

TECHNICAL DATA  
DATA SHEET 161, REV -  
(see also data sheet 766)

## HERMETIC POWER MOSFET N-CHANNEL

**FEATURES:**

- 100 Volt, 0.07 Ohm MOSFET
- Isolated and Hermetically Sealed
- Simple Drive Requirements
- Repetitive Avalanche Rating

**MAXIMUM RATINGS**

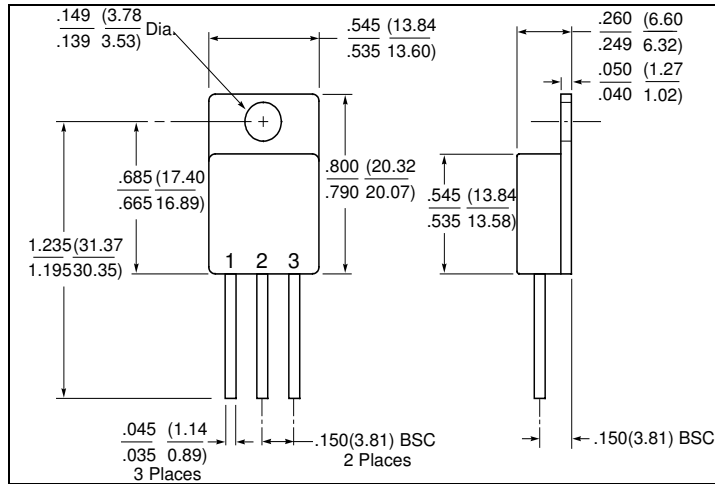
ALL RATINGS ARE AT  $T_A = 25^\circ\text{C}$  UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	$V_{GS}$	-	-	$\pm 20$	Volts
CONTINUOUS DRAIN CURRENT $V_{GS}=10\text{V}, T_C = 25^\circ\text{C}$ $V_{GS}=10\text{V}, T_C = 100^\circ\text{C}$	$I_D$	-	-	34 21	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	$I_{DM}$	-	-	136	Amps
OPERATING AND STORAGE TEMPERATURE	$T_{OP}/T_{STG}$	-55	-	150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	0.83	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	$P_D$	-	-	150	Watts

**ELECTRICAL CHARACTERISTICS**

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 1.0\text{mA}$	$BV_{DSS}$	100	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10\text{V}, I_D = 21\text{A}$ $V_{GS} = 10\text{V}, I_D = 34\text{A}$	$R_{DS(ON)}$	-	-	0.07 0.081	$\Omega$
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq 15\text{V}, I_{DS} = 21\text{A}$	$g_{fs}$	9.0	-	-	$\text{S}(1/\Omega)$
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	$\mu\text{A}$
GATE TO SOURCE LEAKAGE FORWARD @ RATED GATE TO SOURCE LEAKAGE REVERSE $V_{GS}$	$I_{GSS}$	-	-	100 -100	nA
TOTAL GATE CHARGE GATE TO SOURCE CHARGE GATE TO DRAIN CHARGE $V_{GS} = 10\text{ VOLTS}$ 50% RATED $V_{DS}$ RATED $I_D$	$Q_g$ $Q_{gs}$ $Q_{gd}$	50 8 15	-	125 22 65	nC
TURN ON DELAY TIME RISE TIME TURN OFF DELAY TIME FALL TIME $V_{DD} = 50\text{V}$ RATED $I_D$ $R_G = 2.35\Omega$	$t_{d(ON)}$ $t_r$ $t_{d(OFF)}$ $t_f$	-	-	35 190 170 130	nsec
DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}, I_S = 34\text{A},$ $V_{GS} = 0\text{V}$	$V_{SD}$	-	-	1.8	Volts
DIODE REVERSE RECOVERY TIME REVERSE RECOVERY CHARGE $T_J = 25^\circ\text{C}$ $I_f = \text{RATED ID}$ $di/dt = 100\text{A}/\text{sec}$	$t_{rr}$ $Q_{rr}$	-	-	500 2.9	nsec $\mu\text{C}$
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $V_{GS} = 0\text{ VOLTS}$ $V_{DS} = 25\text{ VOLTS}$ $f = 1\text{ MHz}$	$C_{iss}$ $C_{oss}$ $C_{rss}$	-	3700 1100 200	-	pF

**MECHANICAL DIMENSIONS: in Inches / mm**



**TO-254**

**PINOUT TABLE**

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

**TECHNICAL DATA**

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