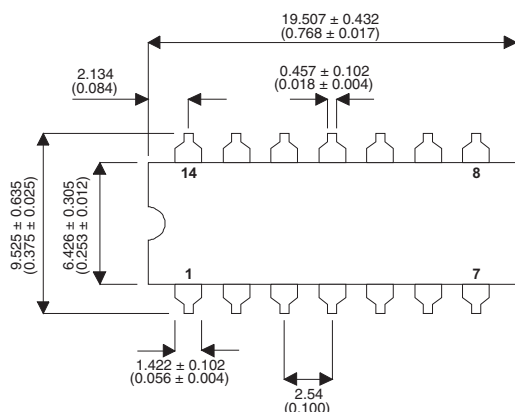


MECHANICAL DATA

Dimensions in mm (inches)


14 LEAD DUAL IN LINE QUAD
N CHANNEL
POWER MOSFETS
 BV_{DSS} $\pm 100V$
 $I_{D(cont)}$ **1A**
 $R_{DS(on)}$ **0.7Ω**
FEATURES

- AVALANCHE ENERGY RATED
- HERMETICALLY SEALED
- DYNAMIC dv/dt RATING
- SIMPLE DRIVE REQUIREMENTS
- FOR AUTOMATIC INSERTION
- SIMPLE DRIVE REQUIREMENTS
- EASE OF PARALLELING
- 4 N-CHANNEL CO-PACKAGED HEXFETS
- LIGHTWEIGHT

N-CHANNEL P-CHANNEL N-CHANNEL P-CHANNEL

1—Drain 1 5—Gate 2 8—Drain 3 12—Gate 4
2—Source 1 6—Source 2 9—Source3 13—Source 4
3—Gate 1 7—Drain 2 10—Gate 3 14—Drain 4

11,4—NC

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

V_{GS}	Gate – Source Voltage	$\pm 20V$
I_D	Continuous Drain Current ($V_{GS} = 10V$, $T_{case} = 25^{\circ}C$)	1.A
I_D	Continuous Drain Current ($V_{GS} = 10V$, $T_{case} = 100^{\circ}C$)	0.6A
I_{DM}	Pulsed Drain Current	4A
P_D	Power Dissipation @ $T_{case} = 25^{\circ}C$	1.4W
	Linear Derating Factor	0.011W/ $^{\circ}C$
E_{AS}	Single Pulse Avalanche Energy ²	75mJ
dv/dt	Peak Diode Recovery ³	5.5V/ns
T_J , T_{stg}	Operating and Storage Temperature Range	-55 to $150^{\circ}C$
$R_{\theta JC}$	Thermal Resistance Junction to Case	6.25 $^{\circ}C/W$
$R_{\theta JCA}$	Thermal Resistance Junction-to-Ambient	175 $^{\circ}C/W$

Notes

- 1) Pulse Test: Pulse Width $\leq 300\mu s$, $\delta \leq 2\%$
- 2) @ $V_{DD} = 25V$, $L \geq 112mH$, $R_G = 25\Omega$, Peak $I_L = 1A$, Starting $T_J = 25^{\circ}C$
- 3) @ $I_{SD} \leq 1A$, $di/dt \leq 75A/\mu s$, $V_{DD} \leq BV_{DSS}$, $T_J \leq 150^{\circ}C$, Suggested $R_G = 24\Omega$

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25^{\circ}\text{C}$ 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}	Temperature Coefficient of	Reference to 25°C			0.13		V/°C
ΔT _J	Breakdown Voltage	I _D = 1mA					
R _{DS(on)}	Static Drain – Source On–State	V _{GS} = 10V	I _D = 0.6A			0.70	Ω
	Resistance	V _{GS} = 10V	I _D = 1A			0.80	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS}	I _D = 250μA	2		4	V
g _{fs}	Forward Transconductance	V _{DS} ≥ 15V	I _{DS} = 0.60A	0.86			S(Ω)
I _{DSS}	Zero Gate Voltage Drain Current	V _{GS} = 0	V _{DS} = 0.8V _{DSS}			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			180		pF
C _{oss}	Output Capacitance	V _{DS} = 25V			82		
C _{rss}	Reverse Transfer Capacitance	f = 1MHz			15		
Q _g	Total Gate Charge	V _{GS} = 10V	I _D = 1A			15	nC
Q _{gs}	Gate – Source Charge	V _{DS} = 0.5V _{DS}				7.5	
Q _{gd}	Gate – Drain (“Miller”) Charge					7.5	
t _{d(on)}	Turn–On Delay Time	V _{DD} = 50V				20	ns
t _r	Rise Time	I _D = 1A				25	
t _{d(off)}	Turn–Off Delay Time	R _G = 24Ω				40	
t _f	Fall Time					40	
SOURCE – DRAIN DIODE CHARACTERISTICS							
I _S	Continuous Source Current					1	A
I _{SM}	Pulse Source Current ²					4	
V _{SD}	Diode Forward Voltage ¹	I _S = 1.0A	T _J = 25°C			1.5	V
		V _{GS} = 0					
t _{rr}	Reverse Recovery Time	I _F = 1A	T _J = 25°C			200	ns
Q _{rr}	Reverse Recovery Charge	d _i / d _t ≤ 100A/μs V _{DD} ≤ 50V				0.83	μC
t _{on}	Forward Turn–On Time				Negligible		
PACKAGE CHARACTERISTICS							
L _D	Internal Drain Inductance (from centre of drain pad to die)				4.0		nH
L _S	Internal Source Inductance (from centre of source pad to end of source bond wire)				6.0		

Notes

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