Die Type:		AP33A-0E		DB50A-0C		SP26A-0A	
Package Assembly Site:		ASECL		ATP		ASE CHUNG-LI	
Die Size:		64.17 X 66.14		31.89 X 62.6		46.85 X 61.42	
Package Type:		16L TQFN 5X5		10L MSOP		10L TDFN 3X3	
Wire Bond Material/Dia.:		Au 1.3 mil		Au 1.0 mil		Au 1.3 mil	
Mold Compound:		G770HJ		G700K		G770HJ	
Die Attach:		EN4900G		AB8290		EN4900G	
Leadframe Material:		COPPER		COPPER		COPPER	
Lead Finish:		100% MATTE TIN		100% MATTE TIN		100% MATTE TIN	
Date Code:		1425		1334		1337	
Rel Lot Number:		R27254B		R26410E		R26410ZI1	
AEC #	**Test**	**Results** *SS*	*Temp*	**Results** *SS*	*Temp*	**Results** *SS*	*Temp*
A1	**Preconditioning**	0/231	R	0/231	R	-	N/A
A2	**HAST**	0/77	RH	0/77	R	-	N/A
A3	**Unbiased HAST**	0/77	R	-	N/A	-	N/A
A4	**Temperature Cycle**	500x – 0/77	RH	500x – 0/77	R	-	N/A
A6	**High Temp Storage**	-	N/A	-	N/A	-	N/A
B1	**High Temp Operating Life**	1000hrs – 0/76	RHC	1000hrs – 0/77	R	-	N/A
B2	**Early Life Failure Rate**	48hrs – 0/800	RH	-	N/A	12hrs – 0/3584	R

Electrical Distribution: One Lot Process Skewed

Test Name	Temp	Unit	EC / QA Min (Output)	EC / QA Max (Output)	QA CPK	Data Sheet Parameter
I_IN_40	-40	mA	0.80	5.00	4.92	Input Voltage range (V_{IN}) and Quiescent Supply Current
I_IN_40	25	mA	0.80	5.00	4.83	Input Voltage range (V_{IN}) and Quiescent Supply Current
I_IN_40	125	mA	0.80	5.00	2.86	Input Voltage range (V_{IN}) and Quiescent Supply Current
I_EN_40	-40	nA	-500.00	700.00	18.85	Enable input current
I_EN_40	25	nA	-500.00	700.00	30.82	Enable input current
I_EN_40	125	nA	-500.00	700.00	11.04	Enable input current
I_IN_SHDN_40	-40	uA	2.00	40.00	2.71	Standby Supply Current (I_{SH})
I_IN_SHDN_40	25	uA	2.00	40.00	2.68	Standby Supply Current (I_{SH})
I_IN_SHDN_40	125	uA	2.00	40.00	2.71	Standby Supply Current (I_{SH})
I_SHDN_12	-40	uA	1.00	40.00	5.55	Standby Supply Current (I_{SH})
I_SHDN_12	25	uA	1.00	40.00	5.60	Standby Supply Current (I_{SH})
I_SHDN_12	125	uA	1.00	40.00	5.68	Standby Supply Current (I_{SH})
I_IN_12	-40	mA	0.80	5.00	5.31	Quiescent Supply Current (I_Q)
I_IN_12	25	mA	0.80	5.00	3.87	Quiescent Supply Current (I_Q)
I_IN_12	125	mA	0.80	5.00	2.46	Quiescent Supply Current (I_Q)
IN_UVLO_R	-40	V	4.00	4.55	2.44	Undervoltage Lockout ($UVLO_{IN}$)
IN_UVLO_R	25	V	4.00	4.55	2.48	Undervoltage Lockout ($UVLO_{IN}$)
IN_UVLO_R	125	V	4.00	4.55	2.53	Undervoltage Lockout ($UVLO_{IN}$)
IN_UVLO_HYST	-40	mV	50.00	275.00	19.53	Undervoltage Lockout (HYST)
IN_UVLO_HYST	25	mV	50.00	275.00	19.17	Undervoltage Lockout (HYST)
IN_UVLO_HYST	125	mV	50.00	275.00	19.13	Undervoltage Lockout (HYST)
VCC_UVLO_R	-40	V	3.40	4.40	3.24	VCC Undervoltage Lockout ($UVLO_{VCC}$)
