Product Termination Notification

Product Group: SIL/Wednesday May 20, 2026/PTN-SIL-038-2026-REV-0

Conversion to Copper (Cu) Wire – SQ4284EY

For further information, please contact your regional Vishay office.

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Description of Change: The affected part number listed in this notification will be converted from gold (Au) bond wire to a copper (Cu) wire material set. The new ordering code is SQ4284CEY-T1_GE3 which has identical silicon technology and silicon die design as SQ4284EY. Small changes to the data sheet AC parameters are a consequence of lot to lot variation and/or updated characterization methods (reference: SQ4284CEY Doc # 61666 Rev. A). Device performance in the application will not be impacted. There will be no change to the wafer fab location.

Reason for Change: Standardization of materials

Expected Influence on Quality/Reliability/Performance: None

Part Numbers/Series/Families Affected: SQ4284EY-T1_GE3, SQ4284EY-T1_BE3,

Vishay Brand(S): Vishay Siliconix

Time Schedule:

Last Time Buy Date: Monday November 23, 2026

Last Time Ship Date: Monday May 17, 2027

Sample Availability: Qualified samples of replacement product are available on request.

Product Identification: SQ4284CEY-T1_GE3

Qualification Data: AEC Q101 qualification data of replacement product is available. Qualification PPAP is available on request.

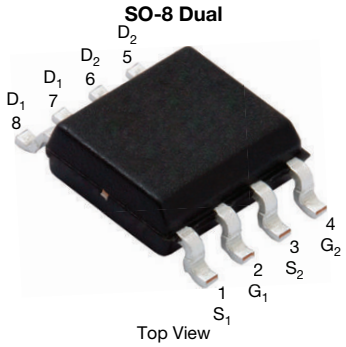
This PTN is considered approved, without further notification, unless we receive specific customer concerns before Thursday July 23, 2026 or as specified by contract.

Issued By: Lance Gurrola, automostechsupport@vishay.com

SQ4284CEY

Vishay Siliconix

Automotive Dual N-Channel 40 V (D-S) 175 °C MOSFET



FEATURES

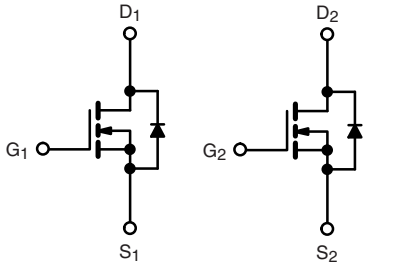
- TrenchFET® Power MOSFET
- AEC-Q101 qualified
- 100 % R_g and UIS tested
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE GRADE

Pb-free

RoHS COMPLIANT

HALOGEN FREE



PRODUCT SUMMARY	
V_{DS} (V)	40
$R_{DS(on)}$ (Ω) at V_{GS} = 10 V	0.0135
$R_{DS(on)}$ (Ω) at V_{GS} = 4.5 V	0.0148
I_D (A)	8
Configuration	Dual

ORDERING INFORMATION	
Package	SO-8
Lead (Pb)-free and halogen-free	SQ4284CEY (for detailed order number please see www.vishay.com/doc?79771)

ABSOLUTE MAXIMUM RATINGS (T_C = 25 °C, unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNIT
Drain-source voltage		V_{DS}	40	V
Gate-source voltage		V_{GS}	± 20	
Continuous drain current	T_C = 25 °C [a]	I_D	8	A
	T_C = 125 °C		7.4	
Continuous source current (diode conduction)		I_S	3.5	
Pulsed drain current [a]		I_{DM}	32	
Single pulse avalanche current	L = 0.1 mH	I_{AS}	48	
Single pulse avalanche energy		E_{AS}	115	mJ
Maximum power dissipation	T_C = 25 °C	P_D	3.9	W
	T_C = 125 °C		1.3	
Operating junction and storage temperature range		T_J, T_{stg}	- 55 to + 175	°C

THERMAL RESISTANCE RATINGS

PARAMETER		SYMBOL	LIMIT	UNIT
Junction-to-ambient	PCB Mount [b]	R_{thJA}	120	°C/W
Junction-to-foot (drain)		R_{thJF}	38	

Notes

a. Pulse test; pulse width ≤ 300 µs, duty cycle ≤ 2 %

b. When mounted on 1" square PCB (FR-4 material)

