Si2303CDS vs. Si2303BDS

Description: **P-Channel, 30-V (D-S) MOSFET**
Package: **SOT-23**
Pin Out: **Identical**

Part Number Replacements: Si2303CDS-T1-E3 replaces Si2303BDS-T1-E3
Si2303CDS-T1-E3 replaces Si2303BDS-T1

ABSOLUTE MAXIMUM RATINGS T_A = 25 °C, unless otherwise noted					
PARAMETER		**SYMBOL**	**Si2303CDS**	**Si2303BDS**	**UNIT**
Drain-Source Voltage		V_{DS}	- 30	- 30	V
Gate-Source Voltage		V_{GS}	± 20	± 20	
Continuous Drain Current	T_A = 25 °C	I_D	- 1.9	- 1.64	A
	T_A = 70 °C		- 1.5	- 1.31	
Pulsed Drain Current		I_{DM}	- 10	- 10	
Continuous Source Current (MOSFET Diode Conduction)		I_S	- 0.83	- 0.75	
Power Dissipation	T_A = 25 °C	P_D	1.0	0.9	W
	T_A = 70 °C		0.7	0.57	
Operating Junction and Storage Temperature Range		T_J and T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	120	145	°C/W

SPECIFICATIONS T_J = 25 °C, unless otherwise noted									
PARAMETER		**SYMBOL**	**Si2303CDS**			**Si2303BDS**			**UNIT**
			MIN.	**TYP.**	**MAX.**	**MIN.**	**TYP.**	**MAX.**	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	- 1.0		- 3.0	- 1.0		- 3.0	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} = - 10 V	$I_{D(on)}$	- 10			- 6			A
Drain-Source On-Resistance	V_{GS} = - 10 V	$R_{DS(on)}$		0.158	0.190		0.150	0.200	Ω
	V_{GS} = - 4.5 V			0.275	0.330		0.285	0.380	
Forward Transconductance		g_{fs}		2			2		S
Diode Forward Voltage		V_{SD}		- 0.8	- 1.2		- 0.85	- 1.2	V
Dynamic									
Total Charge		Q_g		4	8		4.3	10	nC
Gate-Source Charge		Q_{gs}		0.6			0.8		
Gate-Drain Charge		Q_{gd}		1			1.3		

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.