Si3459BDV vs. Si3459DV

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

Part Number Replacements: Si3459BDV-T1-GE3 replaces Si3459DV-T1-GE3
Si3459BDV-T1-E3 or Si3459BDV-T1-GE3 replaces Si3459DV-T1-E3
Si3459BDV-T1-E3 or Si3459BDV-T1-GE3 replaces Si3459DV-T1

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted

PARAMETER		SYMBOL	Si3459BDV	Si3459DV	UNIT
Drain-Source Voltage		V_{DS}	- 60	- 60	V
Gate-Source Voltage		V_{GS}	± 20	± 20	
Continuous Drain Current	T_C = 25 °C	I_D	- 2.9	- 2.2	A
	T_C = 70 °C		- 2.3	- 1.7	
Pulsed Drain Current		I_{DM}	- 8	- 10	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 1.7	- 1.7	
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	Si3459BDV			Si3459DV			UNIT
			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	- 1		- 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	$I_{D(on)}$	- 8			- 10			A
Drain-Source On-Resistance	V_{GS} = - 10 V	$R_{DS(on)}$		0.180	0.216		0.190	0.220	Ω
	V_{GS} = - 4.5 V			0.240	0.288		0.265	0.310	
Forward Transconductance		g_{fs}		4			4		S
Diode Forward Voltage		V_{SD}		- 0.8	- 1.2		- 0.8	- 1.2	V
Dynamic									
Total Gate Charge		Q_g		7.7	12		7	14	nC
Gate-Source Charge		Q_{gs}		1.3			1.6		
Gate-Drain Charge		Q_{gd}		2.5			1.2		
Gate Resistance		R_g	2	10	20		NS		Ω

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.