



## Si3424CDV vs. Si3424BDV

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

**Part Number Replacements:** Si3424CDV-T1-GE3 Replaces Si3424BDV-T1-E3  
 Si3424CDV-T1-GE3 Replaces Si3424BDV-T1-GE3

<b>ABSOLUTE MAXIMUM RATINGS</b> ( $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise noted)				
PARAMETER	SYMBOL	Si3424CDV	Si3424BDV	UNIT
Drain-Source Voltage	$V_{DS}$	30	30	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	$\pm 20$	
Continuous Drain Current	$T_A = 25\text{ }^\circ\text{C}$	7.2	7	A
	$T_A = 70\text{ }^\circ\text{C}$	5.7	5.6	
Pulsed Drain Current	$I_{DM}$	20	30	
Continuous Source Current (MOSFET Diode Conduction)	$T_A = 25\text{ }^\circ\text{C}$	1.70	1.74	
Power Dissipation	$T_A = 25\text{ }^\circ\text{C}$	2	2.1	W
	$T_A = 70\text{ }^\circ\text{C}$	1.3	1.3	
Operating Junction and Storage Temperature Range	$T_i, T_{stg}$	- 55 to 150	- 55 to 150	$^\circ\text{C}$
Maximum Junction-to-Ambient	$R_{thJA}$	62.5	60	$^\circ\text{C/W}$

<b>SPECIFICATIONS</b> ( $T_J = 25\text{ }^\circ\text{C}$ , unless otherwise noted)								
PARAMETER	SYMBOL	Si3424CDV			Si3424BDV			UNIT
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
<b>Static</b>								
Gate-Threshold Voltage	$V_{GS(th)}$	1	-	2.5	1	-	3	V
Gate-Body Leakage	$I_{GSS}$	-	-	$\pm 100$	-	-	$\pm 100$	nA
Zero Gate Voltage Drain Current	$I_{DSS}$	-	-	1	-	-	1	$\mu\text{A}$
On-State Drain Current	$V_{GS} = 10\text{ V}$ $I_{D(on)}$	20	-	-	30	-	-	A
Drain-Source On-Resistance	$V_{GS} = 10\text{ V}$ $R_{DS(on)}$	-	0.021	0.026	-	0.023	0.028	$\Omega$
	$V_{GS} = 4.5\text{ V}$	-	0.026	0.032	-	0.0315	0.0380	
Forward Transconductance	$g_{fs}$	-	17	-	-	17	-	S
Diode Forward Voltage	$V_{SD}$	-	0.8	1.2	-	0.8	1.2	V
<b>Dynamic</b>								
Total Gate Charge	$V_{GS} = 10\text{ V}$ $Q_g$	-	8.3	12.5	-	13.05	19.6	nC
	$V_{GS} = 4.5\text{ V}$	-	4.2	6.3	-	6.2	9.3	
Gate-Source Charge	$Q_{gs}$	-	1.2	-	-	2.16	-	
Gate-Drain Charge	$Q_{gd}$	-	1.6	-	-	2.15	-	
Gate Resistance	$R_g$	0.6	3	6	NS	2.45	3.7	$\Omega$

**Note**

- NS denotes not specified in original specification

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.