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# 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

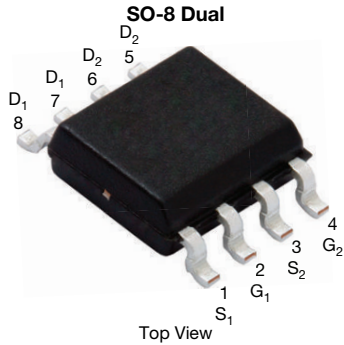
**Qualification Data:** AEC Q101 qualification data of replacement product is available. Qualification PPAP is available on request.

**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



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

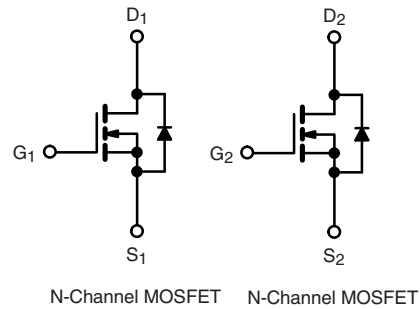


### FEATURES

- TrenchFET® Power MOSFET
- AEC-Q101 qualified
- 100 % R<sub>g</sub> and UIS tested
- Material categorization:  
for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**



PRODUCT SUMMARY	
V <sub>DS</sub> (V)	40
R <sub>DS(on)</sub> (Ω) at V <sub>GS</sub> = 10 V	0.0135
R <sub>DS(on)</sub> (Ω) at V <sub>GS</sub> = 4.5 V	0.0148
I <sub>D</sub> (A)	8
Configuration	Dual

ORDERING INFORMATION	
Package	SO-8
Lead (Pb)-free and halogen-free	SQ4284CEY (for detailed order number please see <a href="http://www.vishay.com/doc?79771">www.vishay.com/doc?79771</a> )

ABSOLUTE MAXIMUM RATINGS (T <sub>C</sub> = 25 °C, unless otherwise noted)			
PARAMETER	SYMBOL	LIMIT	UNIT
Drain-source voltage	V <sub>DS</sub>	40	V
Gate-source voltage	V <sub>GS</sub>	± 20	
Continuous drain current	I <sub>D</sub>	T <sub>C</sub> = 25 °C <sup>a</sup>	8
		T <sub>C</sub> = 125 °C	7.4
Continuous source current (diode conduction)	I <sub>S</sub>	3.5	A
Pulsed drain current <sup>a</sup>	I <sub>DM</sub>	32	
Single pulse avalanche current	I <sub>AS</sub>	48	
Single pulse avalanche energy	E <sub>AS</sub>	115	
Maximum power dissipation	P <sub>D</sub>	T <sub>C</sub> = 25 °C	3.9
		T <sub>C</sub> = 125 °C	1.3
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>stg</sub>	- 55 to + 175	°C

THERMAL RESISTANCE RATINGS			
PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-ambient	R <sub>thJA</sub>	120	°C/W
Junction-to-foot (drain)	R <sub>thJF</sub>	38	

### Notes

- Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2 %
- When mounted on 1" square PCB (FR-4 material)



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

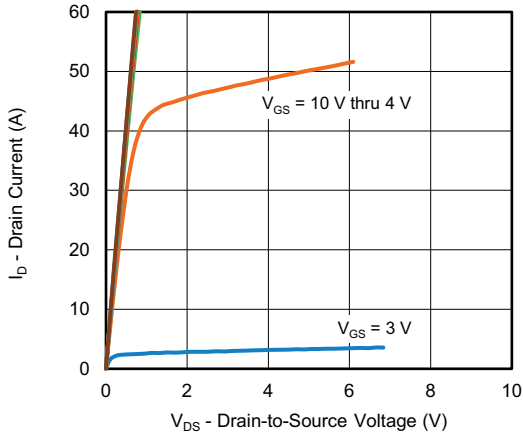
**Notes**

- Pulse test; pulse width  $\leq 300\text{ }\mu\text{s}$ , duty cycle  $\leq 2\%$
- Guaranteed by design, not subject to production testing
- Independent of operating temperature

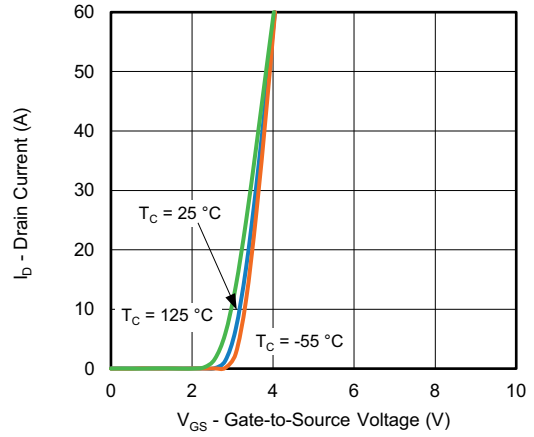
Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure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



