Si4626ADY vs. Si4626DY

Description: **N-Channel, 30-V (D-S) MOSFET**
Package: **SO-8**
Pin Out: **Identical**

Part Number Replacements: Si4626ADY-T1-E3 replaces Si4626DY-T1-E3

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted					
PARAMETER		**SYMBOL**	**Si4626ADY**	**Si4626DY**	**UNIT**
Drain-Source Voltage		V_{DS}	30	30	V
Gate-Source Voltage		V_{GS}	± 20	± 20	
Continuous Drain Current	T_A = 25 °C	I_D	21.5	21.5	A
	T_A = 70 °C		17.1	17.1	
Pulsed Drain Current		I_{DM}	70	70	
Continuous Source Current (MOSFET Diode Conduction)		I_S	2.7	2.7	
Power Dissipation	T_A = 25 °C	P_D	3.0	3.0	W
	T_A = 70 °C		1.9	1.9	
Operating Junction and Storage Temperature Range		T_J and T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	42	42	°C/W

SPECIFICATIONS T_J = 25 °C, unless otherwise noted									
PARAMETER		**SYMBOL**	**Si4626ADY**			**Si4626DY**			**UNIT**
			MIN.	**TYP.**	**MAX.**	**MIN.**	**TYP.**	**MAX.**	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	1.2		2.5	1.0		3.0	V
Gate-Body Leakage		I_{GSS}			± 100			± 100	nA
Zero Gate Voltage Drain Current		I_{DSS}			1			1	µA
On-State Drain Current	V_{GS} = 10 V[a]	$I_{D(on)}$	30			30			A
Drain-Source On-Resistance	V_{GS} = 10 V	$r_{DS(on)}$		0.0026	0.0033		0.003	0.0036	Ω
	V_{GS} = 4.5 V			0.0032	0.0041		0.004	0.0048	
Forward Transconductance		g_{fs}		85			97		S
Diode Forward Voltage		V_{SD}		0.74	1.1		0.74	1.1	V
Dynamic									
Total Gate Charge	V_{GS} = 10 V	Q_g		82	125		75	112	nC
	V_{GS} = 4.5 V			37	56		34	51	
Gate-Source Charge		Q_{gs}		12.6			15		
Gate-Drain Charge		Q_{gd}		9.8			9.4		
Gate Resistance		R_g	0.2	0.95	1.9		0.95	1.9	Ω

Note
a.

Specification comparisons are supplied as a courtesy to compare two devices and do not constitute a commercial product datasheet or any guarantee of identical performance. Designers should refer to the appropriate datasheets of the same number for guaranteed specification limits.