Si2333CDS vs. Si2333DS

Description: **P-Channel, 12-V (D-S) MOSFET**
Package: **SOT-23**
Pin Out: **Identical**

Part Number Replacements: Si2333CDS-T1-GE3 replaces Si2333DS-T1-GE3
Si2333CDS-T1-E3 or Si2333CDS-T1-GE3 replaces Si2333DS-T1-E3
Si2333CDS-T1-E3 or Si2333CDS-T1-GE3 replaces Si2333DS-T1

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

PARAMETER		SYMBOL	Si2333CDS	Si2333DS	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	- 5.1	- 5.3	A
	T_A = 70 °C		- 4.0	- 4.2	
Pulsed Drain Current		I_{DM}	- 20	- 20	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 0.63	- 1.0	
Power Dissipation	T_A = 25 °C	P_D	1.25	1.25	W
	T_A = 70 °C		0.8	0.8	
Operating Junction and Storage Temperature Range		T_J and T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	100	100	°C/W

SPECIFICATIONS T_J = 25 °C, unless otherwise noted

PARAMETER		SYMBOL	Si2333CDS MIN.	Si2333CDS TYP.	Si2333CDS MAX.	Si2333DS MIN.	Si2333DS TYP.	Si2333DS MAX.	UNIT
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			- 1	µA
On-State Drain Current	V_{GS} = 4.5 V	$I_{D(on)}$	- 20			- 20			A
Drain-Source On-Resistance	V_{GS} = - 4.5 V	$R_{DS(on)}$		0.0285	0.035		0.025	0.032	Ω
	V_{GS} = - 2.5 V			0.036	0.045		0.033	0.042	
	V_{GS} = - 1.8 V			0.046	0.059		0.046	0.059	
Forward Transconductance		g_{fs}		18.5			17		S
Diode Forward Voltage		V_{SD}		- 0.7	- 1.2		- 0.7	- 1.2	V
Dynamic									
Total Gate Charge		Q_g		15	25		11.5	18	nC
Gate-Source Charge		Q_{gs}		1.9			1.5		
Gate-Drain Charge		Q_{gd}		3.8			3.2		

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.