

TECHNICAL DATA
 DATA SHEET 619, REV -

HERMETIC POWER MOSFET P-CHANNEL

FEATURES:

- 100 Volt, 0.31 Ohm, -9.3 A MOSFET
- Fast Switching
- Low $R_{DS(on)}$
- Equivalent to IRFY9130 Series
- Add a "C" to the part number for ceramic seals, SHDC226309

MAXIMUM RATINGS

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

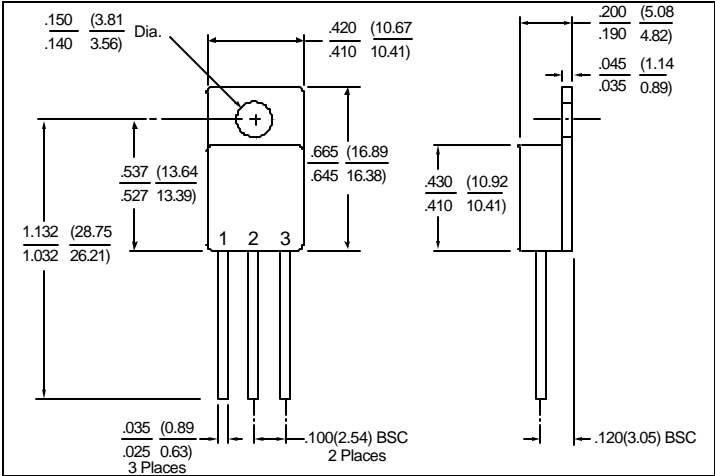
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
ON-STATE DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	$I_{D(on)}$	-	-	-9.3	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	5.8	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
THERMAL RESISTANCE, JUNCTION TO CASE	R_{thJC}	-	-	1.4	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	89	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 1.0\text{ mA}$	BV_{DSS}	-100	-	-	Volts
GATE TO SOURCE ON-STATE VOLTAGE $V_{GS} = -10\text{V}, I_D = -9.3\text{A}, V_{DS} = 0.5 \times V_{DS}\text{ Max.}$	Q_{gs}	1.0	-	7.1	nC
GATE DRAIN CHARGE $V_{GS} = -10\text{V}, I_D = -9.3\text{A}, V_{DS} = V_{DS}\text{ Max.} \times 0.8$	Q_{gd}	2.1	-	21	nC
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = -10\text{V}, I_D = -5.8\text{A}$ $V_{GS} = -10\text{V}, I_D = -9.3\text{A}$	$R_{DS(ON)}$	-	-	0.31 0.36	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = -250\mu\text{A}$	$V_{GS(th)}$	-2.0	-	-4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq 15V_{DS(on)}, I_D = -5.8\text{A}$	g_{fs}	2.5	-	-	S(1/ Ω)
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0\text{V}$ $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0\text{V}, T_J = 125^\circ\text{C}$	I_{DSS}	-	-	-25 -250	μA
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20\text{V}$	I_{GSS}	-	-	100	nA
GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20\text{V}$				-100	
TURN ON DELAY TIME $V_{DD} = -50\text{V}, I_D = -9.3\text{A},$	$t_{d(ON)}$	-	-	60	nsec
RISE TIME $R_G = 7.5\Omega,$	t_r			140	
TURN OFF DELAY TIME $V_{GS} = -10\text{V}$	$t_{d(OFF)}$			140	
FALL TIME	t_f			140	
DIODE FORWARD VOLTAGE $T_C = 25^\circ\text{C}, I_S = -9.3\text{A}, V_{GS} = 0\text{V}$	V_{SD}	-	-	-4.7	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C}, I_S = -9.3\text{ A}, di/dt = -100\text{A}/\mu\text{sec}, V_{DD} \leq -50\text{ V}$	t_{rr}	-	-	250	nsec
INPUT CAPACITANCE $V_{GS} = 0\text{ V},$	C_{iss}	-	800	-	pF
OUTPUT CAPACITANCE $V_{DS} = 25\text{ V},$	C_{oss}		350		
REVERSE TRANSFER CAPACITANCE $f = 1.0\text{MHz}$	C_{rss}		125		

SENSITRON
DATA SHEET 619
REVISION -

MECHANICAL DIMENSIONS: in Inches / mm



TO-257

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET	DRAIN	SOURCE	GATE
TO-257 PACKAGE			

TECHNICAL DATA

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