



Si4925DDY vs. Si4925BDY

Description: P-Channel, 30-V (D-S) MOSFET

Package: SO-8

Pin Out: Identical

Part Number Replacements: Si4925DDY-T1-GE3 replaces Si4925BDY-T1-E3
Si4925DDY-T1-GE3 replaces Si4925BDY-T1-GE3

ABSOLUTE MAXIMUM RATINGS $T_A = 25\text{ }^\circ\text{C}$, unless otherwise noted					
PARAMETER	SYMBOL	Si4925DDY	Si4925BDY	UNIT	
Drain-Source Voltage	V_{DS}	- 30	- 30	V	
Gate-Source Voltage	V_{GS}	± 20	± 20		
Continuous Drain Current	I_D	$T_A = 25\text{ }^\circ\text{C}$	- 7.3	- 7.1	A
		$T_A = 70\text{ }^\circ\text{C}$	- 5.9	- 5.7	
Pulsed Drain Current	I_{DM}	- 32	- 40		
Continuous Source Current (MOSFET Diode Conduction)	I_S	- 2.0	- 1.7		
Power Dissipation	P_D	$T_A = 25\text{ }^\circ\text{C}$	2.5	2.0	W
		$T_A = 70\text{ }^\circ\text{C}$	1.6	1.3	
Operating Junction and Storage Temperature Range	T_J and T_{stg}	- 55 to 150	- 55 to 150	$^\circ\text{C}$	
Maximum Junction-to-Ambient	R_{thJA}	50	62.5	$^\circ\text{C}/\text{W}$	

SPECIFICATIONS $T_J = 25\text{ }^\circ\text{C}$, unless otherwise noted								
PARAMETER	SYMBOL	Si4925DDY			Si4925BDY			UNIT
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
Static								
Gate-Threshold Voltage	$V_{GS(th)}$	- 1.0		- 3.0	- 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	$V_{GS} = - 10\text{ V}$ $I_{D(on)}$	- 30			- 40			A
Drain-Source On-Resistance	$V_{GS} = - 10\text{ V}$ $R_{DS(on)}$		0.024	0.029		0.020	0.025	Ω
	$V_{GS} = - 4.5\text{ V}$		0.033	0.041		0.033	0.041	
Forward Transconductance	g_{fs}		23			20		S
Diode Forward Voltage	V_{SD}		- 0.75	- 1.2		- 0.8	- 1.2	V
Dynamic								
Total Gate Charge	Q_g		32	50		33	50	nC
Gate-Source Charge	Q_{gs}		4			5.4		
Gate-Drain Charge	Q_{gd}		7.5			8.9		
Gate Resistance	R_g		5.8			NS		

Note

NS denotes not specified in original specification

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.