

HERMETIC RAD HARD POWER MOSFET N-CHANNEL QUAD

FEATURES:

- Four 250 Volt, 0.36 Ohm, 4.4A RAD HARD MOSFETs
- Single Event Effect (SEE) hardened, LET 55, Range: 90µm
 - $V_{GS} = -15V, V_{DS} = 250V$
 - $V_{GS} = -20V, V_{DS} = 160V$
- Total Ionization Dose (TID) hardened, 100kRad (Level R)
- Fast Switching
- Low $R_{DS(on)}$
- Pin compatible with IRHQ57214SE, with 1/3rd the $R_{DS(ON)}$

MAXIMUM RATINGS

ALL RATINGS ARE AT $T_C = 25^\circ C$ UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	±20	Volts
ON-STATE DRAIN CURRENT	I_D	-	-	4.4	Amps
PULSED DRAIN CURRENT (LIMITED BY T_{JMAX})	I_{DM}	-	-	18	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	°C
TOTAL DEVICE DISSIPATION	P_D	-	-	27	Watts
THERMAL RESISTANCE, JUNCTION TO CASE	R_{thJC}	-	-	4.7	°C/W
AVALANCE ENERGY	E_{AS}	-	-	20	mJ

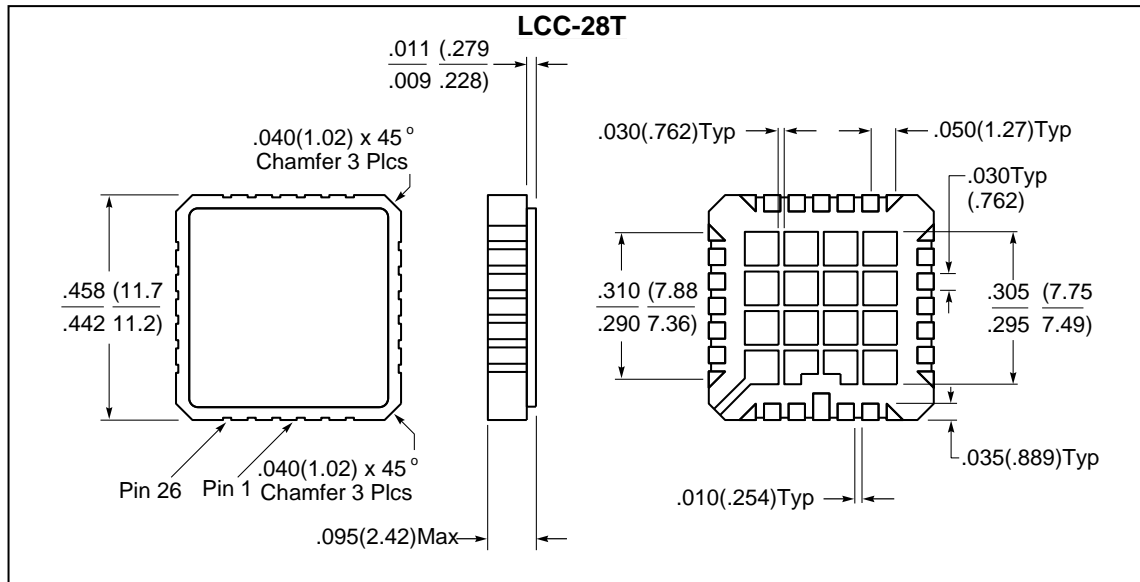
ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 250\mu A$	BV_{DSS}	250	295	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10V, I_D = 3A$ $V_{GS} = 10V, I_D = 3A, T_A = 125^\circ C$	$R_{DS(ON)}$	-	0.36	0.45	Ω
GATE THRESHOLD VOLTAGE $V_{DS} \geq V_{GS}, I_D = 1mA$	$V_{GS(th)}$	2.0	3.4	4.0	Volts
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 200V, V_{GS} = 0V$ $V_{DS} = 200V, V_{GS} = 0V, T_A = 125^\circ C$	I_{DSS}	-	-	15	µA
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20V$	I_{GSS}	-	-	100	nA
GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20V$		-	-	-100	
TURN ON DELAY TIME $V_{DD} = .5V_{DS}, I_D = 3A,$	$t_{d(ON)}$	-	10	14	nsec
RISE TIME	t_r	-	10	14	
TURN OFF DELAY TIME $R_G = 4.7\Omega$	$t_{d(OFF)}$	-	15	20	
FALL TIME	t_f	-	11	16	
DIODE FORWARD VOLTAGE $I_S = 4.4A$ $V_{GS} = 0V$	V_{SD}	-	0.95	1.3	Volts
REVERSE RECOVERY TIME $V_{DD} = .5V_{DS}, I_f = 4.4A$	t_{rr}	-	210	250	nsec
INPUT CAPACITANCE $V_{GS} = 0V$	C_{iss}	-	580	700	pF
OUTPUT CAPACITANCE $V_{DS} = 100V$	C_{oss}	-	45	60	
REVERSE TRANSFER CAPACITANCE $f = 1.0MHz$	C_{rss}	-	2.3	3	

**This product is subject to the International Traffic in Arms Regulations (ITAR), 22 C.F.R. Parts 120 - 130, and may not be exported without the appropriate U.S. Department of State authorization.

TECHNICAL DATA
DATA SHEET 5311, REV. A

MECHANICAL DIMENSIONS: in Inches / mm



PINOUT TABLE

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

Note: Pins 4, 7, 11, 14, 18, 21, 25 and 28 are Not Connected.

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