



Si2323CDS vs. Si2323DS

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

Package: SOT-23

Pin Out: Identical

Part Number Replacements: Si2323CDS-T1-GE3 replaces Si2323DS-T1-GE3

Si2323CDS-T1-GE3 replaces Si2323DS-T1-E3

Si2323CDS-T1-GE3 replaces Si2323DS-T1

ABSOLUTE MAXIMUM RATINGS $T_A = 25\text{ }^\circ\text{C}$, unless otherwise noted					
PARAMETER	SYMBOL	Si2323CDS	Si2323DS	UNIT	
Drain-Source Voltage	V_{DS}	- 20	- 20	V	
Gate-Source Voltage	V_{GS}	± 8	± 8		
Continuous Drain Current	I_D	$T_A = 25\text{ }^\circ\text{C}$	- 4.6	- 4.7	A
		$T_A = 70\text{ }^\circ\text{C}$	- 3.7	- 3.8	
Pulsed Drain Current	I_{DM}	- 20	- 20		
Continuous Source Current (MOSFET Diode Conduction)	I_S	- 1.0	- 1.0		
Power Dissipation	P_D	$T_A = 25\text{ }^\circ\text{C}$	1.25	1.25	W
		$T_A = 70\text{ }^\circ\text{C}$	0.8	0.8	
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}	100	100	$^\circ\text{C/W}$	

SPECIFICATIONS $T_J = 25\text{ }^\circ\text{C}$, unless otherwise noted								
PARAMETER	SYMBOL	Si2323CDS			Si2323DS			UNIT
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
Static								
Gate-Threshold Voltage	$V_{GS(th)}$	- 0.40		- 1.0	- 0.40		- 1.0	V
Gate-Body Leakage	I_{GSS}			± 100			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}			- 1.0			- 1.0	μA
On-State Drain Current	$V_{GS} = 4.5\text{ V}$ $I_{D(on)}$	- 20			- 20			A
Drain-Source On-Resistance	$V_{GS} = - 4.5\text{ V}$ $R_{DS(on)}$		0.032	0.039		0.031	0.039	Ω
	$V_{GS} = - 2.5\text{ V}$		0.041	0.050		0.041	0.052	
	$V_{GS} = - 1.8\text{ V}$		0.050	0.063		0.054	0.068	
Forward Transconductance	g_{fs}		2.0			16		S
Diode Forward Voltage	V_{SD}		- 0.8	- 1.2		- 0.7	- 1.2	V
Dynamic								
Total Charge	Q_g		16	25		12.5	19	nC
Gate-Source Charge	Q_{gs}		2.5			1.7		
Gate-Drain Charge	Q_{gd}		3.2			3.3		

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.