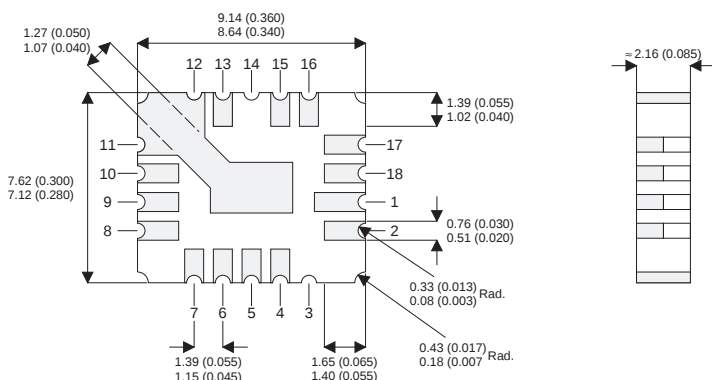


MECHANICAL DATA

Dimensions in mm (inches)



LCC4

GATE Pins 4,5
DRAIN Pins 1,2,15,16,17,18
SOURCE Pins 6,7,8,9,10,11,12,13

P-CHANNEL POWER MOSFET

V_{DSS} **-100V**
 $I_{D(cont)}$ **-3.5A**
 $R_{DS(on)}$ **0.6 Ω**

FEATURES

- SURFACE MOUNT
- SMALL FOOTPRINT
- HERMETICALLY SEALED
- DYNAMIC dv/dt RATING
- AVALANCHE ENERGY RATING
- SIMPLE DRIVE REQUIREMENTS
- LIGHTWEIGHT

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_{GS}	Gate – Source Voltage	$\pm 20V$
I_D	Continuous Drain Current ($V_{GS} = -10V$, $T_{case} = 25^{\circ}C$)	-3.5A
I_D	Continuous Drain Current ($V_{GS} = -10V$, $T_{case} = 100^{\circ}C$)	-2.2A
I_{DM}	Pulsed Drain Current ¹	-14A
P_D	Power Dissipation @ $T_{case} = 25^{\circ}C$	14W
	Linear Derating Factor	0.09W/ $^{\circ}C$
E_{AS}	Single Pulse Avalanche Energy ²	115mJ
dv/dt	Peak Diode Recovery ³	-5.0V/ns
T_J , T_{stg}	Operating and Storage Temperature Range	-55 to +150 $^{\circ}C$
	Surface Temperature (for 5 sec).	300 $^{\circ}C$

Notes

- 1) Pulse Test: Pulse Width $\leq 300\mu s$, $\delta \leq 2\%$
- 2) @ $V_{DD} = -25V$, Peak $I_L = -3.5A$, Starting $T_J = 25^{\circ}C$
- 3) @ $I_{SD} \leq -3.5A$, $di/dt \leq -110A/\mu s$, $V_{DD} \leq BV_{DSS}$, $T_J \leq 150^{\circ}C$, Suggested $R_G = 7.5\Omega$

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ELECTRICAL CHARACTERISTICS ($T_{\text{case}} = 25^{\circ}\text{C}$ unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
STATIC ELECTRICAL RATINGS							
BV _{DSS}	Drain – Source Breakdown Voltage	V _{GS} = 0	I _D = -1mA	-100			V
ΔBV _{DSS} ΔT _J	Temperature Coefficient of Breakdown Voltage	Reference to 25°C I _D = -1mA			-0.10		V/°C
R _{DS(on)}	Static Drain – Source On–State Resistance ¹	V _{GS} = -10V	I _D = -2.2A			0.6	Ω
		V _{GS} = -10V	I _D = -3.5A			0.69	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS}	I _D = -250μA	-2		-4	V
g _{fs}	Forward Transconductance ¹	V _{DS} ≥ -15V	I _{DS} = -2.2A	1.25			S(Ω)
I _{DSS}	Zero Gate Voltage Drain Current	V _{GS} = 0	V _{DS} = -80V			-25	μA
			T _J = 125°C			-250	
I _{GSS}	Forward Gate – Source Leakage	V _{GS} = -20V				-100	nA
I _{GSS}	Reverse Gate – Source Leakage	V _{GS} = 20V				100	
DYNAMIC CHARACTERISTICS							
C _{iss}	Input Capacitance	V _{GS} = 0			380		pF
C _{oss}	Output Capacitance	V _{DS} = -25V			170		
C _{rss}	Reverse Transfer Capacitance	f = 1MHz			45		
Q _g	Total Gate Charge	V _{GS} = -10V				16.3	nC
Q _{gs}	Gate – Source Charge	I _D = -3.5A				4.7	
Q _{gd}	Gate – Drain (“Miller”) Charge	V _{DS} = -50V				9.0	
t _{d(on)}	Turn–On Delay Time	V _{DD} = -50V				60	ns
t _r	Rise Time	I _D = -3.5A				100	
t _{d(off)}	Turn–Off Delay Time	R _G = 7.5Ω				50	
t _f	Fall Time					70	
SOURCE – DRAIN DIODE CHARACTERISTICS							
I _S	Continuous Source Current					-3.5	A
I _{SM}	Pulse Source Current ²					-14	
V _{SD}	Diode Forward Voltage ¹	I _S = -3.5A	T _J = 25°C			-4.8	V
		V _{GS} = 0					
t _{rr}	Reverse Recovery Time	I _F = -3.5A	T _J = 25°C			200	ns
Q _{rr}	Reverse Recovery Charge ¹	d _i / d _t ≤ -100A/μs V _{DD} ≤ -50V				3.1	μC
t _{on}	Forward Turn–On Time			Negligible			
THERMAL CHARACTERISTICS							
R _{θJC}	Thermal Resistance Junction – Case					9.1	°C/W
R _{θJPC}	Thermal Resistance Junction – PC Board					26	

Notes

- 1) Pulse Test: Pulse Width $\leq 300\text{ms}$, $\delta \leq 2\%$
- 2) Repetitive Rating – Pulse width limited by maximum junction temperature.

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