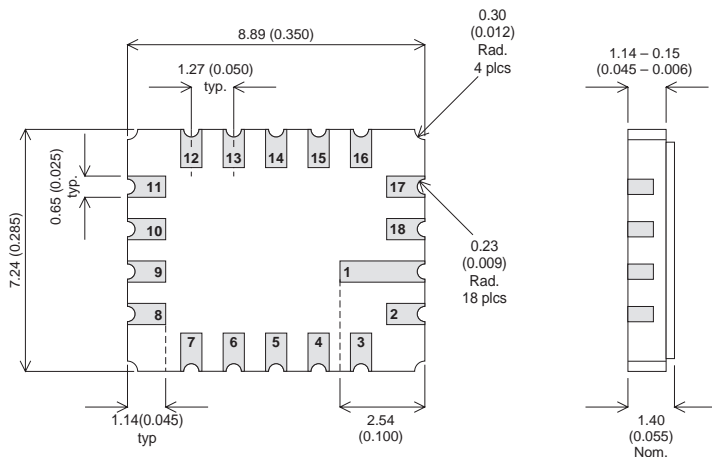


MECHANICAL DATA

Dimensions in mm (inches)



LCC18 Ceramic Package

Pin 1 - Drain 1	Pin 2 - N/C	Pin 3 - Gate 1
Pin 4 - Source 1	Pin 5 - Gate 2	Pin 6 - N/C
Pin 7 - Source 2	Pin 8 - N/C	Pin 9 - Drain 2
Pin 10 - Drain 3	Pin 11 - N/C	Pin 12 - Source 3
Pin 13 - Gate 3	Pin 14 - Source 4	Pin 15 - N/C
Pin 16 - Gate 4	Pin 17 - N/C	Pin 18 - Drain 4

QUAD N-CHANNEL ENHANCEMENT MOSFETS

FEATURES

- HERMETIC CERAMIC SURFACE MOUNT PACKAGE
- LIGHTWEIGHT
- MILITARY SCREENING LEVEL OPTIONS
- SPACE QUALITY LEVELS OPTIONS

APPLICATIONS

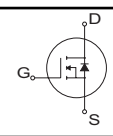
- FAST SWITCHING
- MOTOR CONTROLS
- POWER SUPPLIES

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

V_{DS}	Drain Source Voltage	100V
I_D	Continuous Drain Current	1A
$I_D @ T_c = 100^{\circ}C$	Continuous Drain Current	0.6A
I_{DM}	Pulsed Drain Current *	4A
V_{GS}	Gate Source Voltage	$\pm 20V$
P_D	Maximum Power Dissipation	3.5W
$R_{\theta JC}$	Thermal Resistance Junction to Case	$35.7^{\circ}C/W$
T_J, T_{stg}	Operating and Storage Temperature Range	-55 to $+150^{\circ}C$

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
BV_{DSS} Drain – Source Breakdown Voltage	$V_{GS} = 0$ $I_D = 1mA$	100			V
$V_{GS(th)}$ Gate Threshold Voltage	$V_{DS} = V_{GS}$ $I_D = 250\mu A$	2.0		4.0	
I_{GSSF} Gate – Source Leakage Forward	$V_{GS} = 20V$			100	nA
I_{GSSR} Gate – Source Leakage Reverse	$V_{GS} = -20V$			-100	
I_{DSS} Zero Gate Voltage Drain Current	$V_{DS} = 80V$, $V_{GS} = 0$			25	μA
	$T_C = 125^{\circ}C$			250	
$R_{DS(on)}$ Static Drain Source On-State Resistance*	$V_{GS} = 10V$ $I_D = 0.6A$			0.70	Ω
	$V_{GS} = 10V$ $I_D = 1.0A$			0.80	
g_{fs} Forward Transconductance *	$V_{DS} = 15V$ $I_{DS} = 0.6A$	0.86			S (τ)
C_{iss} Input Capacitance	$V_{GS} = 0$ $V_{DS} = 25V$ $f = 1MHz$		180		pF
C_{oss} Output Capacitance			82		
C_{riss} Reverse Transfer Capacitance			15		
Q_g Total Gate Charge	$V_{GS} = 10V$ $V_{DS} = 50V$			15	nC
Q_{gs} Gate – Source Charge	$I_{DS} = 1.0A$			7.5	
Q_{gd} Gate – Drain Charge				7.5	
$t_{d(on)}$ Turn-On Delay Time	$V_{DD} = 50V$ $I_D = 1.0A$			20	ns
t_r Rise Time	$R_G = 24\Omega$			25	
$t_{d(off)}$ Turn-Off Delay Time	(MOSFET switching times are essentially independent of operating temperature.)			40	
t_f Fall Time				40	
BODY- DRAIN DIODE RATINGS & CHARACTERISTICS					
I_S Continuous Source Current Body Diode	Modified MOS POWER symbol showing the intergal 			1.0	A
I_{SM} Source Current* (Body Diode)	P-N junction rectifier.			4.0	
V_{SD} Diode Forward Voltage *	$I_S = 1.0A$ $V_{GS} = 0$			1.5	V
t_{rr} Reverse Recovery Time	$I_F = 1.0A$ $T_J = 25^{\circ}C$			200	ns
Q_{RR} Reverse Recovery Charge	$d_i / d_t = 100A/\mu s$ $V_{DD} = 50V$			0.83	μC

Notes

* Pulse Test: Pulse Width $\leq 300\mu s$, $\delta \leq 2\%$