Si3447BDV vs. Si3447DV

Description: **P-Channel, 1.8 V (G-S) MOSFET**
Package: **TSOP-6**
Pin Out: **Identical**

Part Number Replacements:
Si3447BDV-T1 Replaces Si3447DV-T1
Si3447BDV-T1-E3 (Lead (Pb)-free version) Replaces Si3447DV-T1

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

Parameter		Symbol	Si3447BDV	Si3447DV	Unit
Drain-Source Voltage		V_{DS}	- 12	- 12	V
Gate-Source Voltage		V_{GS}	± 8	± 8	
Continuous Drain Current	T_A = 25 °C	I_D	- 6.0	- 5.2	A
	T_A = 70 °C		- 4.3	- 4.1	
Pulsed Drain Current		I_{DM}	- 20	- 20	
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		1.0	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	Si3447BDV			Si3447DV			Unit
			Min	Typ	Max	Min	Typ	Max	
Static									
Drain-Source Breakdown Voltage		$V_{(BR)DSS}$	- 12			- 12			V
Gate-Threshold Voltage		$V_{G(th)}$	- 0.45		- 1.0	- 0.45			
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	$I_{D(on)}$	- 20			- 15			A
Drain-Source On-Resistance	V_{GS} = - 4.5 V	$r_{DS(on)}$		0.033	0.040		0.040	0.050	Ω
	V_{GS} = - 2.5 V			0.044	0.053		0.056	0.070	
	V_{GS} = - 1.8 V			0.060	0.072		0.071	0.095	
Forward Transconductance		g_{fs}		15			15		S
Diode Forward Voltage		V_{SD}		- 0.7	- 1.2		- 0.7	- 1.2	V
Dynamic									
Total Gate Charge		Q_g		9.3	14		16	25	nC
Gate-Source Charge		Q_{gs}		1.5			3.5		
Gate-Drain Charge		Q_{gd}		2.6			2.5		
Switching									
Turn-On Time		$t_{d(on)}$		20	30		20	40	ns
		t_r		46	70		45	90	
Turn-Off Time		$t_{d(off)}$		62	95		100	200	
		t_f		62	95		75	150	
Source-Drain Reverse Recovery Time		t_{rr}		40	80		60	100	

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.