Si4825DDY vs. Si4825DY

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

Part Number Replacements: Si4825DDY-T1-E3 replaces Si4825DY-T1-E3
Si4825DDY-T1-GE3 replaces Si4825DY-T1-GE3

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted					
PARAMETER		**SYMBOL**	**Si4825DDY**	**Si4825DY**	**UNIT**
Drain-Source Voltage		V_{DS}	- 30	- 30	V
Gate-Source Voltage		V_{GS}	± 25	± 25	
Continuous Drain Current	T_A = 25 °C	I_D	- 10.9	- 11.5	A
	T_A = 70 °C		- 8.6	- 9.2	
Pulsed Drain Current		I_{DM}	- 60	- 50	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 2.2	- 2.1	
Power Dissipation	T_A = 25 °C	P_D	2.7	3.0	W
	T_A = 70 °C		1.7	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}	46	42	°C/W

SPECIFICATIONS T_J = 25 °C, unless otherwise noted									
			Si4825DDY			**Si4825DY**			
PARAMETER		**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	- 1.4		- 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	$I_{D(on)}$	- 30			- 50			A
Drain-Source On-Resistance	V_{GS} = - 10 V	$R_{DS(on)}$		0.010	0.0125		0.012	0.014	Ω
	V_{GS} = - 4.5 V			0.0165	0.0205		0.018	0.022	
Forward Transconductance		g_{fs}		28			28		S
Diode Forward Voltage		V_{SD}		- 0.75	- 1.2		- 0.8	- 1.2	V
Dynamic									
Total Gate Charge		Q_g		57	86		55	71	nC
Gate-Source Charge		Q_{gs}		8			15.5		
Gate-Drain Charge		Q_{gd}		22			7.5		
Gate Resistance		R_g	0.5	2.2	4.4		3.5	5.3	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.