



SiA811ADJ vs. SiA811DJ

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

Package: PowerPAK® SC-70

Pin Out: Identical

Part Number Replacements: SiA811ADJ-T1-GE3 replaces SiA811DJ-T1-GE3

ABSOLUTE MAXIMUM RATINGS $T_A = 25\text{ }^\circ\text{C}$, unless otherwise noted				
PARAMETER	SYMBOL	SiA811ADJ	SiA811DJ	UNIT
Drain-Source Voltage	V_{DS}	- 20	- 20	V
Gate-Source Voltage	V_{GS}	± 8	± 8	
Continuous Drain Current	$T_A = 25\text{ }^\circ\text{C}$	- 3.2	- 3.6	A
	$T_A = 70\text{ }^\circ\text{C}$	- 2.6	- 2.9	
Pulsed Drain Current	I_{DM}	- 8	- 8	
Continuous Source Current (MOSFET Diode Conduction)	I_S	- 1.5	- 1.6	
Maximum Power Dissipation	$T_A = 25\text{ }^\circ\text{C}$	1.8	1.9	W
	$T_A = 70\text{ }^\circ\text{C}$	1.1	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	R_{thJA}	70	65	$^\circ\text{C/W}$

SPECIFICATIONS $T_J = 25\text{ }^\circ\text{C}$, unless otherwise noted									
PARAMETER	SYMBOL	SiA811ADJ			SiA811DJ			UNIT	
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Static									
Gate-Threshold Voltage	$V_{GS(th)}$	- 0.4		- 1	- 0.4		- 1	V	
Gate-Body Leakage	I_{GSS}			± 100			± 100	nA	
Zero Gate Voltage Drain Current (25 $^\circ\text{C}$)	I_{DSS}			- 1			- 1	μA	
On-State Drain Current	$V_{GS} = - 4.5\text{ V}$	$I_{D(on)}$	- 8		- 8			A	
Drain-Source On-Resistance	$V_{GS} = - 4.5\text{ V}$	$R_{DS(on)}$		0.096	0.116		0.078	0.094	
	$V_{GS} = - 2.5\text{ V}$			0.125	0.155		0.109	0.131	
	$V_{GS} = - 1.8\text{ V}$			0.165	0.205		0.153	0.185	
Forward Transconductance		g_{fs}		7			7	S	
Diode Forward Voltage		V_{SD}		- 0.8	- 1.2		- 0.85	- 1.2	V
Dynamic									
Total Gate Charge		Q_g		4.9	7.4		4.9	7.4	nC
Gate-Source Charge		Q_{gs}		0.75			0.75		
Gate-Drain Charge		Q_{gd}		1.2			1.2		
Gate Resistance		R_g		6			8		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.