Si3458BDV vs. Si3458DV

Description: **N-Channel, 60-V (D-S) MOSFET**
Package: **TSOP-6**
Pin Out: **Identical**

Part Number Replacements: Si3458BDV-T1-E3 replaces Si3458DV-T1-E3
Si3458BDV-T1-E3 replaces Si3458DV-T1

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted					
PARAMETER		**SYMBOL**	**Si3458BDV**	**Si3458DV**	**UNIT**
Drain-Source Voltage		V_{DS}	60	60	V
Gate-Source Voltage		V_{GS}	± 20	± 20	
Continuous Drain Current	T_A = 25 °C	I_D	3.2	3.2	A
	T_A = 70 °C		2.5	2.5	
Pulsed Drain Current		I_{DM}	10	15	
Continuous Source Current (MOSFET Diode Conduction)	T_A = 25 °C	I_S	1.7	NS	
	T_C = 25 °C	I_S			
Power Dissipation	T_A = 25 °C	P_D	2.0	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}	62.5	62.5	°C/W

SPECIFICATIONS T_J = 25 °C, unless otherwise noted									
PARAMETER		**SYMBOL**	**Si3458BDV**			**Si3458DV**			**UNIT**
			MIN.	**TYP.**	**MAX.**	**MIN.**	**TYP.**	**MAX.**	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	1.5		3	1		NS	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	$I_{D(on)}$	10			10			A
Drain-Source On-Resistance	V_{GS} = 10 V	$R_{DS(on)}$		0.082	0.100		0.085	0.100	Ω
	V_{GS} = 4.5 V			0.105	0.128		0.110	0.130	
Forward Transconductance		g_{fs}		12			8		S
Diode Forward Voltage		V_{SD}		0.8	1.2		NS	1.2	V
Dynamic									
Total Gate Charge		Q_g		7.1	11		8.0	16	nC
Gate-Source Charge		Q_{gs}		1.1			4.0		
Gate-Drain Charge		Q_{gd}		0.95			2.0		
Gate Resistance		R_g		2.3	NS	1		3.9	Ω

Note
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.