Si4830CDY vs. Si4830ADY

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

Part Number Replacements: Si4830CDY-T1-E3 replaces Si4830ADY-T1-E3

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted					
PARAMETER		**SYMBOL**	**Si4830CDY**	**Si4830ADY**	**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	7.5	7.5	A
	T_A = 70 °C		5.8	6.0	
Pulsed Drain Current		I_{DM}	30	30	
Continuous Source Current (MOSFET Diode Conduction)		I_S	1.8	1.7	
Power Dissipation	T_A = 25 °C	P_D	2.0	2.0	W
	T_A = 70 °C		1.2	1.3	
Operating Junction and Storage Temperature Range		T_J and T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient - MOSFET		R_{thJA}	62.5	62.5	°C/W

MOSFET SPECIFICATIONS T_J = 25 °C, unless otherwise noted										
PARAMETER		**SYMBOL**		**Si4830CDY**			**Si4830ADY**			**UNIT**
				MIN.	**TYP.**	**MAX.**	**MIN.**	**TYP.**	**MAX.**	
Static										
Gate-Threshold Voltage		$V_{GS(th)}$		1.0		3.0	1.4		3.0	V
Gate-Body Leakage		I_{GSS}				100			100	nA
Zero Gate Voltage Drain Current		I_{DSS}	Ch-1			1			1	µA
			Ch-2		16	100			100	
On-State Drain Current	V_{GS} = 10 V	$I_{D(on)}$		20			20			A
Drain-Source On-Resistance	V_{GS} = 10 V	$R_{DS(on)}$			0.0156	0.020		0.017	0.022	Ω
	V_{GS} = 4.5 V				0.019	0.025		0.024	0.030	
Forward Transconductance		g_{fs}			29			19		S
Diode Forward Voltage		V_{SD}	Ch-1		0.74	1.1		0.75	1.2	V
			Ch-2		0.46	0.51		0.47	0.5	
Dynamic										
Total Charge		Q_g			7.3	11		7	11	nC
Gate-Source Charge		Q_{gs}			2.7			2.9		
Gate-Drain Charge		Q_{gd}			2.1			2.5		
Gate Resistance		R_g		0.2	1.2	2.4	0.5	1.5	2.4	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.