

TECHNICAL DATA
DATA SHEET 5518, REV -

HERMETIC POWER MOSFET N-CHANNEL

FEATURES:

- 90 Volt, 3.6 Ohm low capacitance MOSFET
- Hermetically Sealed TO-205/TO-39 package
- S-100 screening available – 2N6661S
- Low input and Output Leakage

MAXIMUM RATINGS

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

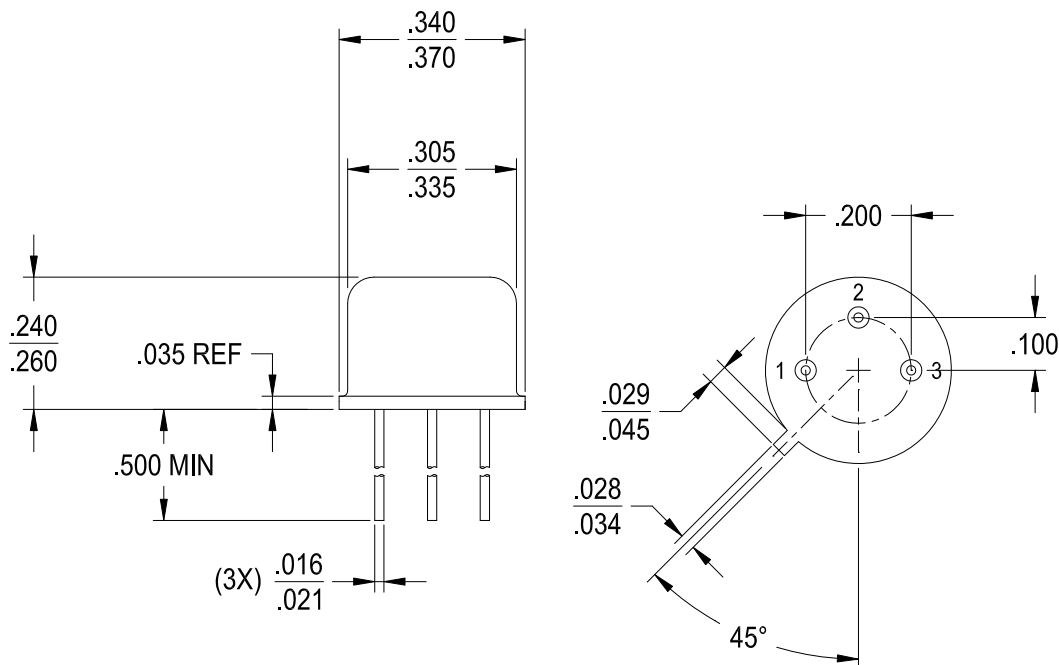
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE VOLTAGE	V_{DS}	90	-	-	Volts
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
CONTINUOUS DRAIN CURRENT $V_{GS}=10\text{V}, T_C=25^\circ\text{C}$ $V_{GS}=10\text{V}, T_C=100^\circ\text{C}$	I_D	-	-	0.86 0.54	Amps
PULSED DRAIN CURRENT @ $T_C=25^\circ\text{C}$	I_{DM}	-	-	3	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	20	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C=25^\circ\text{C}$	P_D	-	-	6.25	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 10\mu\text{A}$	BV_{DSS}	90	125	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 5\text{V}, I_D = 0.3\text{A}$ $V_{GS} = 10\text{V}, I_D = 1\text{A}$ $V_{GS} = 10\text{V}, I_D = 1\text{A}, T_J = 125^\circ\text{C}$	$R_{DS(ON)}$	-	3.8 3.6 6.7	5.3 4.4 7.5	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 1\text{mA}$ $V_{DS} = V_{GS}, I_D = 1\text{mA}, T_J = 125^\circ\text{C}$ $V_{DS} = V_{GS}, I_D = 1\text{mA}, T_J = -55^\circ\text{C}$	$V_{GS(th)}$	0.8 0.3 -	1.6 1.3 1.8	2.0 - 2.5	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} = 7.5\text{V}, I_{DS} = 0.475\text{A}$	g_{fs}	-	0.34	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 72\text{V}, V_{GS} = 0\text{V}$ $V_{DS} = 72\text{V}, V_{GS} = 0\text{V}, T_J = 125^\circ\text{C}$	I_{DSS}	-	-	1 100	μA
GATE TO SOURCE LEAKAGE FORWARD @ REVERSE $V_{GS} = \pm 20\text{V}$ $V_{GS} = \pm 20\text{V}, T_J = 125^\circ\text{C}$	I_{GSS}	-	-	± 100 ± 500	nA
TURN ON TIME TURN OFF TIME $V_{DD} = 25\text{V}, V_{GS} = 10\text{V}$ $I_D = 1\text{A}, R_G = 23\Omega$	$t_{(ON)}$ $t_{(OFF)}$	-	6 8	10 10	nsec
DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}, I_S = 0.86\text{A},$ $V_{GS} = 0\text{V}$	V_{SD}	0.7	0.9	1.4	Volts
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $V_{GS} = 0\text{V}$ $V_{DS} = 25\text{V}$ $f = 1\text{MHz}$	C_{iss} C_{oss} C_{rss}	-	35 15 2	-	pF

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MECHANICAL DIMENSIONS: in Inches / mm



TO-205AD
(TO-39)

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET TO-205 (TO-39) PACKAGE	SOURCE	GATE	DRAIN

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