Si7634BDP vs. Si7634DP

Description: **N-Channel, 30-V (D-S) MOSFET**
Package: **PowerPAK® SO-8**
Pin Out: **Identical**

Part Number Replacements: Si7634BDP-T1-E3 replaces Si7634DP-T1-E3

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted					
PARAMETER		**SYMBOL**	**Si7634BDP**	**Si7634DP**	**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	22.5	23	A
	T_A = 70 °C		18.0	18.5	
Pulsed Drain Current		I_{DM}	70	60	
Continuous Source Current (MOSFET Diode Conduction)		I_S	4.5	4.5	
Power Dissipation	T_A = 25 °C	P_D	5	5	W
	T_A = 70 °C		3.2	3.2	
Operating Junction and Storage Temperature Range		T_J and T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	25	25	°C/W

SPECIFICATIONS T_J = 25 °C, unless otherwise noted									
PARAMETER		**SYMBOL**	**Si7634BDP**			**Si7634DP**			**UNIT**
			MIN.	**TYP.**	**MAX.**	**MIN.**	**TYP.**	**MAX.**	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	1.4		2.6	1.5		2.5	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	$r_{DS(on)}$		0.0045	0.0054		0.0043	0.0052	Ω
	V_{GS} = 4.5 V			0.0058	0.007		0.0062	0.0076	
Forward Transconductance		g_{fs}		78			35		S
Diode Forward Voltage		V_{SD}		0.75	1.1		0.72	1.1	V
Dynamic									
Total Gate Charge	V_{GS} = 10 V	Q_g		45.5	68		52	78	nC
	V_{GS} = 4.5 V			21.5	33		21	32	
Gate-Source Charge		Q_{gs}		8			8.2		
Gate-Drain Charge		Q_{gd}		6.2			7.2		
Gate Resistance		R_g		0.8	1.6		1.5	2.3	Ω

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.