Si4936CDY vs. Si4936BDY

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

Part Number Replacements: Si4936CDY-T1-GE3 replaces Si4936BDY-T1-GE3
Si4936CDY-T1-GE3 replaces Si4936BDY-T1-E3

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted					
PARAMETER		**SYMBOL**	**Si4936CDY**	**Si4936BDY**	**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	5.0	5.9	A
	T_A = 70 °C		4.0	4.7	
Pulsed Drain Current		I_{DM}	20	30	
Continuous Source Current (MOSFET Diode Conduction)		I_S	1.4	1.7	
Power Dissipation	T_A = 25 °C	P_D	1.7	2.0	W
	T_A = 70 °C		1.1	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}	75	62.5	°C/W

SPECIFICATIONS T_J = 25 °C, unless otherwise noted									
			Si4936CDY			**Si4936BDY**			
PARAMETER		**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	1.2		3.0	1.5		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	$I_{D(on)}$	15			30			A
Drain-Source On-Resistance	V_{GS} = 10 V	$R_{DS(on)}$		0.033	0.040		0.029	0.035	Ω
	V_{GS} = 4.5 V			0.041	0.050		0.042	0.051	
Forward Transconductance		g_{fs}		15			12		S
Diode Forward Voltage		V_{SD}		0.8	1.2		0.8	1.2	V
Dynamic									
Total Gate Charge	V_{GS} = 10 V	Q_g		6	9		9.1	15	nC
	V_{GS} = 4.5 V			2.8	4.2		4.5	7	
Gate-Source Charge		Q_{gs}		1.1			1.8		
Gate-Drain Charge		Q_{gd}		0.8			1.7		
Gate Resistance		R_g	0.6	2.8	5.6		3		Ω
Switching									
Turn-On-Time		$t_{d(on)}$		4	8		5	10	ns
		t_r		9	18		25	40	
Turn-Off-Time		$t_{d(off)}$		11	20		12	20	
		t_f		8	15		10	15	
Source-Drain Reverse Recovery Time		t_{rr}		11	20		20	40	

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.