VCC_UVLO_R	25	V	3.40	4.40	3.26	VCC Undervoltage Lockout ($UVLO_{VCC}$)
VCC_UVLO_R	125	V	3.40	4.40	3.25	VCC Undervoltage Lockout ($UVLO_{VCC}$)
VDRV_5P75_0P1	-40	V	4.75	5.25	3.05	VDRV Output voltage (V_{DRV})
VDRV_5P75_0P1	25	V	4.75	5.25	2.81	VDRV Output voltage (V_{DRV})
VDRV_5P75_0P1	125	V	4.75	5.25	2.75	VDRV Output voltage (V_{DRV})
VDRV_5P75_30	-40	V	4.75	5.25	3.16	VDRV Output voltage (V_{DRV})

VDRV_5P75_30	25	V	4.75	5.25	3.03	VDRV Output voltage (V_{DRV})
VDRV_5P75_30	125	V	4.75	5.25	3.03	VDRV Output voltage (V_{DRV})
VDRV_DROPOUT	-40	mV	0.00	500.00	3.84	VDO Dropout voltage
VDRV_DROPOUT	25	mV	0.00	500.00	4.01	VDO Dropout voltage
VDRV_DROPOUT	125	mV	0.00	500.00	3.94	VDO Dropout voltage
VDRV_6P5_0P1	-40	V	4.75	5.25	3.05	VDRV Output voltage (V_{DRV})
VDRV_6P5_0P1	25	V	4.75	5.25	2.81	VDRV Output voltage (V_{DRV})
VDRV_6P5_0P1	125	V	4.75	5.25	2.75	VDRV Output voltage (V_{DRV})
VDRV_10_0P1	-40	V	4.75	5.25	3.05	VDRV Output voltage (V_{DRV})
VDRV_10_0P1	25	V	4.75	5.25	2.81	VDRV Output voltage (V_{DRV})
VDRV_10_0P1	125	V	4.75	5.25	2.75	VDRV Output voltage (V_{DRV})
VDRV_10_30	-40	V	4.75	5.25	3.16	VDRV Output voltage (V_{DRV})
VDRV_10_30	25	V	4.75	5.25	3.02	VDRV Output voltage (V_{DRV})
VDRV_10_30	125	V	4.75	5.25	3.02	VDRV Output voltage (V_{DRV})
VDRV_12_0P1	-40	V	4.75	5.25	3.05	VDRV Output voltage (V_{DRV})
VDRV_12_0P1	25	V	4.75	5.25	2.81	VDRV Output voltage (V_{DRV})
VDRV_12_0P1	125	V	4.75	5.25	2.75	VDRV Output voltage (V_{DRV})
VDRV_12_30	-40	V	4.75	5.25	3.17	VDRV Output voltage (V_{DRV})
VDRV_12_30	25	V	4.75	5.25	3.02	VDRV Output voltage (V_{DRV})
VDRV_12_30	125	V	4.75	5.25	3.02	VDRV Output voltage (V_{DRV})
VDRV_40_0P1	-40	V	4.75	5.25	3.02	VDRV Output voltage (V_{DRV})
VDRV_40_0P1	25	V	4.75	5.25	2.78	VDRV Output voltage (V_{DRV})
VDRV_40_0P1	125	V	4.75	5.25	2.69	VDRV Output voltage (V_{DRV})
VDRV_40_30	-40	V	4.75	5.25	3.18	VDRV Output voltage (V_{DRV})
VDRV_40_30	25	V	4.75	5.25	3.03	VDRV Output voltage (V_{DRV})
VDRV_40_30	125	V	4.75	5.25	3.02	VDRV Output voltage (V_{DRV})
OSC_600K_12	-40	KHz	570.00	630.00	2.83	Oscillator Frequency Accuracy and Switching Frequency Range (F_{SW})
OSC_600K_12	25	KHz	570.00	630.00	2.94	Oscillator Frequency Accuracy and Switching Frequency Range (F_{SW})
OSC_600K_12	125	KHz	570.00	630.00	3.05	Oscillator Frequency Accuracy and Switching Frequency Range (F_{SW})
DUTY_600K_12	-40	%	90.00	98.00	2.98	Duty Cycle (D_{MAX})
DUTY_600K_12	25	%	90.00	98.00	2.94	Duty Cycle (D_{MAX})
DUTY_600K_12	125	%	90.00	98.00	2.85	Duty Cycle (D_{MAX})

OSC_200K_12	-40	KHz	185.00	215.00	3.39	Oscillator Frequency Accuracy and Switching Frequency Range (F_{SW})
