



Si3447CDV vs. Si3447BDV

Description: P-Channel, 12-V (D-S) MOSFET

Package: TSOP-6

Pin Out: Identical

Part Number Replacements: Si3447CDV-T1-E3 replaces Si3447BDV-T1-E3
Si3447CDV-T1-E3 replaces Si3447BDV-T1

ABSOLUTE MAXIMUM RATINGS $T_A = 25\text{ }^\circ\text{C}$, unless otherwise noted					
PARAMETER	SYMBOL	Si3447CDV	Si3447BDV	UNIT	
Drain-Source Voltage	V_{DS}	- 12	- 12	V	
Gate-Source Voltage	V_{GS}	± 8	± 8		
Continuous Drain Current	$T_A = 25\text{ }^\circ\text{C}$	I_D	- 6.3	- 6.0	A
	$T_A = 70\text{ }^\circ\text{C}$		- 5.0	- 4.3 ^a	
Pulsed Drain Current	I_{DM}	- 20	- 20		
Continuous Source Current (MOSFET Diode Conduction)	I_S	- 1.67	- 1.7		
Power Dissipation	$T_A = 25\text{ }^\circ\text{C}$	P_D	2.0	2.0	W
	$T_A = 70\text{ }^\circ\text{C}$		1.3	1.0 ^a	
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	Si3447CDV			Si3447BDV			UNIT
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
Static								
Gate-Threshold Voltage	$V_{GS(th)}$	- 0.4		- 1.0	- 0.45		- 1	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			- 20			A
Drain-Source On-Resistance	$V_{GS} = - 4.5\text{ V}$ $r_{DS(on)}$		0.030	0.036		0.033	0.040	Ω
	$V_{GS} = - 2.5\text{ V}$		0.041	0.050		0.044	0.053	
	$V_{GS} = - 1.8\text{ V}$		0.055	0.068		0.060	0.072	
Forward Transconductance	g_{fs}		20			15		S
Diode Forward Voltage	V_{SD}		- 0.8	- 1.2		- 0.7	- 1.2	V
Dynamic								
Total Gate Charge	Q_g		12	18		9.3	14	nC
Gate-Source Charge	Q_{gs}		1.6			1.5		
Gate-Drain Charge	Q_{gd}		3.4			2.6		
Gate Resistance	R_g		6			NS		Ω

Note

NS denotes not specified in original datasheet

a. $T_A = 85\text{ }^\circ\text{C}$

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.