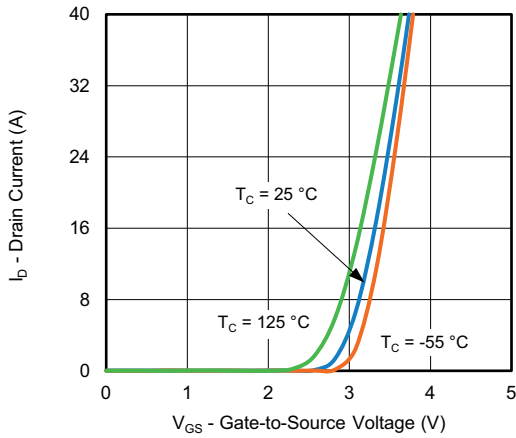
**TYPICAL CHARACTERISTICS** ( $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise noted)



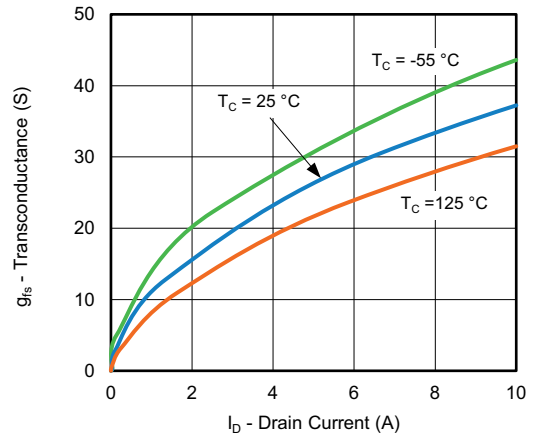
**Output Characteristics**



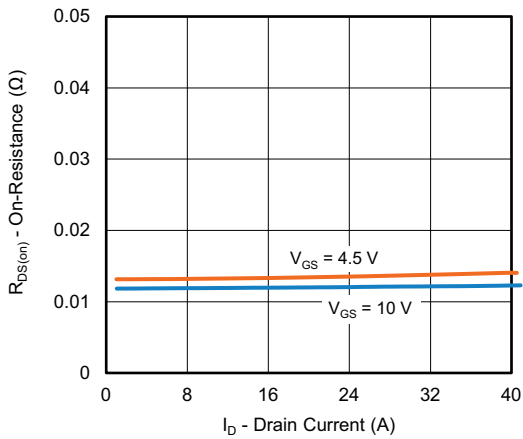
**Transfer Characteristics**



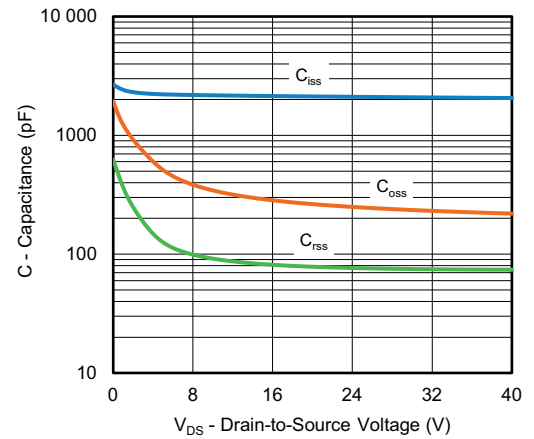