OSC_200K_12	25	KHz	185.00	215.00	3.32	Oscillator Frequency Accuracy and Switching Frequency Range (F_{SW})
OSC_200K_12	125	KHz	185.00	215.00	3.33	Oscillator Frequency Accuracy and Switching Frequency Range (F_{SW})
DUTY_200K_12	-40	%	90.00	98.00	2.81	Duty Cycle (D_{MAX})
DUTY_200K_12	25	%	90.00	98.00	2.87	Duty Cycle (D_{MAX})
DUTY_200K_12	125	%	90.00	98.00	2.94	Duty Cycle (D_{MAX})
OSC_2MEG_12	-40	MHz	1.73	1.98	4.19	Oscillator Frequency Accuracy and Switching Frequency Range (F_{SW})
OSC_2MEG_12	25	MHz	1.73	1.98	4.19	Oscillator Frequency Accuracy and Switching Frequency Range (F_{SW})
OSC_2MEG_12	125	MHz	1.73	1.98	4.11	Oscillator Frequency Accuracy and Switching Frequency Range (F_{SW})
DUTY_2MEG_12	-40	%	86.00	94.00	2.38	Duty Cycle (D_{MAX})
DUTY_2MEG_12	25	%	86.00	94.00	2.55	Duty Cycle (D_{MAX})
DUTY_2MEG_12	125	%	86.00	94.00	2.74	Duty Cycle (D_{MAX})
SYNC_900K_12	-40	KHz	897.00	903.00	4.54	**Sync Frequency Range and Logic Level before Sync capacitor**
SYNC_900K_12	25	KHz	897.00	903.00	4.54	**Sync Frequency Range and Logic Level before Sync capacitor**
SYNC_900K_12	125	KHz	898.00	902.50	3.46	**Sync Frequency Range and Logic Level before Sync capacitor**
SYNC_660K_12	-40	KHz	658.00	662.00	4.33	Sync Frequency Range
SYNC_660K_12	25	KHz	658.00	662.00	4.34	Sync Frequency Range
SYNC_660K_12	125	KHz	658.00	662.00	4.35	Sync Frequency Range
RDS_NDRV_SRC	-40	Ohms	0.10	4.00	7.88	NDRV ON resistance
RDS_NDRV_SRC	25	Ohms	0.10	4.00	7.88	NDRV ON resistance
RDS_NDRV_SRC	125	Ohms	0.80	3.80	5.17	NDRV ON resistance
ICS_0P0	-40	nA	-1300.00	500.00	3.82	CS input current
ICS_0P0	25	nA	-1300.00	500.00	6.70	CS input current
ICS_0P0	125	nA	-1300.00	500.00	10.90	CS input current
V_CS_MAX	-40	mV	285.00	315.00	4.49	CS threshold voltage
V_CS_MAX	25	mV	285.00	315.00	5.68	CS threshold voltage
V_CS_MAX	125	mV	285.00	315.00	5.66	CS threshold voltage
ICS_0P35	-40	nA	-1300.00	500.00	2.63	CS input current
ICS_0P35	25	nA	-1300.00	500.00	4.20	CS input current
ICS_0P35	125	nA	-1300.00	500.00	4.86	CS input current
RDS_NDRV_SNK	-40	Ohms	0.00	4.00	7.87	NDRV ON resistance
RDS_NDRV_SNK	25	Ohms	0.00	4.00	7.67	NDRV ON resistance

RDS_NDRV_SNK	125	Ohms	0.80	3.80	4.49	NDRV ON resistance
RDS_DRAIN	-40	Ohms	0.00	0.35	6.28	Power switch On resistance
RDS_DRAIN	25	Ohms	0.00	0.35	5.87	Power switch On resistance
RDS_DRAIN	125	Ohms	0.05	0.35	2.44	Power switch On resistance
VREF_OUT1	-40	V	0.90	1.10	9.89	OUT_ Regulation voltage
VREF_OUT1	25	V	0.90	1.10	10.86	OUT_ Regulation voltage
VREF_OUT1	125	V	0.90	1.10	11.42	OUT_ Regulation voltage
VREF_OUT2	-40	V	0.90	1.10	9.81	OUT_ Regulation voltage
