



Si4834CDY vs. Si4834BDY

Description: Dual N-Channel, 30-V (D-S) MOSFET with Schottky Diode
Package: SO-8
Pin Out: Identical

Part Number Replacements: Si4834CDY-T1-E3 replaces Si4834BDY-T1-E3

ABSOLUTE MAXIMUM RATINGS $T_A = 25\text{ }^\circ\text{C}$, unless otherwise noted				
PARAMETER	SYMBOL	Si4834CDY	Si4834BDY	UNIT
Drain-Source Voltage	V_{DS}	30	30	V
Gate-Source Voltage	V_{GS}	± 20	± 20	
Continuous Drain Current	$T_A = 25\text{ }^\circ\text{C}$	I_D	7.5	A
	$T_A = 70\text{ }^\circ\text{C}$		5.8	
Pulsed Drain Current	I_{DM}	30	30	
Continuous Source Current (MOSFET Diode Conduction)	I_S	1.8	1.7	
Power Dissipation	$T_A = 25\text{ }^\circ\text{C}$	P_D	2.0	W
	$T_A = 70\text{ }^\circ\text{C}$		1.2	
Operating Junction and Storage Temperature Range	T_J and T_{stg}	- 55 to 150	- 55 to 150	$^\circ\text{C}$
Maximum Junction-to-Ambient - MOSFET	R_{thJA}	62.5	62.5	$^\circ\text{C/W}$

SPECIFICATIONS $T_J = 25\text{ }^\circ\text{C}$, unless otherwise noted									
PARAMETER	SYMBOL	Si4834CDY			Si4834BDY			UNIT	
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Static									
Gate-Threshold Voltage	$V_{GS(th)}$	1.0		3.0	0.8		3.0	V	
Gate-Body Leakage	I_{GSS}			100			100	nA	
Zero Gate Voltage Drain Current	I_{DSS}	Ch-1	16	100			100	μA	
		Ch-2		1			1		
On-State Drain Current	$V_{GS} = 10\text{ V}$	$I_{D(on)}$	20		20			A	
Drain-Source On-Resistance	$V_{GS} = 10\text{ V}$	$R_{DS(on)}$		0.0156	0.020		0.017	0.022	Ω
	$V_{GS} = 4.5\text{ V}$			0.019	0.025		0.024	0.030	
Forward Transconductance		g_{fs}		29			19	S	
Diode Forward Voltage	V_{SD}	Ch-1	0.46	0.51			0.47	0.5	V
		Ch-2	0.74	1.1			0.75	1.2	
Dynamic									
Total Charge		Q_g		7.3	11		7	11	nC
Gate-Source Charge		Q_{gs}		2.7			2.9		
Gate-Drain Charge		Q_{gd}		2.1			2.5		
Gate Resistance		R_g	0.2	1.2	2.4	0.5	1.5	2.6	Ω

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.