**Transfer Characteristics**



**Transconductance**



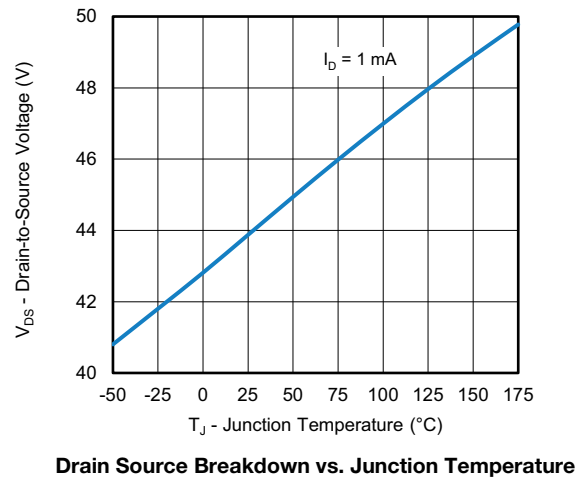
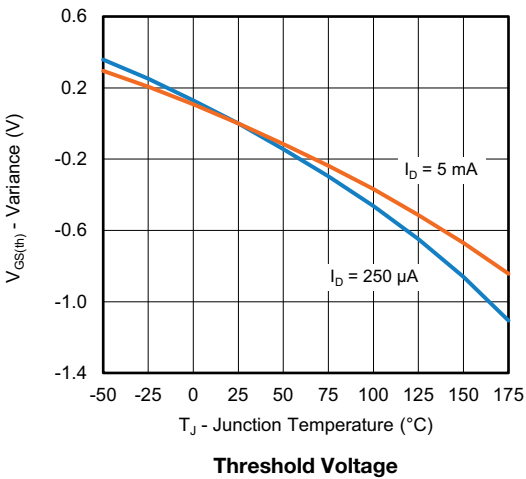
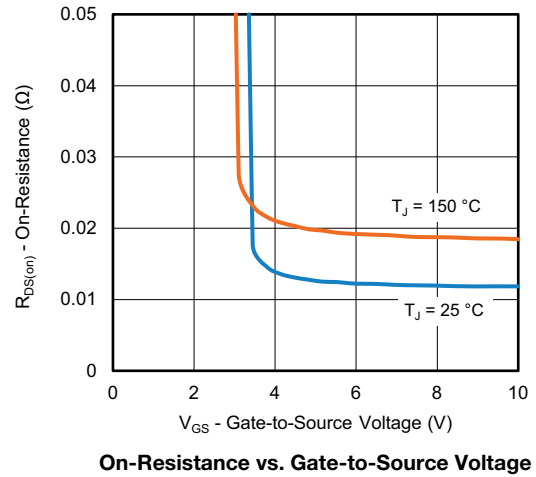
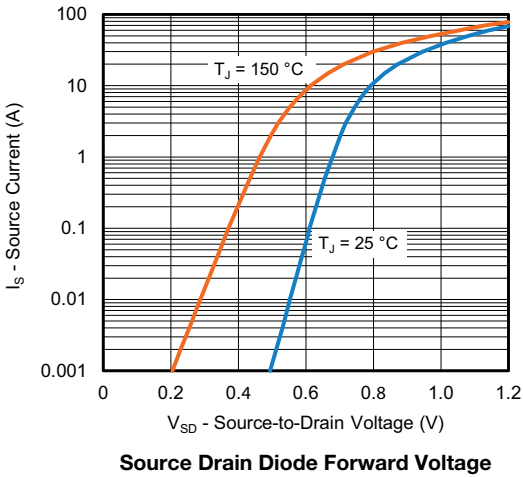
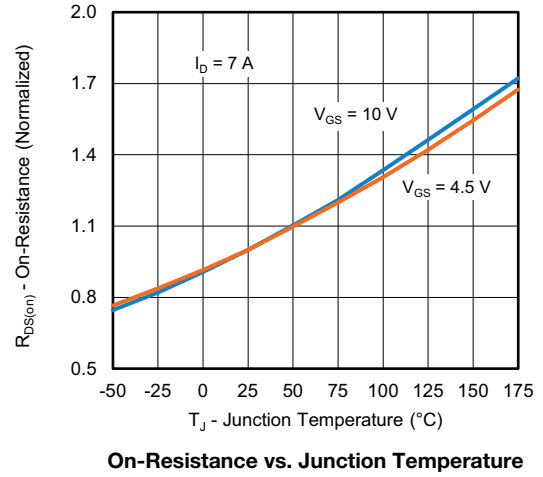
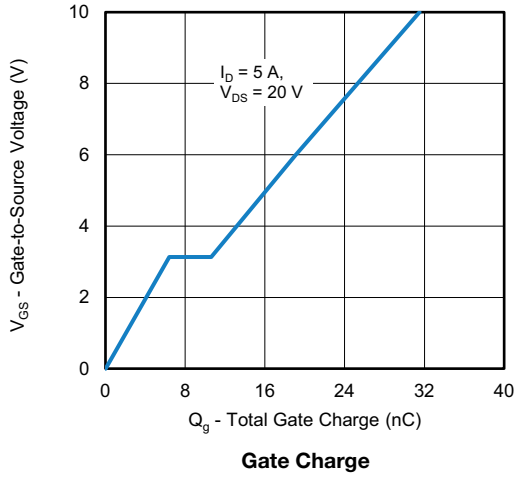
**On-Resistance vs. Drain Current**



