Si3424BDV vs. Si3424DV

Description: **N-Channel 30-V (D-S) MOSFET**
Package: **TSOP-6**
Pin Out: **Identical**

Part Number Replacements

Si3424BDV-T1-E3 Replaces Si3424DV-T1-E3
Si3424BDV-T1-E3 Replaces Si3424DV-T1

ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C, unless otherwise noted)					
Parameter		**Symbol**	**Si3424BDV**	**Si3424DV**	**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	7	6.7	A
	T_A = 70 °C		5.6	5.4	
Pulsed Drain Current		I_{DM}	30	30	
Continuous Source Current (MOSFET Diode Conduction)	T_A = 25 °C	I_S	1.74	1.7	
Power Dissipation	T_A = 25 °C	P_D	2.1	2.0	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}	60	62.5	°C/W

SPECIFICATIONS (T_J = 25 °C, unless otherwise noted)									
Parameter		**Symbol**	**Si3424BDV**			**Si3424DV**			**Unit**
			Min	**Typ**	**Max**	**Min**	**Typ**	**Max**	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	1		3	0.8		NS[a]	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	$r_{DS(on)}$		0.023	0.028		0.023	0.028	Ω
	V_{GS} = 4.5 V			0.0315	0.038		0.032	0.038	
Forward Transconductance		g_{fs}		17			14		S
Diode Forward Voltage		V_{SD}		0.8	1.2		0.8	1.2	V
Dynamic									
Total Gate Charge		Q_g		13.05	19.6		11.5	18	nC
Gate-Source Charge		Q_{gs}		2.16			1.6		
Gate-Drain Charge		Q_{gd}		2.15			3.2		
Gate Resistance		R_g		2.45	3.7		NS[a]		Ω

Notes:
a. 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.