

TECHNICAL DATA DATA SHEET 319, REV. A

# HERMETIC POWER MOSFET N-CHANNEL QUAD

## **FEATURES:**

- 100 Volt, 0.35 Ohm, 6.2A MOSFET
- Fast Switching
- Low R<sub>DS (on)</sub>
- Equivalent to IRF120 Series

#### **MAXIMUM RATINGS**

ALL RATINGS ARE AT  $T_c = 25^{\circ}\text{C}$  UNLESS OTHERWISE SPECIFIED.

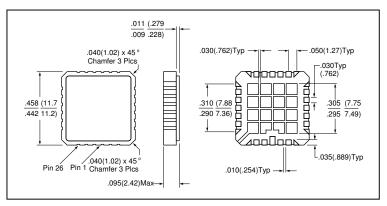
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	$V_{GS}$	-	-	±20	Volts
ON-STATE DRAIN CURRENT @ T <sub>C</sub> = 25°C	I <sub>D</sub>	-	-	6.2	Amps
PULSED DRAIN CURRENT (10ms)	I <sub>DM</sub>	-	-	12	Amps
OPERATING AND STORAGE TEMPERATURE	$T_{OP}/T_{STG}$	-55	-	+150	°C
TOTAL DEVICE DISSIPATION @ T <sub>C</sub> = 25°C	P <sub>D</sub>	-	-	27	Watts
THERMAL RESISTANCE, JUNCTION TO CASE	$R_{thJC}$	-	-	4.7	°C/W

# **ELECTRICAL CHARACTERISTICS**

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE	$BV_{DSS}$	100	-	-	Volts
$V_{GS} = 0V, I_D = 250\mu A$					
STATIC DRAIN TO SOURCE ON STATE RESISTANCE	R <sub>DS(ON)</sub>	-	-	0.35	Ω
$V_{GS} = 10V$ , $I_D = 0.6x$ rated $I_D$					
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}$ , $I_D = 250 \mu A$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE	<b>g</b> fs	2.7	4.1	-	S(1/Ω)
$V_{DS} \ge I_{D (ON)} X R_{DS (ON)} Max., I_{DS} = 0.6 X I_{D}$					
ZERO GATE VOLTAGE DRAIN CURRENT		-	-		
$V_{DS} = Max. Rating, V_{GS} = 0V$	$I_{DSS}$			250	μΑ
$V_{DS} = 0.8xMax$ . Rating, $V_{GS} = 0V$ , $T_{J} = 125$ °C				1000	
GATE TO SOURCE LEAKAGE FORWARD V <sub>GS</sub> = 20V	$I_{GSS}$	-	-	100	nA
GATE TO SOURCE LEAKAGE REVERSE V <sub>GS</sub> = -20V				-100	
TURN ON DELAY TIME $V_{DD} = 50V$ ,	$t_{d(ON)}$	-	8.8	13	
RISE TIME $I_D = .5xI_D$ ,	$t_r$		30	45	nsec
TURN OFF DELAY TIME $R_G = 18\Omega$ ,	$t_{d(OFF)}$		19	29	
FALL TIME $V_{GS} = 10V$	t <sub>f</sub>		20	30	
DIODE FORWARD VOLTAGE $T_C = 25^{\circ}C$ , $I_S = I_D$ ,	$V_{SD}$	-	-	2.5	Volts
$V_{GS} = 0V$					
REVERSE RECOVERY TIME $T_J = 25$ °C,	t <sub>rr</sub>	55	110	240	
$I_f = I_D$ ,					nsec
$di_F/ds = 100A/\mu sec,$					
INPUT CAPACITANCE $V_{GS} = 0 \text{ V}$	$C_{iss}$	-	350	-	
OUTPUT CAPACITANCE $V_{DS} = 25 \text{ V}$	$C_{oss}$		130		pF
REVERSE TRANSFER CAPACITANCE f = 1.0MHz	$C_{rss}$		36		

#### DATA SHEET 319 REVISION A

## **MECHANICAL DIMENSIONS: in Inches / m**



LCC-28T

## **PINOUT TABLE**

QUAD MOSFET LCC-28T	GATE	DRAIN	SOURCE
MOSFET 1	PIN 1	PINS 5, 6, 7	PINS 2, 3, 4
MOSFET 2	PIN 8	PINS 9, 10, 11	PINS 12, 13, 14
MOSFET 3	PIN 15	PINS 19, 20, 21	PINS 16, 17, 18
MOSFET 4	PIN 22	PINS 23, 24, 25	PINS 26, 27, 28



#### **TECHNICAL DATA**

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