**Capacitance**

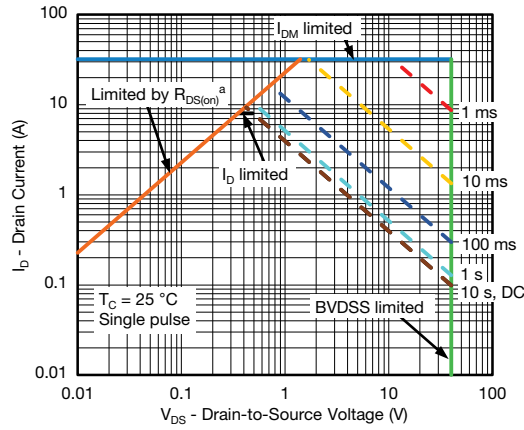


**TYPICAL CHARACTERISTICS** ( $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise noted)





**THERMAL RATINGS** ( $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise noted)



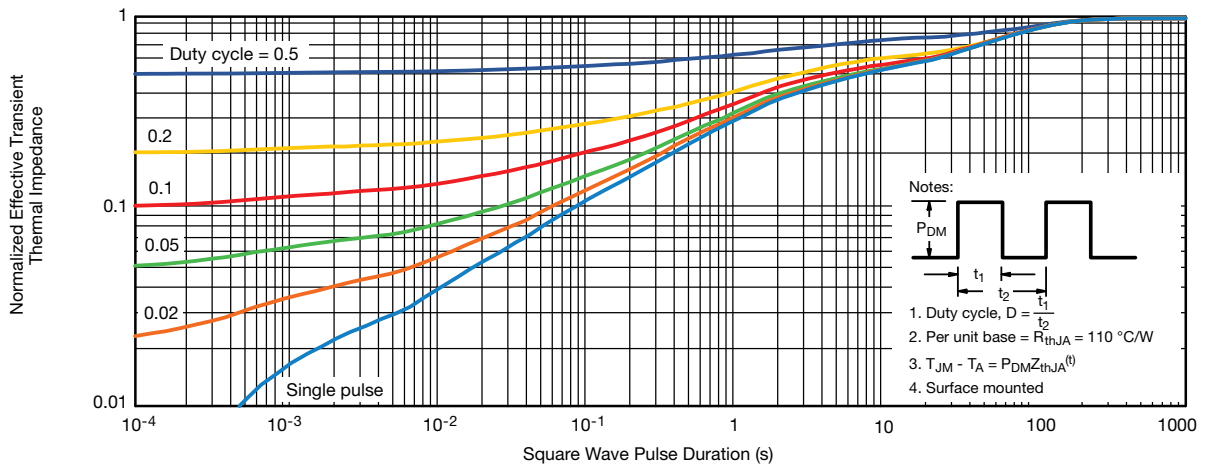
**Safe Operating Area**

**Note**

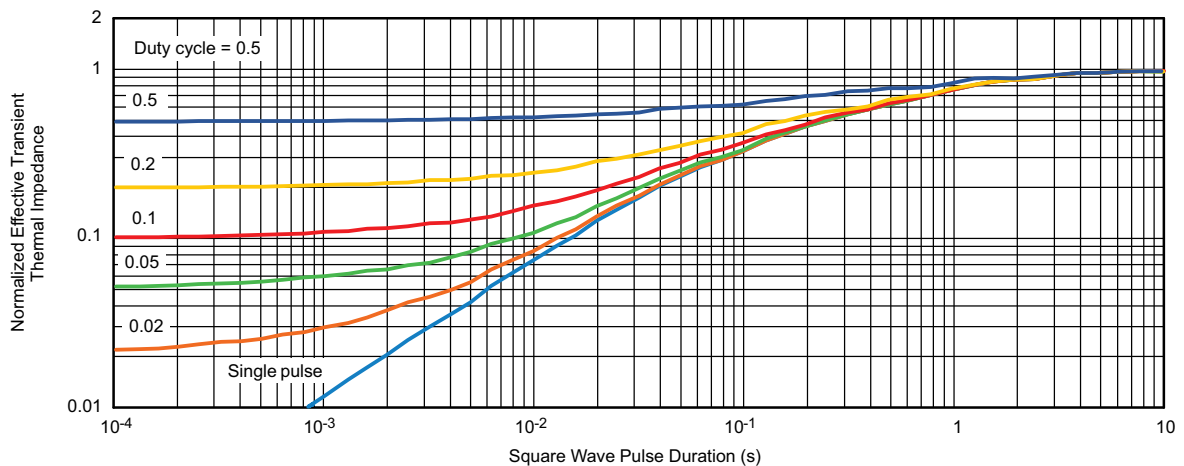
a.  $V_{GS} >$  minimum  $V_{GS}$  at which  $R_{DS(on)}$  is specified



**THERMAL RATINGS** ( $T_A = 25\text{ }^\circ\text{C}$ , 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 ( $25\text{ }^\circ\text{C}$ )
    - Normalized Transient Thermal Impedance Junction-to-Foot ( $25\text{ }^\circ\text{C}$ )
- 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
SQ4284EY-T1_BE3	SLNSQ4284EY-T1-BE3	Ft Worth