SiR826ADP vs. SiR826DP

Description: **N-Channel, 80 V (D-S) MOSFET**

Package: **PowerPAK® SO-8**

Pin Out: **Identical**

Part Number Replacements: SiR826ADP-T1-GE3 replaces SiR826DP-T1-GE3

ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C, unless otherwise noted)					
PARAMETER		**SYMBOL**	**SiR826ADP**	**SiR826DP**	**UNIT**
Drain-Source Voltage		V_{DS}	80	80	V
Gate-Source Voltage		V_{GS}	± 20	± 20	
Continuous Drain Current	T_A = 25 °C	I_D	23.8	25	A
	T_A = 70 °C		19	20	
Pulsed Drain Current		I_{DM}	100	100	
Continuous Source Current (MOSFET Diode Conduction)		I_S	5.6	5.6	
Power Dissipation	T_A = 25 °C	P_D	6.25	6.25	W
	T_A = 70 °C		4.0	4.0	
Operating Junction and Storage Temperature Range		T_J and T_{stg}	- 55 to 150	- 55 to 150	°C
Maximum Junction-to-Ambient		R_{thJA}	20	20	°C/W

SPECIFICATIONS (T_J = 25 °C, unless otherwise noted)									
PARAMETER		**SYMBOL**	**SiR826ADP**			**SiR826DP**			**UNIT**
			MIN.	**TYP.**	**MAX.**	**MIN.**	**TYP.**	**MAX.**	
Static									
Gate-Threshold Voltage		$V_{GS(th)}$	1.2		2.8	1.2		2.8	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	$I_{D(on)}$	30			30			A
Drain-Source On-Resistance	V_{GS} = 10 V	$R_{DS(on)}$		0.0046	0.0055		0.0040	0.0048	Ω
	V_{GS} = 7.5 V			0.0049	0.0059		0.0043	0.0052	
	V_{GS} = 4.5 V			0.0062	0.0087		0.0054	0.0065	
Forward Transconductance		g_{fs}		68			80		S
Diode Forward Voltage		V_{SD}		0.73	1.1		0.74	1.1	V
Dynamic									
Total Gate Charge	V_{GS} = 10 V	Q_g		57	86		60	90	nC
	V_{GS} = 7.5 V			42	63		45.5	69	
	V_{GS} = 4.5 V			25	38		27.9	42	
Gate-Source Charge		Q_{gs}		8.5			8.5		
Gate-Drain Charge		Q_{gd}		10			12		
Gate Resistance		R_g	0.3	0.95	1.9	0.3	0.95	1.9	Ω
Switching									
Turn-On Time	V_{GEN} = 10 V	$t_{d(on)}$		9	18		12	24	ns
		t_r		12	24		11	22	
Turn-Off Time		$t_{d(off)}$		34	68		36	70	
		t_f		7	14		8	16	
Turn-On Time	V_{GEN} = 7.5 V	$t_{d(on)}$		16	32		15	30	
		t_r		15	30		14	28	
Turn-Off Time		$t_{d(off)}$		32	64		36	70	
		t_f		8	16		8	16	