



Product Termination Notification



Product Group: Vishay Siliconix/Mar13, 2015/PCN- SIL-0052015 Rev1

End of Life Notification

DESCRIPTION OF CHANGE: For SQ3427EEV-T1-GE3, we had announced via PCN-SIL-0462014 that we will be transferring the wafer Fab site from Santa Clara, USA to Itzehoe, Germany and no changes were expected in silicon design or the datasheet. In order to meet part qualification criteria per AEC Q101 Rev D specifications, we had to make changes in silicon design which will result in change in datasheet specifications. The replacement products are identified in the table below.

Production of SQ3427EEV-T1-GE3 from Santa Clara Fab will be terminated per the time schedule in this product termination notification and last time buy orders must be received within the specified timeframe.

CLASSIFICATION OF CHANGE: End of life

REASON FOR CHANGE: Closure of Fab at Santa Clara

EXPECTED INFLUENCE ON QUALITY/RELIABILITY/PERFORMANCE: We expect quality and reliability to improve with the redesigned parts. Please refer to the following page for comparison of electrical parameters.

PRODUCT CATAGORY: Automotive MOSFETs

VISHAY PART NUMBERS AFFECTED:

Affected Vishay Part	Recommended Replacement Part	Sample Availability of Replacement Part
SQ3427EEV-T1-GE3	SQ3427EV-T1-GE3 (preferred replacement without ESD network) SQ3427AEEV-T1-GE3 (replacement with ESD network)	Apr-15

VISHAY BRAND(s): Vishay-Siliconix

QUALIFICATION DATA: Qualification data for replacement part is planned for April 2015

SAMPLE AVAILABILITY: For samples, please email automos.pcn@Vishay.com and include part number, pcn number, date samples needed, required quantity, ship-to address and contact information including phone number.

TIME SCHEDULE: Last time buy orders are required by 13-Sep 2015 and last time buy shipments will be made by 13-Mar-2016.

ISSUED BY: Shishir Rai, Automotive Product Marketing (E-mail: Shishir.Rai@Vishay.com)

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Procedure #

Affected Part Number SQ3427EEV
 AEC-Q101 Qualified Yes
 Package Type TSOP-6
 Process Technology 90M cells/sq.in.
 100% Rg & UIS Test Yes
 Datasheet Rev B

Replacement Part Number SQ3427AEEV
 AEC-Q101 Qualified Yes
 Package Type TSOP-6
 Process Technology 90M cells/sq.in.
 100% Rg & UIS Test Yes
 Datasheet Rev A - pending*

* Note: This part number is still under release process and the datasheet specifications are preliminary. The parameters are subjected to verification and may be different in the final version of the datasheet.

Absolute Maxmtrm Ratings	Symbol	Test Conditions	Limit	Units
Drain-Source Voltage	VDS		-60	V
Gate-Source Voltage	VGS		20	±V
Continuous Drain Current	ID	TC=25°C	-5.5	A
Continuous Drain Current	ID	TC=125°C	-3.2	A
Continuous Source Current (Diode Conduction)	IS		-6.3	A
Pulsed Drain Current	IDM		-22	A
Single Pulse Avalanche Current	IAS		-21	A
Single Pulse Avalanche Energy	EAS		22	mJ
Max Power Dissipation	PD	TC=25°C	5	W
Max Power Dissipation	PD	TC=125°C	1.6	W
Thermal Resistance J-A	RthJA	PCB Mount	110	°C/W
Thermal Resistance J-F	RthJF		30	°C/W

Symbol	Test Conditions	Limit	Units
VDS		-60	V
VGS		20	±V
ID	TC=25°C	-5.3	A
ID	TC=125°C	-3	A
IS		-6.3	A
IDM		-21	A
IAS	L=0.1mH	-21	A
EAS		22	mJ
PD	TC=25°C	5	W
PD	TC=125°C	1.6	W
RthJA	PCB Mount	110	°C/W
RthJF		30	°C/W

Type of Change	Risk
None	None
None	None
Spec changed	Check
Spec changed	Check
None	None
Spec changed	Check
None	None
None	None
None	None
None	None
None	None
None	None

