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# Product Termination Notification



Product Group: SIL/Tue Jul 26, 2022/PTN-SIL-015-2022-REV-0

## Conversion to Copper (Cu) Wire – SQS484EN

For further information, please contact your regional Vishay office.

### CONTACT INFORMATION

#### Americas

Vishay Siliconix  
2565 Junction Ave  
-  
San Jose CA United States 95134  
Phone: 4089705799  
Fax: 4089705799  
business-americas@vishay.com

#### Europe

VISHAY Europe Sales GmbH  
Dr.-Felix-Zandman-Platz 1  
-  
Selb Germany 95100  
Phone: 49 9287 710  
Fax: 49 9287 70435  
business-europe@vishay.com

#### Asia

Vishay Intertechnology Asia Pte. Ltd  
37A Tampines Street 92 #07-01  
-  
Singapore Singapore 528886  
Phone: 65 6788 6668  
Fax: 65 6788 0988  
business-asia@vishay.com

**Description of Change:** The affected part number listed in this notification will be converted to a Copper wire material set. The new ordering code is SQS484CENW-T1\_GE3, which has the exact same product performance and fit as SQS484EN-T1\_GE3. In addition, the SQS484CENW-T1\_GE3 package also includes pins with wet-able flanks. This feature promotes improved solder coverage and solder filet shape at the lead tips. The outer most dimensions are unchanged and the same PCB land pattern is required. There will be no change to the wafer fab or assembly location. There will be no changes to the parameters on the datasheet (reference: SQS484CENW Doc # 77038, Rev.B) - see included datasheet comparison for details.

**Classification of Change:** Standardization of materials

**Expected Influence on Quality/Reliability/Performance:** None

**Part Numbers/Series/Families Affected:** SQS484EN-T1\_GE3, SQS484EN-T1\_BE3,

**Vishay Brand(S):** Vishay Siliconix

#### Time Schedule:

Last Time Buy Date: Wed Aug 23, 2023

Last Time Ship Date: Fri Feb 23, 2024

**Sample Availability:** Qualified samples of replacement product are available immediately

**Product Identification:** SQS484CENW-T1\_GE3

**Qualification Data:** AEC Q101 qualification data of replacement product is available. Qualification PPAP is available now.

**This PTN is considered approved, without further notification, unless we receive specific customer concerns before Mon Jul 17, 2023 or as specified by contract.**

**Issued By:** Lance Gurrola, business-americas@vishay.com

Affected Part Number SQ5484EN  
 AEC Q101 Qualified Yes  
 Package Type PPAK 1212-8  
 Process Technology 300M cells/in<sup>2</sup>  
 Bondwire Material Gold (Au)  
 100% Rg & UIS Tested Yes  
 Datasheet Rev C

Replacement Part Number SQ5484CENW  
 AEC Q101 Qualified Yes  
 Package Type PPAK 1212-8W  
 Process Technology 300M cells/in<sup>2</sup>  
 Bondwire Material Copper (Cu)  
 100% Rg and UIS Tested Yes  
 Datasheet Rev B

Test Conditions	Limit	Units
	40	V
	±20	V
TC = 25°C	16	A
TC = 125°C	16	A
	16	A
	64	A
L = 0.1mH	30	A
	45	mJ
TC = 25°C	62	W
TC = 125°C	20	W
	-55 to +175	°C
PCB Mount	81	°C/W
	2.4	°C/W
	260	°C

Symbol	Test Conditions	Limit	Units
VDS		40	V
VGS		±20	V
ID	TC = 25°C	16	A
ID	TC = 125°C	16	A
IS		16	A
IDM		64	A
IAS	L = 0.1mH	25	A
EAS		31.2	mJ
PD	TC = 25°C	62.5	W
PD	TC = 125°C	20	W
TJ		-55 to +175	°C
RthJA	PCB Mount	81	°C/W
RthJC		2.4	°C/W
		260	°C

