

TECHNICAL DATA
DATA SHEET 370, REV. A

HERMETIC POWER MOSFET N-CHANNEL

DESCRIPTION: 100 VOLT, 33 AMP, 0.06 OHM MOSFET IN A HERMETIC TO-257 PACKAGE.

MAXIMUM RATINGS

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

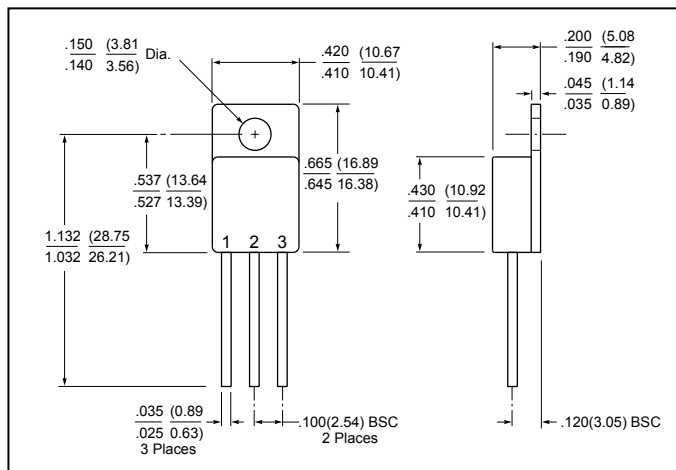
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
CONTINUOUS DRAIN CURRENT $V_{GS}=10\text{V}, T_C = 25^\circ\text{C}$ $V_{GS}=10\text{V}, T_C = 100^\circ\text{C}$	I_D	-	-	33 20	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	99	Amps(pk)
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	0.80	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	150	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 250\mu\text{A}$	BV_{DSS}	100	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $I_D = 16.5\text{A}, V_{GS} = 10\text{V} @ T_J = 25^\circ\text{C}$	$R_{DS(ON)}$	-	-	0.06	Ω
FORWARD TRANSCONDUCTANCE $V_{DS} = 80\text{Vdc}, I_{DS} = 16.5\text{A}$	g_{fs}	8.0	-	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 100\text{Vdc}, V_{GS} = 0\text{Vdc}$ $V_{DS} = 100\text{Vdc}$ $V_{GS} = 0\text{Vdc}, T_J = 125^\circ\text{C}$	I_{DSS}	-	-	10 100	μA
GATE TO BODY LEAKAGE CURRENT $V_{GS} = \pm 20\text{Vdc}, V_{DS} = 0\text{Vdc}$	I_{GSS}	-	-	+100 -100	nA
TOTAL GATE CHARGE $(V_{GS} = 10\text{Vdc}, V_{DS} = 80\text{Vdc}, I_D = 33\text{Adc})$	Q_g		52	110	nC
GATE TO SOURCE CHARGE	Q_{gs}		12		
GATE TO DRAIN CHARGE	Q_{gd}		32		
TURN ON DELAY TIME $(V_{DD} = 50\text{V}, I_D = 33\text{Adc})$	$t_{d(ON)}$	-	18	40	nsec
RISE TIME	t_r		164	330	
TURN OFF DELAY TIME $V_{GS} = 10\text{Vdc}, R_G = 9.1\Omega$	$t_{d(OFF)}$		48	100	
FALL TIME	t_f		83	170	
FORWARD VOLTAGE, $(I_S = 33\text{Adc}, V_{GS} = 0\text{V})$ $(I_S = 33\text{Adc}, V_{GS} = 0\text{Vdc}, T_J = 125^\circ\text{C})$	V_{SD}	-	1.0 0.98	2.0	Volts
REVERSE RECOVERY TIME $(I_S = 33\text{Adc}, V_{GS} = 0\text{Vdc})$	t_{rr}	-	-	144	nsec
REVERSE RECOVERY CHARGE $di/dt = 100\text{A}/\mu\text{sec}$	Q_{rr}			.93	μC
INPUT CAPACITANCE $(V_{DS} = 25\text{Vdc}, V_{GS} = 0\text{Vdc})$	C_{iss}	-	1830	2500	pF
OUTPUT CAPACITANCE	C_{oss}		678	1200	
REVERSE TRANSFER CAPACITANCE $f = 1\text{MHz}$	C_{rss}		559	1100	

SENSITRON
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MECHANICAL DIMENSIONS: in Inches / mm



TO-257

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET IN A TO-257 PACKAGE STANDARD VERSION	DRAIN	SOURCE	GATE
'R' VERSION	GATE	DRAIN	SOURCE

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