Si3493BDV vs. Si3493DV

Description: **P-Channel, 20 V (D-S) MOSFET**
Package: **TSOP-6**
Pin Out: **Identical**

Part Number Replacements

Si3493BDV-T1-E3 Replaces Si3493DV-T1-E3
Si3493BDV-T1-E3 Replaces Si3493DV-T1

ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C, unless otherwise noted)					
Parameter		**Symbol**	**Si3493BDV**	**Si3493DV**	**Unit**
Drain-Source Voltage		V_{DS}	- 20	- 20	V
Gate-Source Voltage		V_{GS}	± 8	± 8	
Continuous Drain Current	T_A = 25 °C	I_D	- 7	- 7	A
	T_A = 70 °C*		- 5.8	- 3.6	
Pulsed Drain Current		I_{DM}	- 25	- 20	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 1.73	- 1.7	
Power Dissipation	T_A = 25 °C	P_D	2.08	2.0	W
	T_A = 70 °C*		1.33	1.0	
Operating Junction and Storage Temperature Range		T_j and T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	60	62.5	°C/W

SPECIFICATIONS (T_J = 25 °C, unless otherwise noted)									
Parameter		**Symbol**	**Si3493BDV**			**Si3493DV**			**Unit**
			Min	**Typ**	**Max**	**Min**	**Typ**	**Max**	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	- 0.4		- 0.9	- 0.4		- 1.0	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 V	$I_{D(on)}$	- 25			- 20			A
Drain-Source On-Resistance	V_{GS} = - 4.5 V	$r_{DS(on)}$		0.023	0.0275		0.022	0.027	Ω
	V_{GS} = - 2.5 V			0.0284	0.034		0.029	0.035	
	V_{GS} = - 1.8 V			0.0347	0.045		0.039	0.048	
Forward Transconductance		g_{fs}		24.3			25		S
Diode Forward Voltage		V_{SD}		- 0.8	- 1.2		- 0.7	- 1.2	V
Dynamic									
Total Gate Charge		Q_g		26.2	39.3		21	32	nC
Gate-Source Charge		Q_{gs}		1.45			2.6		
Gate-Drain Charge		Q_{gd}		7.14			6		
Gate Resistance		R_g		6.5	10		NS	NS	Ω
Switching									
Turn-On Time		$t_{d(on)}$		22	33		20	30	ns
		t_r		72	108		40	60	
Turn-Off Time		$t_{d(off)}$		75	113		125	190	
		t_f		84	126		85	130	
Source-Drain Reverse Recovery Time		t_{rr}		52	78		64	90	

* 85 °C for Si3493DV
NS denotes parameter 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.