Type of Change	Risk
None	None
None	None
None	None
None	None
None	None
None	None
Test standardization	Very low; Ias is 2x the rated current of 16A
Test standardization	Very low; Eas is calculated from Ias
None	None
None	None
None	None
None	None
None	None
None	None
None	None

Test Conditions	MIN	TYP	MAX	Units
VGS=0V, ID=250uA	40			V
VDS=VGS, ID=250uA	1.5	2	2.5	V
VDS=0V, VGS=±20V			±100	nA
VGS=0V			1	uA
VGS=0V			50	uA
VGS=0V			150	uA
VGS=10V		20		A
VGS=10V		0.0080	0.0090	Ω
VGS=10V			0.0230	Ω
VGS=10V			0.0240	Ω
VGS=4.5V		0.0090	0.0100	Ω
VDS=15V, ID=16.4A		77		S
VGS=0V		1484	1855	pF
VGS=10V		216	270	pF
VGS=10V		84	105	pF
VGS=10V		25.5	39	nC
VGS=10V		4.8		nC
f=1mHz		4		nC
f=1mHz	5	10	20	Ω
VDD=20V, RL=2Ω, ID=10A, Vgen=-4.5V, Rg=1Ω		8	12	ns
		14	21	ns
		48	72	ns
		20	30	ns
			64	A
If=10A VGS=0V		0.8	1.2	V
				ns
				nC
				ns
				ns
				A

Symbol	Test Conditions	MIN	TYP	MAX	Units
VDS	VGS=0V, ID=250uA	40			V
VGS(th)	VDS=VGS, ID=250uA	1.5	2	2.5	V
IGSS	VDS=0V, VGS=±20V			±100	nA
IDSS	VGS=0V			1	uA
IDSS	VGS=0V, VGS=40V, TJ=125°C			50	uA
IDSS	VGS=0V, VGS=40V, TJ=175°C			150	uA
ID(DN)	VGS=10V		20		A
RDS(on)	VGS=10V		0.0081	0.0095	Ω
RDS(on)	VGS=10V, ID=10A, TJ=125°C			0.0152	Ω
RDS(on)	VGS=10V, ID=10A, TJ=175°C			0.0190	Ω
RDS(on)	VGS=4.5V, ID=10A		0.0095	0.0110	Ω
gfs	VDS=15V, ID=10A		62		S
Ciss			1565	2350	pF
Coss	VGS=0V		193	290	pF
Crss	VGS=0V		68	102	pF
Qg	VGS=10V		27	40	nC
Qgs	VGS=10V		5		nC
Qgd			3.6		nC
Rg	f=1mHz	3.6	8	12.8	Ω
td(on)	VDD=20V, RL=5Ω, ID=4A, Vgen=10V, Rg=1Ω		7.8	11.7	ns
tr			2.4	3.6	ns
td(off)			38	57	ns
tf			7.2	10.8	ns
ISM				64	A
VSD	I <sub>l</sub> =10A VGS=0V		0.82	1.1	V
trr			18	36	ns
Qrr	I <sub>l</sub> =A, di/dt=100A/us		12	24	nC
ta			11		ns
tb			6		ns
θ <sub>MB(REC)</sub>			-1.3	-3	A

Type of Change	Risk
None	None
None	None
None	None
None	None
None	None
None	None
Limit increase	Very low; Rds(on) is lower at higher temperatures which is more important.
Improvement	None
Improvement	None
Limit increase	Very low; typical RDS(ON) values are similar
Test standardization	None
These are not tested parameters so no limit changes. Data simply reflects the lot to lot variation in the characterization data.	Very low. Switching speeds are not impacted
Tighter test spec	Very low. Switching speeds are not impacted
No actual change in the device only test condition standardization	Very low. Switching speeds are measured under different conditions, but overall AC parameters are very similar resulting in close matching of switching performance.
None	None
Tighter test spec	None
Additional characterization data not previously documented	None
None	None
None	None