Si4833ADY vs. Si4833DY

Description: **P-Channel, 30 V (D-S) MOSFET with Schottky Diode**
Package: **SO-8**
Pin Out: **Identical**

Part Number Replacements

Si4833ADY-T1-E3 Replaces Si4833DY-T1-E3
Si4833ADY-T1-E3 Replaces Si4833DY-T1

ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C, unless otherwise noted)					
Parameter		**Symbol**	**Si4833ADY**	**Si4833DY**	**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	- 3.6	- 3.5	A
	T_A = 70 °C		- 2.8	- 2.8	
Pulsed Drain Current		I_{DM}	- 20	- 20	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 1.4	- 1.7	
Power Dissipation	T_A = 25 °C	P_D	1.75	2.0	W
	T_A = 70 °C		1.1	1.3	
Operating Junction and Storage Temperature Range		T_j and T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	71.5	62.5	°C/W

SPECIFICATIONS (T_J = 25 °C, unless otherwise noted)									
Parameter		**Symbol**	**Si4833ADY**			**Si4833DY**			**Unit**
			Min	**Typ**	**Max**	**Min**	**Typ**	**Max**	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	- 1		- 3	- 1.0		NS	V
Gate-Body Leakage		I_{GSS}			± 100			± 100	uA
Zero Gate Voltage Drain Current		I_{DSS}			- 1			- 1	µA
On-State Drain Current	V_{GS} = - 10 V	$I_{D(on)}$	- 5			- 15			A
Drain-Source On-Resistance	V_{GS} = - 10 V	$r_{DS(on)}$		0.059	0.072		0.066	0.085	Ω
	V_{GS} = - 4.5 V			0.090	0.110		0.125	0.180	
Forward Transconductance		g_{fs}		7			5		S
Diode Forward Voltage		V_{SD}		- 0.8	- 1.2		- 0.8	- 1.2	V
Dynamic									
Total Gate Charge		Q_g		9.8	15		8.7	15	nC
Gate-Source Charge		Q_{gs}		1.4			1.9		
Gate-Drain Charge		Q_{gd}		2.4			1.3		
Gate Resistance		R_g		8	16		NS		Ω
Switching									
Turn-On Time		$t_{d(on)}$		7	14		7	15	ns
		t_r		11	17		9	18	
Turn-Off Time		$t_{d(off)}$		19	30		14	27	
		t_f		8	15		8	15	
Source-Drain Reverse Recovery Time		t_{rr}		23	40		50	80	

NS denotes not specified in original datasheet

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.