Si4833BDY vs. Si4833ADY

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

Part Number Replacements: Si4833BDY-T1-GE3 replaces Si4833ADY-T1-GE3
Si4833BDY-T1-GE3 replaces Si4833ADY-T1-E3

ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C, unless otherwise noted)					
PARAMETER		**SYMBOL**	**Si4833BDY**	**Si4833ADY**	**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	- 3.80	- 3.85	A
	T_A = 70 °C		- 3	- 3.08	
Pulsed Drain Current		I_{DM}	- 20	- 20	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 1.4	- 1.4	
Power Dissipation	T_A = 25 °C	P_D	1.75	1.93	W
	T_A = 70 °C		1.1	1.23	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	71.5	65	°C/W

SPECIFICATIONS (T_J = 25 °C, unless otherwise noted)									
			Si4833BDY			**Si4833ADY**			
PARAMETER		**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	- 1	- 1.8	- 2.5	- 1	-	- 2.5	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	$I_{D(on)}$	- 5	-	-	- 5	-	-	A
Drain-Source On-Resistance	V_{GS} = - 10 V	$R_{DS(on)}$	-	0.055	0.068	-	0.059	0.072	Ω
	V_{GS} = - 4.5 V		-	0.092	0.110	-	0.090	0.110	
Forward Transconductance		g_{fs}	-	6.5	-	-	7	-	S
Diode Forward Voltage		V_{SD}	-	- 0.83	- 1.2	-	- 0.8	- 1.2	V
Dynamic									
Total Gate Charge	V_{GS} = - 10 V	Q_g	-	9	14	-	9.8	15	nC
	V_{GS} = - 4.5 V		-	4.6	7.0	-	4.6	7.0	
Gate-Source Charge		Q_{gs}	-	1.3	-	-	1.4	-	
Gate-Drain Charge		Q_{gd}	-	2.1	-	-	2.4	-	
Gate Resistance		R_g	1.5	7.3	14.5	-	8	-	Ω

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.