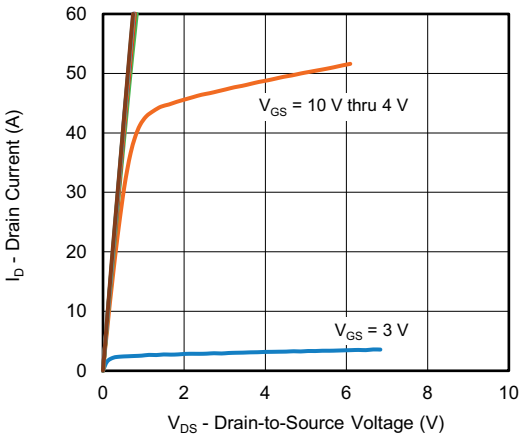
SPECIFICATIONS (T_C = 25 °C, unless otherwise noted)							
PARAMETER	**SYMBOL**	**TEST CONDITIONS**		**MIN.**	**TYP.**	**MAX.**	**UNIT**
Static							
Drain-source breakdown voltage	V_{DS}	V_{GS} = 0 V, I_D = 250 µA		40	-	-	V
Gate-source threshold voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250 µA		1.5	2.0	2.5	
Gate-source leakage	I_{GSS}	V_{DS} = 0 V, V_{GS} = ± 20 V		-	-	± 100	nA
Zero gate voltage drain current	I_{DSS}	V_{GS} = 0 V	V_{DS} = 40 V	-	-	1	µA
		V_{GS} = 0 V	V_{DS} = 40 V, T_J = 125 °C	-	-	50	
		V_{GS} = 0 V	V_{DS} = 40 V, T_J = 175 °C	-	-	150	
On-state drain current [a]	$I_{D(on)}$	V_{GS} = 10 V	V_{DS} ≥ 5 V	25	-	-	A
Drain-source on-state resistance [a]	$R_{DS(on)}$	V_{GS} = 10 V	I_D = 7 A	-	0.0112	0.0135	Ω
		V_{GS} = 10 V	I_D = 7 A, T_J = 125 °C	-	-	0.0198	
		V_{GS} = 10 V	I_D = 7 A, T_J = 175 °C	-	-	0.0235	
		V_{GS} = 4.5 V	I_D = 5 A	-	0.0123	0.0148	
Forward transconductance [b]	g_{fs}	V_{DS} = 15 V, I_D = 7 A		-	30	-	S
Dynamic [b]							
Input capacitance	C_{iss}	V_{GS} = 0 V	V_{DS} = 25 V, f = 1 MHz	-	2107	2650	pF
Output capacitance	C_{oss}			-	247	315	
Reverse transfer capacitance	C_{rss}			-	77	116	
Total gate charge [c]	Q_g	V_{GS} = 10 V	V_{DS} = 20 V, I_D = 5 A	-	31.5	45	nC
Gate-source charge [c]	Q_{gs}			-	6.4	-	
Gate-drain charge [c]	Q_{gd}			-	4	-	
Gate resistance	R_g	f = 1 MHz		2.2	4.53	6.8	Ω
Turn-on delay time [c]	$t_{d(on)}$	V_{DD} = 20 V, R_L = 4 Ω I_D ≅ 5 A, V_{GEN} = 10 V, R_g = 1 Ω		-	10	15	ns
Rise Time [c]	t_r			-	4	60	
Turn-Off Delay Time [c]	$t_{d(off)}$			-	32	48	
Fall time [c]	t_f			-	4	17	
Source-Drain Diode Ratings and Characteristics [b]							
Pulsed current [a]	I_{SM}			-	-	32	A
Forward voltage	V_{SD}	I_F = 7 A, V_{GS} = 0 V		-	0.76	1.2	V

Notes

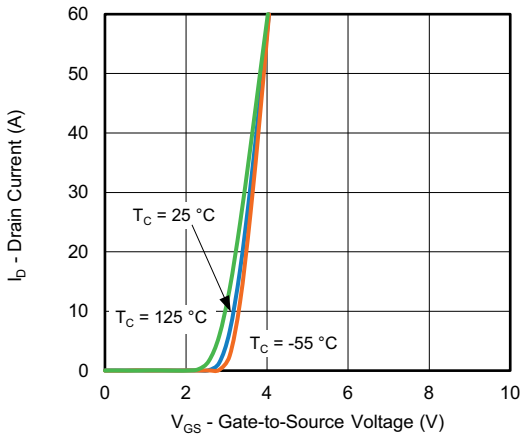
a. Pulse test; pulse width ≤ 300 µs, duty cycle ≤ 2 %
b. Guaranteed by design, not subject to production testing
c. Independent of operating temperature

