

TECHNICAL DATA
DATA SHEET 909, REV. -

HERMETIC POWER MOSFET N-CHANNEL

FEATURES:

- 100 Volt, 75A, 0.02 Ohm, MOSFET
- Isolated Hermetic Metal Package
- Fast intrinsic Rectifier
- Low $R_{DS(on)}$
- Low package inductance-easy to drive and protect
- Similar Part Type - IXTM75N10

MAXIMUM RATINGS

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

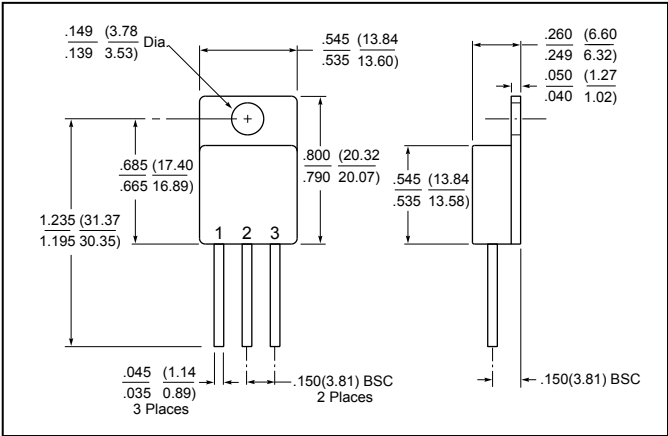
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
ON-STATE DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	$I_{D(on)}$	-	-	75	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	± 300	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
THERMAL RESISTANCE, JUNCTION TO CASE	R_{thJC}	-	-	0.32	$^\circ\text{C/W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	390	Watts

ELECTRICAL CHARACTERISTICS

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 250 \mu\text{A}$	BV_{DSS}	100	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10V, I_D = 37.5A$	$R_{DS(ON)}$	-	-	0.025	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} = 10V, I_D = 37.5A$	g_{fs}	25	30	-	$S(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0V$ $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0V, T_J = 125^\circ\text{C}$	I_{DSS}	-	-	200 1.0	μA mA
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20V$ GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20V$	I_{GSS}	-	-	100 -100	nA
TURN ON DELAY TIME RISE TIME TURN OFF DELAY TIME FALL TIME $V_{DS} = 0.5V, I_D = 37.5A, R_G = 2.0\Omega, V_{GS} = 10V$	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	40 60 100 30	60 110 140 60	nsec
DIODE FORWARD VOLTAGE $T_C = 25^\circ\text{C}, I_S = 75A, V_{GS} = 0V$	V_{SD}	-	-	1.75	Volts
REVERSE RECOVERY TIME $I_F = 75A, -di/dt = 100A/\mu\text{sec}, V_R = 100V$	t_{rr}	-	300	-	nsec
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $V_{GS} = 0V, V_{DS} = 25V, f = 1.0\text{MHz}$	C_{iss} C_{oss} C_{rss}	-	4500 1300 550	-	pF

SENSITRON
DATA SHEET 909, REV. -

MECHANICAL DIMENSIONS: in Inches / mm



TO-254

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET IN A TO-254 PACKAGE	DRAIN	SOURCE	GATE

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