



## Obsolescence of Power MOSFET

**DESCRIPTION OF CHANGE:** Vishay Siliconix announces the End-of-life of part number **SI5906DU-T1-GE3**.  
The recommended replacement part **SI5936DU-T1-GE3**.

**CLASSIFICATION OF CHANGE:** Product Obsolescence

**REASON FOR CHANGE:** Product Obsolescence

**EXPECTED INFLUENCE ON QUALITY/RELIABILITY/PERFORMANCE:** Please see Page 2 for Specification Comparison

**PRODUCT CATEGORY:** Power MOSFET

**PART NUMBERS/SERIES/FAMILIES AFFECTED:**

***SI5906DU-T1-GE3***

**VISHAY BRAND(s):** Vishay-Siliconix

**TIME SCHEDULE:** Last time buy orders must be received by August 1, 2013.

**QUALIFICATION DATA:** N/A.

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# Product Change Notification



Product Group: Vishay Siliconix/ February 1, 2013/PCN- SIL-0122013 rev0

## SPECIFICATION COMPARISON

ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)					
Parameter	Symbol	Si5906DU	Si5936DU	Unit	
Drain-Source Voltage	$V_{DS}$	30	30	V	
Gate-Source Voltage	$V_{GS}$	$\pm 20$	$\pm 20$		
Continuous Drain Current	$T_A = 25^\circ\text{C}$	6	6	A	
	$T_A = 70^\circ\text{C}$	5.3	5.3		
Pulsed Drain Current	$I_{DM}$	25	25		
Continuous Source Current (MOSFET Diode Conduction)	$I_S$	1.9	1.9		
Power Dissipation	$T_A = 25^\circ\text{C}$	2.3	2.3	W	
	$T_A = 70^\circ\text{C}$	1.5	1.5		
Operating Junction & Storage Temperature Range	$T_J$ & $T_{stg}$	-55 to 150	-55 to 150	°C	
Maximum Junction-to-Ambient	$R_{thJA}$	55	55	°C/W	

SPECIFICATIONS ( $T_J = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)								
Parameter	Symbol	Si5906DU			Si5936DU			Unit
		Min	Typ	Max	Min	Typ	Max	
<b>Static</b>								
Gate-Threshold Voltage	$V_{GS(th)}$	1.2		2.2	1.2		2.2	V
Gate-Body Leakage	$I_{GSS}$			$\pm 100$			$\pm 100$	nA
Zero Gate Voltage Drain Current	$I_{DSS}$			1			1	$\mu\text{A}$
On-State Drain Current	$V_{GS} = 10\text{ V}$	20			20			A
	$V_{GS} = 10\text{ V}$		0.025	0.031		0.025	0.030	$\Omega$
Drain-Source On-Resistance	$V_{GS} = 4.5\text{ V}$		0.033	0.040		0.032	0.040	
Forward Transconductance	$g_{fs}$		14			11		S
Diode Forward Voltage	$V_{SD}$		0.8	1.2		0.8	1.2	V
<b>Dynamic</b>								
Total Gate Charge	$Q_g$		2.9	4.4		3.5	5.3	nC
Gate-Source Charge	$Q_{gs}$		1.0			1.0		
Gate-Drain Charge	$Q_{gd}$		1.1			1.3		
Gate Resistance	$R_g$	0.3	1.8	3.6	0.8	4.0	8.0	$\Omega$

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