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

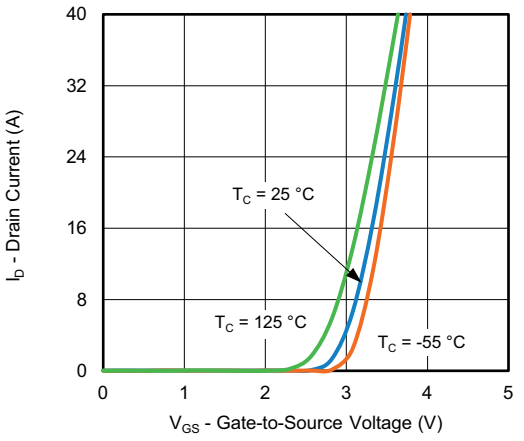
TYPICAL CHARACTERISTICS (T_A = 25 °C, unless otherwise noted)



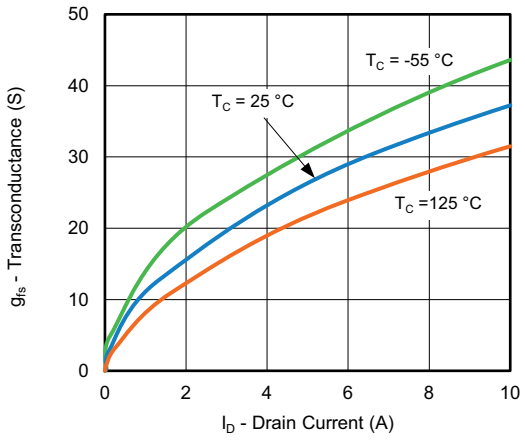
Output Characteristics



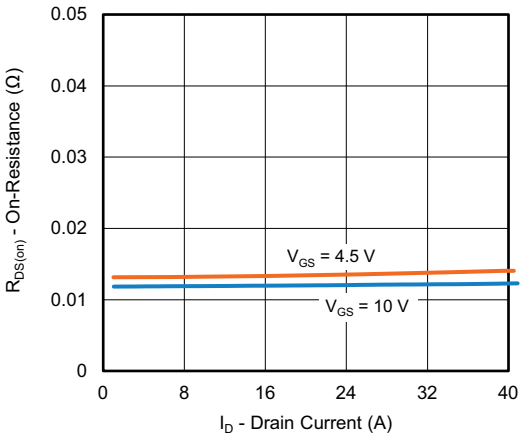
Transfer Characteristics



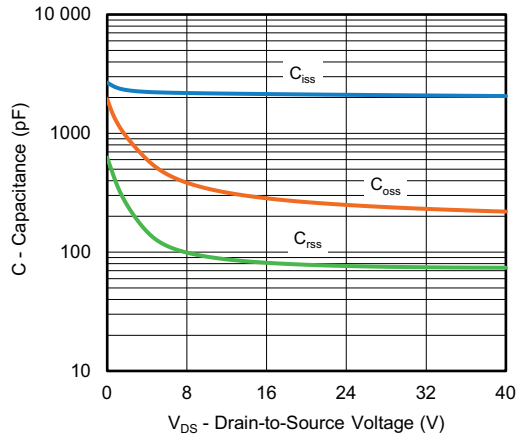
Transfer Characteristics



Transconductance

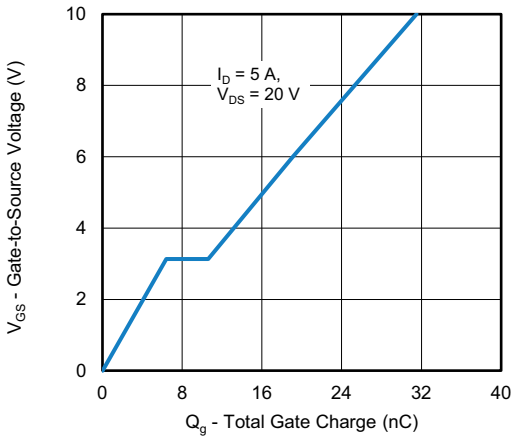


On-Resistance vs. Drain Current

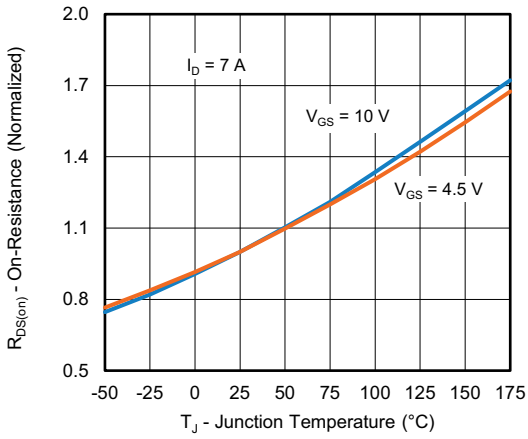


Capacitance

