Si5915BDC vs. Si5915DC

Description: **Dual N-Channel 8-V (D-S) MOSFET**
Package: **1206-8 ChipFET®**
Pin Out: **Identical**

Part Number Replacements

Si5915BDC-T1-E3 Replaces Si5915DC-T1-E3
Si5915BDC-T1-E3 Replaces Si5915DC-T1

ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C, unless otherwise noted)					
Parameter		**Symbol**	**Si5915BDC**	**Si5915DC**	**Unit**
Drain-Source Voltage		V_{DS}	- 8	- 8	V
Gate-Source Voltage		V_{GS}	± 8	± 8	
Continuous Drain Current	T_A = 25 °C	I_D	- 4	- 4.6	A
	T_A = 85 °C		- 3.2[a]	- 3.3	
Pulsed Drain Current		I_{DM}	- 10	- 10	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 1.9	- 1.8	
Power Dissipation	T_A = 25 °C	P_D	1.7	2.1	W
	T_A = 85 °C		1.1	1.1	
Operating Junction and Storage Temperature Range		T_j and T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	74	60	°C/W

SPECIFICATIONS (T_J = 25 °C, unless otherwise noted)									
Parameter		**Symbol**	**Si5915BDC**			**Si5915DC**			**Unit**
			Min	**Typ**	**Max**	**Min**	**Typ**	**Max**	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	- 0.45		- 1.0	- 0.45		NS[b]	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	$I_{D(on)}$	- 10			- 10			A
Drain-Source On-Resistance	V_{GS} = - 4.5 V	$r_{DS(on)}$		0.058	0.070		0.058	0.070	Ω
	V_{GS} = - 2.5 V			0.086	0.104		0.090	0.108	
	V_{GS} = - 1.8 V			0.120	0.145		0.131	0.162	
Forward Transconductance		g_{fs}		9			8		S
Diode Forward Voltage		V_{SD}		- 0.8	- 1.2		- 0.8	- 1.2	V
Dynamic									
Total Gate Charge		Q_g		5	7.5		5.9	9	nC
Gate-Source Charge		Q_{gs}		0.7			1.3		
Gate-Drain Charge		Q_{gd}		0.7			1.4		
Gate Resistance		R_g		7			NS[b]		Ω

Notes:
a. T_A is 70 °C for Si5915BDC.
b. NS denotes not specified in original datasheet.

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.