Si4947ADY vs. Si4947DY

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

Part Number Replacements

Si4947ADY-T1-E3 Replaces Si4947DY-E3
Si4947ADY-T1 Replaces Si4947DY-T1

ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C, unless otherwise noted)					
Parameter		**Symbol**	**Si4947ADY**	**Si4947DY**	**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	- 3.9	- 3.5	A
	T_A = 70 °C		- 3.1	- 2.8	
Pulsed Drain Current		I_{DM}	- 20	- 20	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 1.7	- 1.7	
Power Dissipation	T_A = 25 °C	P_D	2.0	2.0	W
	T_A = 70 °C		1.3	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}	62.5	62.5	°C/W

SPECIFICATIONS (T_J = 25 °C, unless otherwise noted)									
Parameter		**Symbol**	**Si4947ADY**			**Si4947DY**			**Unit**
			Min	**Typ**	**Max**	**Min**	**Typ**	**Max**	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	- 1.0			- 1.0			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	$I_{D(on)}$	- 15			- 15			A
Drain-Source On-Resistance	V_{GS} = - 10 V	$r_{DS(on)}$		0.062	0.080		0.066	0.085	Ω
	V_{GS} = - 4.5 V			0.105	0.135		0.125	0.19	
Forward Transconductance		g_{fs}		5.0			5.0		S
Diode Forward Voltage		V_{SD}		- 0.82	- 1.2		- 0.8	- 1.2	V
Dynamic									
Total Charge		Q_g[1]		5.8	8		8.7	15	nC
Gate-Source Charge		Q_{gs}		2			1.9		
Gate-Drain Charge		Q_{gd}		1.9			1.3		
Switching									
Turn-On Time		$t_{d(on)}$		8	15		7	15	ns
		t_r		9	18		9	18	
Turn-Off Time		$t_{d(off)}$		21	40		14	27	
		t_f		10	20		8	15	
Source-Drain Reverse Recovery Time		t_{rr}		27	40		50	80	

1. For Si4947ADY, V_{GS} = 5 V. For Si4947DY, V_{GS} = 10 V.

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.