



Si1902CDL vs. Si1902DL

Description: Dual N-Channel, 20 V (D-S) MOSFET**Package:** SC70-6**Pin Out:** Identical**Part Number Replacements:** Si1902CDL-T1-GE3 Replaces Si1902DL-T1-E3
Si1902CDL-T1-GE3 Replaces Si1902DL-T1-GE3

ABSOLUTE MAXIMUM RATINGS ($T_A = 25\text{ }^\circ\text{C}$, unless otherwise noted)				
PARAMETER	SYMBOL	Si1902CDL	Si1902DL	UNIT
Drain-Source Voltage	V_{DS}	20	20	V
Gate-Source Voltage	V_{GS}	± 12	± 12	
Continuous Drain Current	$T_A = 25\text{ }^\circ\text{C}$	1	0.7	A
	$T_A = 70\text{ }^\circ\text{C}^{(1)}$	0.8	0.5	
Pulsed Drain Current	I_{DM}	2	1	
Continuous Source Current (MOSFET Diode Conduction)	I_S	0.25	0.25	
Power Dissipation	$T_A = 25\text{ }^\circ\text{C}$	0.3	0.3	W
	$T_A = 70\text{ }^\circ\text{C}^{(1)}$	0.23	0.16	
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to 150	- 55 to 150	$^\circ\text{C}$
Maximum Junction-to-Ambient	R_{thJA}	350	415	$^\circ\text{C/W}$

SPECIFICATIONS ($T_J = 25\text{ }^\circ\text{C}$, unless otherwise noted)									
PARAMETER	SYMBOL	Si1902CDL			Si1902DL			UNIT	
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Static									
Gate-Threshold Voltage	$V_{GS(th)}$	0.6	-	1.5	0.6	-	1.5	V	
Gate-Body Leakage	I_{GSS}	-	-	± 100	-	-	± 100	nA	
Zero Gate Voltage Drain Current	I_{DSS}	-	-	1	-	-	1	μA	
On-State Drain Current	$V_{GS} = 4.5\text{ V}$	$I_{D(on)}$	2	-	-	1	-	A	
Drain-Source On-Resistance	$V_{GS} = 4.5\text{ V}$	$R_{DS(on)}$	-	0.195	0.235	-	0.320	0.385	Ω
	$V_{GS} = 2.5\text{ V}$		-	0.255	0.306	-	0.560	0.630	
Forward Transconductance	g_{fs}	-	3	-	-	1.5	-	S	
Diode Forward Voltage	V_{SD}	-	0.8	1.2	-	0.8	1.2	V	
Dynamic									
Total Gate Charge	Q_g	-	2	3	-	0.8	1.2	nC	
Gate-Source Charge	Q_{gs}	-	0.2	-	-	0.06	-		
Gate-Drain Charge	Q_{gd}	-	0.2	-	-	0.3	-		
Gate Resistance	R_g	-	12	-	-	NS	-	Ω	

Note⁽¹⁾ $T_A = 70\text{ }^\circ\text{C}$ for Si1902CDL

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.