



Si3460DDV vs. Si3460BDV

Description: N-Channel, 20 V (D-S) MOSFET

Package: TSOP-6

Pin Out: Identical

Part Number Replacements: Si3460DDV-T1-GE3 replaces Si3460BDV-T1-GE3

Si3460DDV-T1-GE3 replaces Si3460BDV-T1-GE3

ABSOLUTE MAXIMUM RATINGS $T_A = 25\text{ }^\circ\text{C}$, unless otherwise noted					
PARAMETER	SYMBOL	Si3460DDV	Si3460BDV	UNIT	
Drain-Source Voltage	V_{DS}	20	20	V	
Gate-Source Voltage	V_{GS}	± 8	± 8		
Continuous Drain Current	I_D	$T_A = 25\text{ }^\circ\text{C}$	6.2	6.7	A
		$T_A = 70\text{ }^\circ\text{C}$	5.0	5.4	
Pulsed Drain Current	I_{DM}	20	20		
Continuous Source Current (MOSFET Diode Conduction)	I_S	$T_C = 25\text{ }^\circ\text{C}$	2.2	2.9	
		$T_A = 70\text{ }^\circ\text{C}$	1.4	1.7	
Power Dissipation	P_D	$T_A = 25\text{ }^\circ\text{C}$	1.7	2.0	W
		$T_A = 70\text{ }^\circ\text{C}$	1.1	1.3	
Operating Junction and Storage Temperature Range	T_J and T_{stg}	- 55 to 150	- 55 to 150	$^\circ\text{C}$	
Maximum Junction-to-Ambient	R_{thJA}	74	62.5	$^\circ\text{C}/\text{W}$	

SPECIFICATIONS $T_J = 25\text{ }^\circ\text{C}$, unless otherwise noted								
PARAMETER	SYMBOL	Si3460DDV			Si3460BDV			UNIT
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
Static								
Gate-Threshold Voltage	$V_{GS(th)}$	0.4		1.0	0.45		1.0	V
Gate-Body Leakage	I_{GSS}			± 100			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}			1.0			1.0	μA
On-State Drain Current	$V_{GS} = 4.5\text{ V}$ $I_{D(on)}$	20			20			A
Drain-Source On-Resistance	$V_{GS} = 4.5\text{ V}$ $R_{DS(on)}$		0.023	0.028		0.023	0.027	Ω
	$V_{GS} = 2.5\text{ V}$		0.027	0.032		0.027	0.032	
	$V_{GS} = 1.8\text{ V}$		0.031	0.038		0.033	0.040	
Forward Transconductance	g_{fs}		35			22		S
Diode Forward Voltage	V_{SD}		0.8	1.2		0.8	1.2	V
Dynamic								
Total Gate Charge	Q_g		6.7	10.1		9	13.5	nC
Gate-Source Charge	Q_{gs}		0.95			1.4		
Gate-Drain Charge	Q_{gd}		0.5			1.4		
Gate Resistance	R_g	0.4	2.1	4.2		3.2		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.