Specifications TJ = 25°C, unless otherwise noted	Test Conditions		Min	Typ	Max	Units
Drain-Source Breakdown Voltage	VDS	VGS = 0V ID = -250uA	-60			V
Gate-Source Threshold Voltage	VGS(th)	VDS = VGS ID = -250uA	-1.5		-2.5	V
On State Drain Current	ID(on)	VGS = -10V VDS ≤ -5V	-10			A
Drain-Source On-State Resistance	RDS(on)	VGS = -10V ID = -4.5A		0.067	0.082	Ω
Drain-Source On-State Resistance		VGS = -10V ID = -4.5A Tj = 125°C			0.135	
Drain-Source On-State Resistance		VGS = -10V ID = -4.5A Tj = 175°C			0.165	
Drain-Source On-State Resistance		VGS = -4.5V ID = -3.5A		0.095	0.115	
Forward Transconductance	gfs	VDS = -15V ID = -4A		9		S
Input Capacitance	Ciss	VGS = 0V VDS = -30V, f = 1MHz		900	1125	pF
Output Capacitance	Coss			90	115	
Reverse Transfer Capacitance	Crss			65	85	
Total Gate Charge	Qg	VGS = -10V VDS = -30V, ID = -5A		20.8	32	nC
Gate-Source Charge	Qgs			2.9		
Date-Drain Charge	Qgd			5.7		
Gate Resistance	Rg		f = 1MHz	2.8	5.6	
Turn-On delay Time	td(on)	VDD = -30V, RL = 6Ω ID = -5A, VGEN = -10V, Rg = 1Ω		10	15	ns
Rise Time	tr			7	11	
Turn-Off Delay Time	td(off)			26	39	
Fall Time	tf			12	18	
Pulsed Source-Drain Current	ISM					
Forward Voltage	VSD	VGS = 0V IS = -1.6A		-0.8	-1.2	V

	Test Conditions		Min	Typ	Max	Units
VDS	VGS = 0V	ID = -250uA	-60			V
VGS(th)	VDS = VGS	ID = -250uA	-1.5	-2	-2.5	V
ID(on)	VGS = -10V	VDS ≤ -5V	-10			A
RDS(on)	VGS = -10V	ID = -4.5A		0.079	0.095	Ω
	VGS = -10V	ID = -4.5A Tj = 125°C			0.148	
	VGS = -10V	ID = -4.5A Tj = 175°C			0.178	
	VGS = -4.5V	ID = -3.5A		0.112	0.135	
gfs	VDS = -15V	ID = -4A		9		S
Ciss	VGS = 0V VDS = -30V, f = 1MHz			700		pF
Coss				65		
Crss				45		
Qg	VGS = -10V VDS = -30V, ID = -5A			20.8		nC
Qgs				2.9		
Qgd				5.7		
Rg			f = 1MHz		5.6	
td(on)	VDD = -30V, RL = 6Ω ID = -5A, VGEN = -10V, Rg = 1Ω			10		ns
tr				7		
td(off)				26		
tf				12		
ISM						
VSD	VGS = 0V	IF = -1.6A		-0.8	-1.2	V

Type of Change	Risk
None	None
None	None
None	None
Spec changed	Check
Spec changed	Check
Spec changed	Check
Spec changed	Check
None	None
Improvement	None
Improvement	None
Improvement	None
Spec changed	Check
None	Check
None	Check
Draft datasheet	Check
Application dependent	Check
Application dependent	Check
Application dependent	Check
Application dependent	Check
Spec changed	Check
None	None

Affected Part Number SQ3427EEV
 AEC-Q101 Qualified Yes
 Package Type TSOP-6
 Process Technology 90M cells/sq.in.
 100% Rg & UIS Test Yes
 Datasheet Rev B

Replacement Part Number SQ3427AEEV
 AEC-Q101 Qualified Yes
 Package Type TSOP-6
 Process Technology 90M cells/sq.in.
 100% Rg & UIS Test Yes
 Datasheet Rev A - pending*

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RthJF		30	°C/W

Type of Change	Risk
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Spec changed	Check
None	None
Spec changed	Check
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None	None
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Forward Transconductance	gfs	VDS = -15V ID = -4A		9		S
Input Capacitance	Ciss	VGS = 0V VDS = -30V, f = 1MHz		900	1125	pF
Output Capacitance	Coss			90	115	
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Total Gate Charge	Qg	VGS = -10V VDS = -30V, ID = -5A		20.8	32	nC
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Rise Time	tr			7	11	
Turn-Off Delay Time	td(off)			26	39	
Fall Time	tf			12	18	
Pulsed Source-Drain Current	ISM					
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Ciss	VGS = 0V VDS = -30V, f = 1MHz			900		pF
Coss				90		
Crss				65		
Qg	VGS = -10V VDS = -30V, ID = -5A			20.8		nC
Qgs				2.9		
Qgd				5.7		
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td(on)	VDD = -30V, RL = 6Ω ID = -5A, VGEN = -10V, Rg = 1Ω			10		ns
tr				7		
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VSD	VGS = 0V	IF = -1.6A		-0.8	-1.2	V

Type of Change	Risk
None	None
None	None
None	None
Spec changed	Check
Spec changed	Check
Spec changed	Check
Spec changed	Check
None	None
None	None
Spec changed	Check
Spec changed	Check
None	None
None	None
Spec changed	Check
None	None