VREF_OUT2	25	V	0.90	1.10	11.05	OUT_ Regulation voltage
VREF_OUT2	125	V	0.90	1.10	11.31	OUT_ Regulation voltage
ICOMP_SNK	-40	uA	160.00	800.00	3.34	COMP sink current
ICOMP_SNK	25	uA	160.00	800.00	4.07	COMP sink current
ICOMP_SNK	125	uA	160.00	800.00	2.50	COMP sink current
ICOMP_SRC	-40	uA	160.00	800.00	3.38	COMP source current
ICOMP_SRC	25	uA	160.00	800.00	4.10	COMP source current
ICOMP_SRC	125	uA	160.00	800.00	2.40	COMP source current
GM_COMP	-40	uS	340.00	880.00	2.49	Transconductance
GM_COMP	25	uS	340.00	880.00	2.38	Transconductance
GM_COMP	125	uS	340.00	880.00	2.37	Transconductance
I_DIM_0P0	-40	nA	-600.00	100.00	2.36	DIM input current
I_DIM_0P0	25	nA	-600.00	100.00	4.07	DIM input current
I_DIM_0P0	125	nA	-600.00	100.00	4.94	DIM input current
I_DIM_5P0	-40	nA	-600.00	100.00	66.04	DIM input current
I_DIM_5P0	25	nA	-600.00	100.00	40.14	DIM input current
I_DIM_5P0	125	nA	-600.00	100.00	53.84	DIM input current
TON_OUT1	-40	ns	50.00	1000.00	4.30	DIM to LED Turn on Time
TON_OUT1	25	ns	50.00	1000.00	4.76	DIM to LED Turn on Time
TON_OUT1	125	ns	50.00	1000.00	4.55	DIM to LED Turn on Time
TRISE_OUT1	-40	ns	10.00	600.00	3.40	Iout Rise time
TRISE_OUT1	25	ns	10.00	600.00	3.25	Iout Rise time
TRISE_OUT1	125	ns	10.00	600.00	4.82	Iout Rise time
TFALL_OUT1	-40	ns	5.00	50.00	2.67	Iout Fall time
TFALL_OUT1	25	ns	5.00	50.00	2.72	Iout Fall time
TFALL_OUT1	125	ns	5.00	50.00	2.45	Iout Fall time
TON_OUT2	-40	ns	50.00	1000.00	4.29	DIM to LED Turn on Time

TON_OUT2	25	ns	50.00	1000.00	4.71	DIM to LED Turn on Time
TON_OUT2	125	ns	50.00	1000.00	4.50	DIM to LED Turn on Time
TOFF_OUT2	-40	ns	20.00	100.00	9.85	DIM to LED Turn off ime
TOFF_OUT2	25	ns	20.00	100.00	10.54	DIM to LED Turn off ime
TOFF_OUT2	125	ns	20.00	100.00	14.63	DIM to LED Turn off ime
TRISE_OUT2	-40	ns	10.00	600.00	4.87	Iout Rise time
TRISE_OUT2	25	ns	10.00	600.00	4.32	Iout Rise time
TRISE_OUT2	125	ns	10.00	600.00	11.06	Iout Rise time
TFALL_OUT2	-40	ns	5.00	50.00	3.48	Iout Fall time
TFALL_OUT2	25	ns	5.00	50.00	3.12	Iout Fall time
TFALL_OUT2	125	ns	5.00	50.00	2.83	Iout Fall time
I_EN_0P0	-40	nA	-200.00	500.00	51.74	Enable Input current
I_EN_0P0	25	nA	-200.00	500.00	70.23	Enable Input current
I_EN_0P0	125	nA	-200.00	500.00	56.08	Enable Input current
I_OV_0P0	-40	nA	-100.00	100.00	67.19	OV input bias current
I_OV_0P0	25	nA	-100.00	100.00	67.91	OV input bias current
I_OV_0P0	125	nA	-100.00	100.00	58.75	OV input bias current
I_OV_1P3	-40	nA	-100.00	100.00	72.56	OV input bias current
I_OV_1P3	25	nA	-100.00	100.00	70.41	OV input bias current
I_OV_1P3	125	nA	-100.00	100.00	60.83	OV input bias current
