Si5435BDC vs. Si5435DC

Description: **P-Channel, 30 V (D-S) MOSFET**
Package: **1206-8 ChipFET®**
Pin Out: **Identical**

Part Number Replacements:
Si5435BDC-T1 Replaces Si5435DC-T1
Si5435BDC-T1-E3 (Lead (Pb)-free version) Replaces Si5435DC-T1-E3

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted

Parameter		Symbol	Si5435BDC	Si5435DC	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	- 5.9	- 5.6	A
	T_A = 70 °C		- 4.3	- 4.0	
Pulsed Drain Current		I_{DM}	- 30	- 30	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 2.1	- 2.1	
Power Dissipation	T_A = 25 °C	P_D	2.5	2.5	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}	50	50	°C/W

SPECIFICATIONS T_J = 25 °C, unless otherwise noted

Parameter		Symbol	Si5435BDC			Si5435DC			Unit
			Min	Typ	Max	Min	Typ	Max	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	- 1.0		- 3.0	- 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	$I_{D(on)}$	- 30			- 30			A
Drain-Source On-Resistance	V_{GS} = - 10 V	$r_{DS(on)}$		0.035	0.045		0.042	0.050	Ω
	V_{GS} = - 4.5 V			0.065	0.080		0.070	0.080	
Forward Transconductance		g_{fs}		14			8		S
Diode Forward Voltage		V_{SD}		- 0.8	- 1.2		- 0.8	- 1.2	V
Dynamic									
Total Gate Charge		Q_g		16	24		16	24	nC
Gate-Source Charge		Q_{gs}		2.7			3.6		
Gate-Drain Charge		Q_{gd}		4.1			3.1		
Gate Resistance		R_g		8.5			NS*		Ω
Switching									
Turn-On Time		$t_{d(on)}$		8	15		11	20	ns
		t_r		12	20		5	10	
Turn-Off Time		$t_{d(off)}$		32	50		40	80	
		t_f		20	30		20	40	
Source-Drain Reverse Recovery Time		t_{rr}		25	50		30	60	

* NS denotes parameter not specified in original data sheet.

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.