

TECHNICAL DATA
DATA SHEET 4324, REV. -

LOW R_{DS} HERMETIC POWER MOSFET - P-CHANNEL

FEATURES:

- 150 Volt, 0.1 Ohm, 7A MOSFET
- Isolated Hermetic Metal Package
- Ultra Low $R_{DS(on)}$
- Characterized at V_{GS} of 6V

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	I_{D25}	-	-	- 7	Amps
PULSED DRAIN CURRENT	I_{DM}	-	-	- 50	Amps
OPERATING AND STORAGE TEMPERATURE	T_J/T_{STG}	-55	-	+150	$^\circ\text{C}$
TOTAL DEVICE DISSIPATION	P_D	-	-	40	Watts
THERMAL RESISTANCE, JUNCTION TO CASE	$R_{\theta JC}$	-	-	3.1	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = -250\mu\text{A}$	BV_{DSS}	-150	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = -10V, I_D = -7A$ $V_{GS} = -6V, I_D = -5A$	-	-	0.09 0.10	0.10 0.11	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = -250\mu\text{A}$	$V_{GS(th)}$	-2	-	-4	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} = -15V, I_D = -7A$	g_{fs}	-	19	-	$S(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. rating}, V_{GS} = 0V, T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	I_{DSS}	-	-	-1 -50	μA
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20V$	I_{GSS}	-	-	100	nA
GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20V$				-100	
TURN ON DELAY TIME $V_{DD} = -75V$	$t_{d(ON)}$	-	25	40	nsec
RISE TIME $I_D = -5A$	t_r		46	70	
TURN OFF DELAY TIME $V_{GS} = -10V$	$t_{d(OFF)}$		115	180	nsec
FALL TIME $R_G = 6\Omega$	t_f		64	100	
DIODE FORWARD VOLTAGE $I_F = -5A, V_{GS} = 0V$ Pulse test, $t \leq 300 \mu\text{s}$, duty cycle $d \leq 2\%$	V_{SD}	-	0.9	1.2	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C},$ $I_F = -3A, V_R = 100V$ $di/dt = 100A/\mu\text{sec}$	t_{rr}	-	100	150	nsec
TOTAL GATE CHARGE $V_{DD} = -75V$	Q_g	-	88	-	nC
GATE SOURCE CHARGE $I_D = -5A$	Q_{gs}		18		
GATE DRAIN CHARGE $V_{GS} = -10V$	Q_{gd}		27		

