Si5433BDC vs. Si5433DC

Description: **P-Channel, 20 V (D-S) MOSFET**
Package: **1206-8 ChipFET®**
Pin Out: **Identical**

Part Number Replacements:
Si5433BDC-T1-E3 Replaces Si5433DC-T1-E3
Si5433BDC-T1 Replaces Si5433DC-T1

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted					
Parameter		**Symbol**	**Si5433BDC**	**Si5433DC**	**Unit**
Drain-Source Voltage		V_{DS}	- 20	- 20	V
Gate-Source Voltage		V_{GS}	± 8	± 8	
Continuous Drain Current	T_A = 25 °C	I_D	- 6.7	- 6.7	A
	T_A = 70 °C		- 4.8	- 4.8	
Pulsed Drain Current		I_{DM}	- 20	- 20	
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**	**Si5433BDC**			**Si5433DC**			**Unit**
			Min	**Typ**	**Max**	**Min**	**Typ**	**Max**	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	- 0.45		- 1.0	- 0.45		NS	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} = - 4.5 V	$I_{D(on)}$	- 20			- 20			A
Drain-Source On-Resistance	V_{GS} = - 4.5 V	$r_{DS(on)}$		0.030	0.037		0.036	0.040	Ω
	V_{GS} = - 2.5 V			0.041	0.050		0.045	0.052	
	V_{GS} = - 1.8 V			0.056	0.070		0.062	0.072	
Forward Transconductance		g_{fs}		18			15		S
Diode Forward Voltage		V_{SD}		- 0.8	- 1.2		- 0.8	- 1.2	V
Dynamic									
Total Gate Charge		Q_g		15	22		15	22	nC
Gate-Source Charge		Q_{gs}		2.4			3.6		
Gate-Drain Charge		Q_{gd}		3.6			2.5		
Gate Resistance		R_g		10			NS		Ω
Switching									
Turn-On Time		$t_{d(on)}$		12	25		22	35	ns
		t_r		25	40		29	45	
Turn-Off Time		$t_{d(off)}$		80	120		94	140	
		t_f		55	85		54	80	
Source-Drain Reverse Recovery Time		t_{rr}		30	60		30	60	

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.