I_OUT1_100	-40	mA	95.00	105.00	4.41	LED output current accuracy and current range
I_OUT1_100	25	mA	97.00	103.00	2.95	LED output current accuracy and current range
I_OUT1_100	125	mA	97.00	103.00	3.22	LED output current accuracy and current range
I_OUT2_100	-40	mA	95.00	105.00	4.53	LED output current accuracy and current range
I_OUT2_100	25	mA	97.00	103.00	3.08	LED output current accuracy and current range
I_OUT2_100	125	mA	97.00	103.00	3.27	LED output current accuracy and current range
OUT_MATCH	-40	%	-2.00	2.00	6.37	Led string matching
OUT_MATCH	25	%	-2.00	2.00	6.13	Led string matching
OUT_MATCH	125	%	-2.00	2.00	5.65	Led string matching
I_OUT1_20	-40	mA	18.70	21.30	2.64	LED output current accuracy and current range
I_OUT1_20	25	mA	18.70	21.30	2.46	LED output current accuracy and current range
I_OUT1_20	125	mA	18.70	21.30	2.43	LED output current accuracy and current range
I_OUT2_20	-40	mA	18.70	21.30	2.70	LED output current accuracy and current range
I_OUT2_20	25	mA	18.70	21.30	2.56	LED output current accuracy and current range
I_OUT2_20	125	mA	18.70	21.30	2.47	LED output current accuracy and current range

I_OUT1_150	-40	mA	141.00	157.00	4.63	Led Current Range
I_OUT1_150	25	mA	141.00	157.00	4.75	Led Current Range
I_OUT1_150	125	mA	141.00	157.00	5.07	Led Current Range
I_OUT2_150	-40	mA	141.00	157.00	4.69	Led Current Range
I_OUT2_150	25	mA	141.00	157.00	4.97	Led Current Range
I_OUT2_150	125	mA	141.00	157.00	5.05	Led Current Range
ILEAK_OUT1	-40	nA	-100.00	300.00	10.33	OUT Leakage current
ILEAK_OUT1	25	nA	-100.00	300.00	9.99	OUT Leakage current
ILEAK_OUT1	125	nA	-100.00	300.00	7.04	OUT Leakage current
ILEAK_OUT2	-40	nA	-100.00	300.00	8.65	OUT Leakage current
ILEAK_OUT2	25	nA	-100.00	300.00	9.14	OUT Leakage current
ILEAK_OUT2	125	nA	-100.00	300.00	6.58	OUT Leakage current
ILEAK_CFB_0P0	-40	nA	-300.00	300.00	12.25	CFB Input Bias Current
ILEAK_CFB_0P0	25	nA	-300.00	300.00	17.29	CFB Input Bias Current
ILEAK_CFB_0P0	125	nA	-300.00	300.00	22.61	CFB Input Bias Current
ILEAK_CFB_3P0	-40	nA	-300.00	300.00	156.75	CFB Input Bias Current
ILEAK_CFB_3P0	25	nA	-300.00	300.00	217.19	CFB Input Bias Current
ILEAK_CFB_3P0	125	nA	-300.00	300.00	178.11	CFB Input Bias Current
ILEAK_FLAG_5P5	-40	nA	-300.00	300.00	114.73	FLT leakage current
ILEAK_FLAG_5P5	25	nA	-300.00	300.00	171.65	FLT leakage current
ILEAK_FLAG_5P5	125	nA	-300.00	300.00	104.77	FLT leakage current
FLAG_VOL	-40	mV	0.00	300.00	3.70	FLT Output voltage low
FLAG_VOL	25	mV	0.00	300.00	6.22	FLT Output voltage low
FLAG_VOL	125	mV	0.00	300.00	6.90	FLT Output voltage low

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