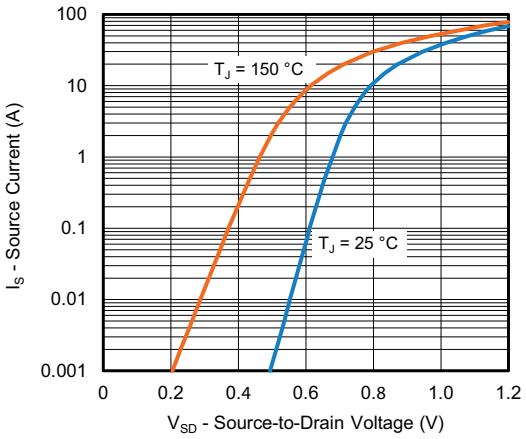
TYPICAL CHARACTERISTICS (T_A = 25 °C, unless otherwise noted)



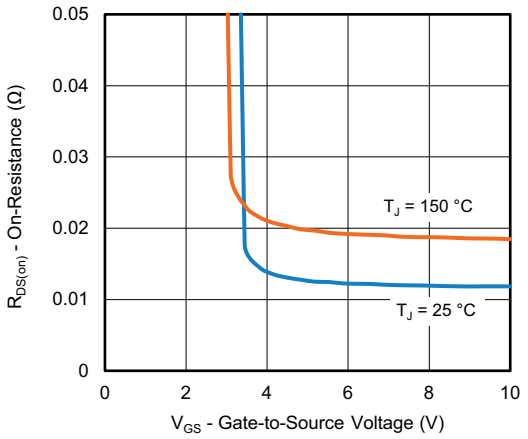
Gate Charge



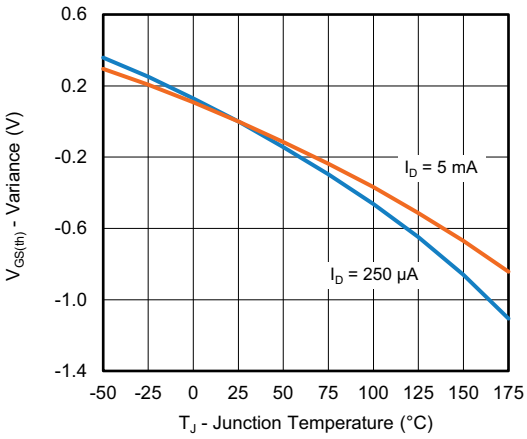
On-Resistance vs. Junction Temperature



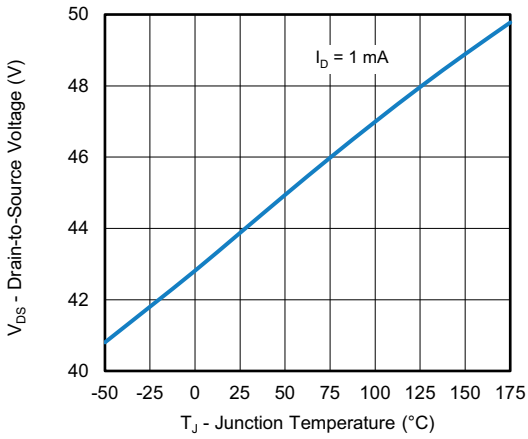
Source Drain Diode Forward Voltage



On-Resistance vs. Gate-to-Source Voltage

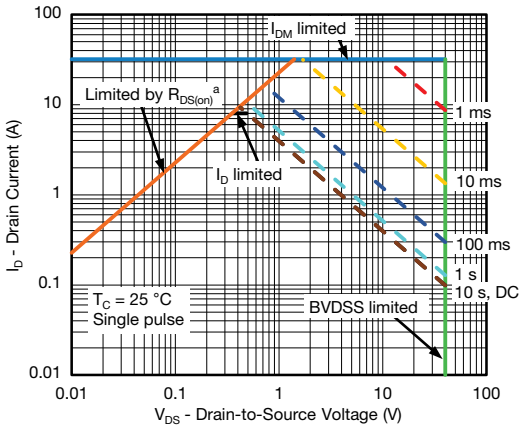


Threshold Voltage



Drain Source Breakdown vs. Junction Temperature

THERMAL RATINGS (T_A = 25 °C, unless otherwise noted)

