



Si3443CDV vs. Si3443BDV

Description: P-Channel, 20-V (D-S) Mosfet

Package: TSOP-6

Pin Out: Identical

Part Number Replacements:

Si3443CDV-T1-E3 Replaces Si3443BDV-T1-E3

ABSOLUTE MAXIMUM RATINGS $T_A = 25\text{ }^\circ\text{C}$, unless otherwise noted					
Parameter	Symbol	Si3443CDV	Si3443BDV	Unit	
Drain-Source Voltage	V_{DS}	- 20	- 20	V	
Gate-Source Voltage	V_{GS}	± 12	± 12		
Continuous Drain Current	$T_A = 25\text{ }^\circ\text{C}$	I_D	- 4.7	- 4.7	A
	$T_A = 70\text{ }^\circ\text{C}$		- 3.4	- 3.8	
Pulsed Drain Current		I_{DM}	- 20	- 20	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 1.71	- 1.7	
Power Dissipation	$T_A = 25\text{ }^\circ\text{C}$	P_D	2.0	2.0	W
	$T_A = 70\text{ }^\circ\text{C}$		1.28	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	Si3443CDV			Si3443BDV			Unit	
		Min.	Typ.	Max.	Min.	Typ.	Max.		
Static									
Gate-Threshold Voltage	$V_{GS(th)}$	- 0.6		- 1.5	- 0.6		- 1.4	V	
Gate-Body Leakage	I_{GSS}			± 100			± 100	nA	
Zero Gate Voltage Drain Current	I_{DSS}			- 1			- 1	μA	
On-State Drain Current	$V_{GS} = - 4.5\text{ V}$	$I_{D(on)}$	- 20		- 15			A	
Drain-Source On-Resistance	$V_{GS} = - 4.5\text{ V}$	$r_{DS(on)}$		0.050	0.060		0.048	0.060	Ω
	$V_{GS} = - 2.7\text{ V}$			0.0692	0.084		0.070	0.090	
	$V_{GS} = - 2.5\text{ V}$			0.083	0.100		0.080	0.100	
Forward Transconductance		g_{fs}		15			11	S	
Diode Forward Voltage		V_{SD}		- 0.8	- 1.2		- 0.8	- 1.2	V
Dynamic									
Total Gate Charge		Q_g		7.53	11.3		6	9	nC
Gate-Source Charge		Q_{gs}		1.53			1.4		
Gate-Drain Charge		Q_{gd}		2.37			1.9		
Gate Resistance		R_g	NS ^a	8.5	12.75	5	9.5	16.2	Ω

Notes:

a. 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.