

TECHNICAL DATA
DATA SHEET 5405, REV. -

HERMETIC RAD HARD POWER MOSFET

FEATURES:

- Low RDS(on)
- Single Event Effect (SEE) hardened,
 - LET 55, Range: 90 μ m
 - VGS = -20V, VDS = 100V
- Total Ionization Dose (TID) hardened, 100kRad
- Surface mount SMD-0.5 package
- Near equivalent to IRHNJ7130

MAXIMUM RATINGS

ALL RATINGS ARE AT T_C = 25°C UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE VOLTAGE	V _{DS}	-	-	100	Volts
GATE TO SOURCE VOLTAGE	V _{GS}	-	-	±20	Volts
ON-STATE DRAIN CURRENT (T _C = 25°C)	I _D	-	-	12.4	Amps
ON-STATE DRAIN CURRENT (T _C = 100°C)	I _D	-	-	8	Amps
PULSED DRAIN CURRENT (LIMITED BY T _{JMAX})	I _{DM}	-	-	50	Amps
OPERATING AND STORAGE TEMPERATURE	T _{OP} /T _{STG}	-55	-	+150	°C
TOTAL DEVICE DISSIPATION	P _D	-	-	75	Watts
THERMAL RESISTANCE, JUNCTION TO CASE	R _{thJC}	-	-	1.66	°C/W
SINGLE PULSE AVALANCHE (LIMITED BY T _{JMAX})	E _{AS}	-	60	-	mJ

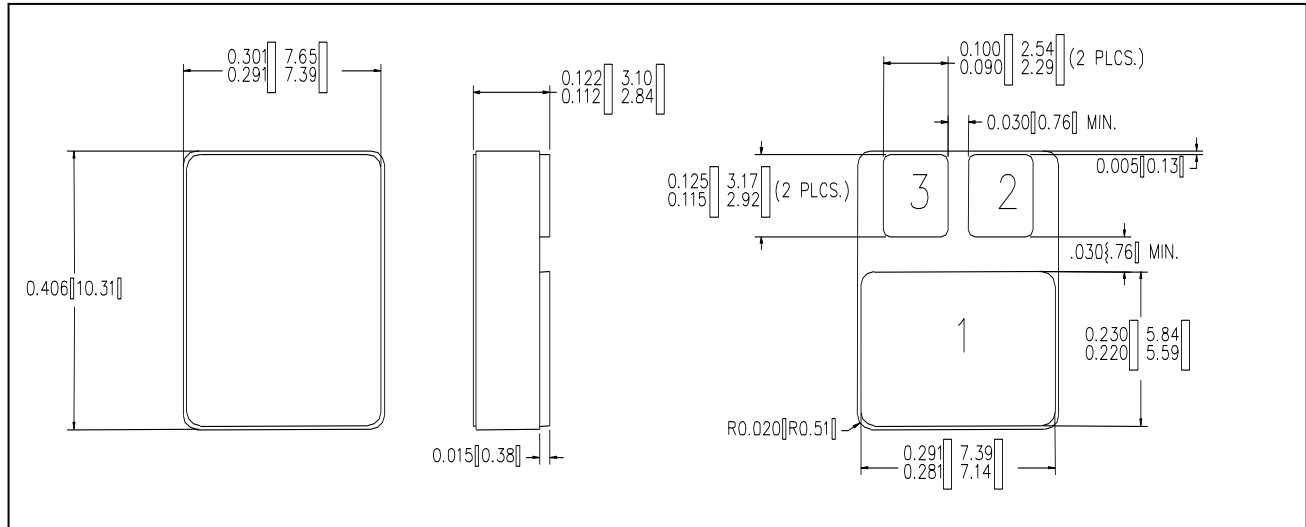
ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN SOURCE BREAKDOWN V _{GS} = 0V, I _D = 250 μ A	B _{VDSS}	100	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE V _{GS} = 10V, I _D = 8A	R _{DS(ON)}	-	-	0.13	Ω
GATE THRESHOLD VOLTAGE V _{DS} = V _{GS} , I _D = 1mA	V _{GS(th)}	2.0	-	4.0	Volts
ZERO GATE VOLTAGE DRAIN CURRENT V _{DS} = 80V, V _{GS} = 0V	I _{DSS}	-	-	25	μ A
GATE TO SOURCE LEAKAGE FORWARD V _{GS} = 20V	I _{GSS}	-	-	100	nA
GATE TO SOURCE LEAKAGE REVERSE V _{GS} = -20V	I _{GSS}	-	-	-100	nA
TURN ON DELAY TIME V _{DD} = 0.5V _{DS} , I _D = 8A,	t _{d(ON)}	-	-	25	nsec
RISE TIME	t _r	-	-	25	
TURN OFF DELAY TIME R _G = 4.7 Ω	t _{d(OFF)}	-	-	35	
FALL TIME	t _f	-	-	20	
DIODE FORWARD VOLTAGE I _S = 12.4A	V _{SD}	-	-	1.2	Volts
REVERSE RECOVERY TIME I _f = 12.4A, di/dt = 100A/ μ s	t _{rr}	-	-	400	nsec
INPUT CAPACITANCE V _{GS} = 0 V	C _{iss}	-	1600	-	pF
OUTPUT CAPACITANCE V _{DS} = 100 V	C _{oss}	-	120	-	
REVERSE TRANSFER CAPACITANCE f = 1.0MHz	C _{riss}	-	3	-	
TOTAL GATE CHARGE V _{DD} = 0.5V _{DS} , I _D = 12.4A, V _{GS} = 10V	Q _G	-	-	42	nC

****NOTE:** 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.

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MECHANICAL DIMENSIONS: in Inches / mm



DEVICE TYPE	PIN-1	PIN-2	PIN-3
N-CHANNEL MOSFET SMD-0.5 PACKAGE	DRAIN	GATE	SOURCE

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