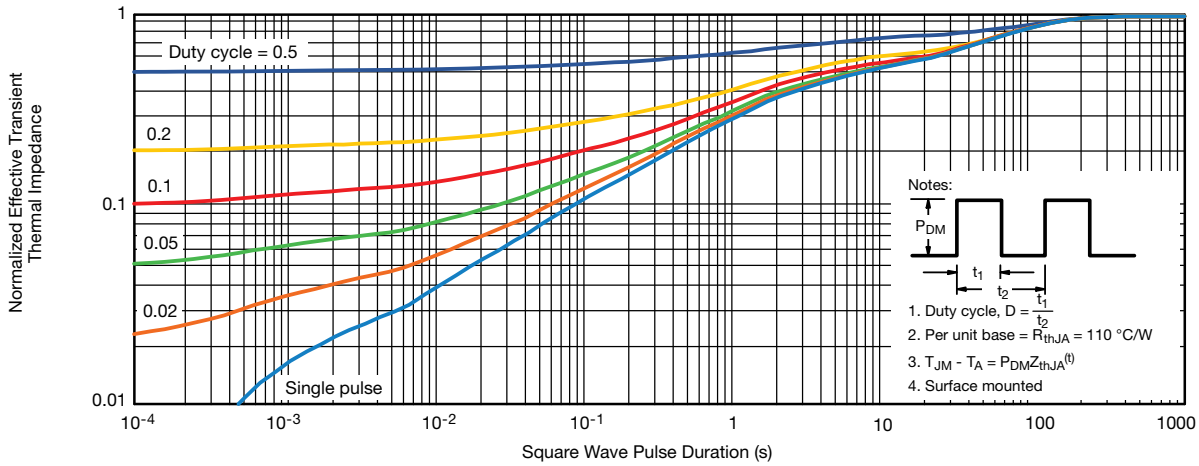


Safe Operating Area

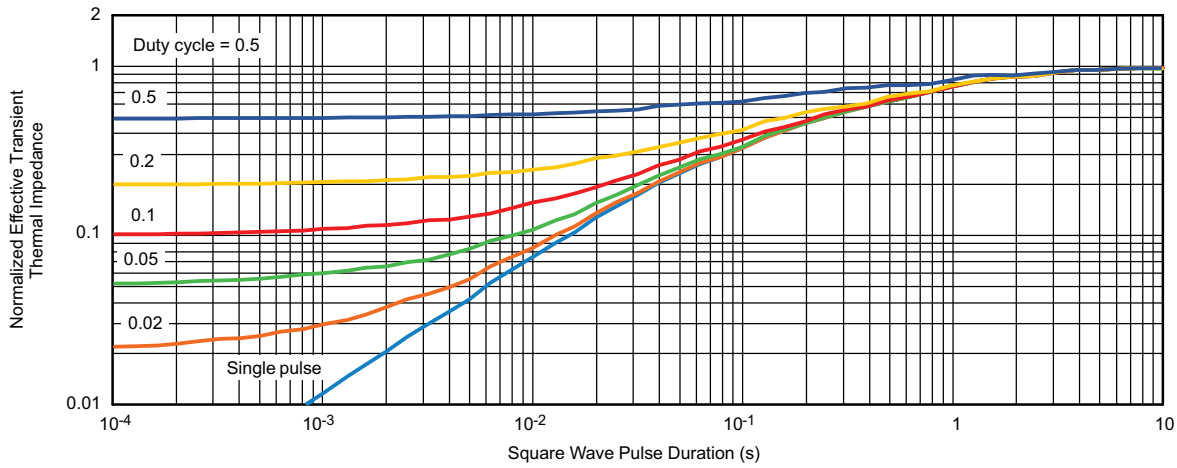
Note

a. V_{GS} > minimum V_{GS} at which $R_{DS(on)}$ is specified

THERMAL RATINGS (T_A = 25 °C, unless otherwise noted)



Normalized Thermal Transient Impedance, Junction-to-Ambient



Normalized Thermal Transient Impedance, Junction-to-Foot

Note

- The characteristics shown in the two graphs
  - Normalized Transient Thermal Impedance Junction-to-Ambient (25 °C)
  - Normalized Transient Thermal Impedance Junction-to-Foot (25 °C)

  are given for general guidelines only to enable the user to get a “ball park” indication of part capabilities. The data are extracted from single pulse transient thermal impedance characteristics which are developed from empirical measurements. The latter is valid for the part mounted on printed circuit board - FR4, size 1" x 1" x 0.062", double sided with 2 oz. copper, 100 % on both sides. The part capabilities can widely vary depending on actual application parameters and operating conditions.

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Vishay Material Code	Customer Material	Location
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