



Si3460BDV vs. Si3460DV

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

Package: TSOP-6

Pin Out: Identical

Part Number Replacements:

Si3460BDV-T1-E3 Replaces Si3460DV-T1-E3

Si3460BDV-T1-E3 Replaces Si3460DV-T1

ABSOLUTE MAXIMUM RATINGS $T_A = 25\text{ }^\circ\text{C}$, unless otherwise noted					
Parameter	Symbol	Si3460BDV	Si3460DV	Unit	
Drain-Source Voltage	V_{DS}	20	20	V	
Gate-Source Voltage	V_{GS}	± 8	± 8		
Continuous Drain Current	$T_A = 25\text{ }^\circ\text{C}$	I_D	6.7	6.8	A
	$T_A = 70\text{ }^\circ\text{C}$		5.4	5.4	
Pulsed Drain Current	I_{DM}	20	20		
Continuous Source Current (MOSFET Diode Conduction)	$T_A = 25\text{ }^\circ\text{C}$	I_S	1.7	1.7	
Power Dissipation	$T_A = 25\text{ }^\circ\text{C}$	P_D	2.0	2.0	W
	$T_A = 70\text{ }^\circ\text{C}$		1.3	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}	62.5	62.5	$^\circ\text{C/W}$	

SPECIFICATIONS $T_J = 25\text{ }^\circ\text{C}$, unless otherwise noted									
Parameter	Symbol	Si3460BDV			Si3460DV			Unit	
		Min	Typ	Max	Min	Typ	Max		
Static									
Gate-Threshold Voltage	$V_{GS(th)}$	0.45		1.0	0.45		1.6	V	
Gate-Body Leakage	I_{GSS}			± 100			± 100	nA	
Zero Gate Voltage Drain Current	I_{DSS}			1			1	μA	
On-State Drain Current	$V_{GS} = 4.5\text{ V}^a$	$I_{D(on)}$	20		20			A	
Drain-Source On-Resistance	$V_{GS} = 4.5\text{ V}$	$r_{DS(on)}$		0.023	0.027		0.023	0.027	Ω
	$V_{GS} = 2.5\text{ V}$			0.027	0.032		0.027	0.032	
	$V_{GS} = 1.8\text{ V}$			0.033	0.040		0.032	0.038	
Forward Transconductance		g_{fs}		22			25	S	
Diode Forward Voltage		V_{SD}		0.8	1.2		0.8	1.2	V
Dynamic									
Total Charge		Q_g		9	13.5		13.5	20	nC
Gate-Source Charge		Q_{gs}		1.4			2.3		
Gate-Drain Charge		Q_{gd}		1.4			2.2		
Gate Resistance		R_g		3.2		0.5		2.9	Ω

Notes:

a. $V_{GS} = 10\text{ V}$ for the Si3460DV

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.