

TECHNICAL DATA
DATA SHEET 5123, REV. A

HERMETIC POWER MOSFET N-CHANNEL

- 200 VOLT, 0.4 OHM, 9.0A MOSFET
- Fast Switching
- Low $R_{DS(on)}$

MAXIMUM RATINGS

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

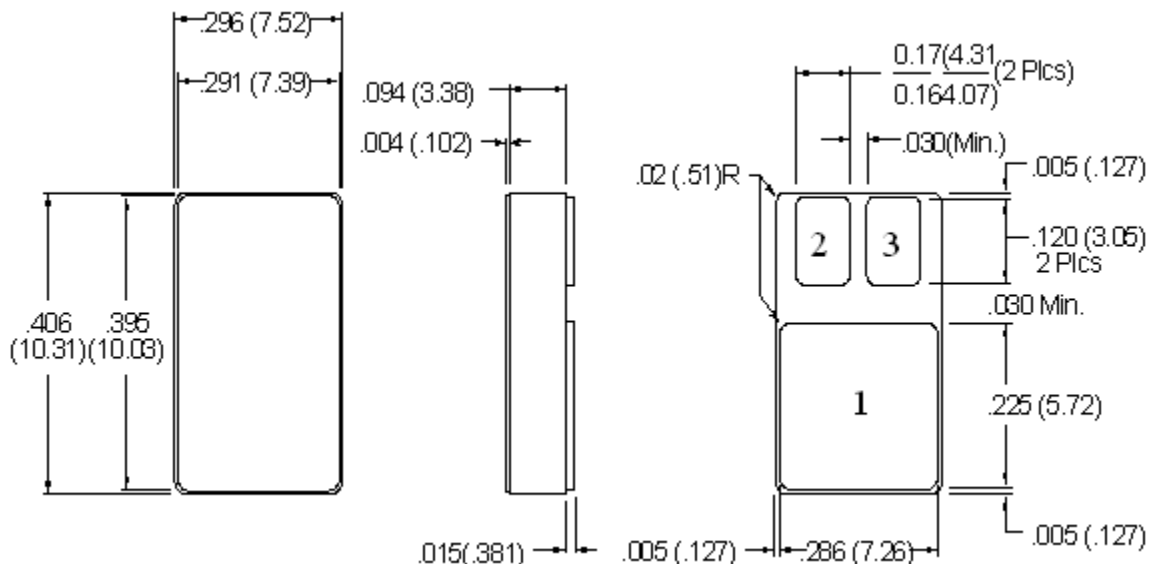
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
CONTINUOUS DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_D	-	-	9.0	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	36	Amps(pk)
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	1.27	$^\circ\text{C/W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	98	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 1.0mA$	BV_{DSS}	200	-	-	Volts
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu A$	$V_{GS(th)}$	2.0	-	4.0	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10Vdc, I_D = 6.0A$ $I_D = 9.0A$	$R_{DS(ON)}$	-	-	0.4 0.49	Ω
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0Vdc$ $V_{DS} = 0.8 \times \text{Max. Rating}$ $V_{GS} = 0Vdc, T_J = 125^\circ\text{C}$	I_{DSS}	-	-	25 250	μA
GATE TO BODY LEAKAGE CURRENT $V_{GS} = \pm 20Vdc,$	I_{GSS}	-	-	± 100	nA
TOTAL GATE CHARGE $V_{GS} = 10 Vdc$	Q_g	16	-	39	nC
GATE TO SOURCE CHARGE $V_{DS} = 0.5V \text{ Max. Rating},$	Q_{gs}	3.0	-	5.7	nC
GATE TO DRAIN CHARGE $I_D = 9.0A$	Q_{gd}	5.5	-	20	
TURN ON DELAY TIME $V_{DD} = 100V,$	$t_{d(ON)}$	-	-	35	nsec
RISE TIME $I_D = 9.0A,$	t_r	-	-	80	
TURN OFF DELAY TIME $R_G = 7.5\Omega$	$t_{d(OFF)}$	-	-	60	
FALL TIME $V_{GS} = 10V$	t_f	-	-	40	
FORWARD VOLTAGE $T_J = 125^\circ\text{C}, I_S = 9.0A, V_{GS} = 0V$	V_{SD}	-	-	1.4	Volts
REVERSE RECOVERY TIME $I_S = 9.0A,$	t_{rr}	-	-	500	nsec
REVERSE RECOVERY CHARGE $di/dt \leq 100A/\mu\text{sec},$ $V_{DD} \leq 50V$					
INPUT CAPACITANCE $V_{DS} = 25 Vdc,$	C_{iss}	-	600	-	pF
OUTPUT CAPACITANCE $V_{GS} = 0 Vdc,$	C_{oss}		250		
REVERSE TRANSFER CAPACITANCE $f = 1 \text{ MHz}$	C_{rss}		80		

SENSITRON

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MECHANICAL DIMENSIONS: in Inches / mm**SMD-0.5****PINOUT TABLE**

DEVICE TYPE	PIN 1	PIN 2	PIN 3
N-CHANNEL MOSFET IN A SMD-0.5 PACKAGE	DRAIN	GATE	SOURCE

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