

TECHNICAL DATA
DATA SHEET 623, REV -

HERMETIC POWER MOSFET N-CHANNEL

FEATURES:

- 600 Volt, 0.35 Ohm MOSFET
- Isolated and Hermetically Sealed
- Surface Mount Package
- Electrically equivalent to IXTM20N60

MAXIMUM RATINGS

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

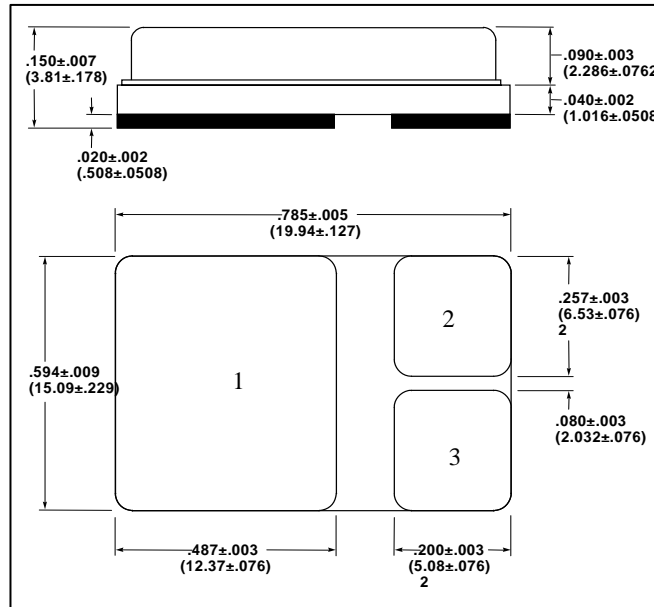
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
CONTINUOUS DRAIN CURRENT $V_{GS}=10V, T_C = 25^\circ\text{C}$	I_D	-	-	20	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	80	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	0.27	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	450	Watts

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 250\mu\text{A}$	BV_{DSS}	600	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10V, I_D = 10A$	$R_{DS(ON)}$	-	-	0.35	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	$V_{GS(th)}$	2.0	-	4.5	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} = 10V, I_D = 10A$	g_{fs}	11	18	-	$S(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT, $T_J = 25^\circ\text{C}$ ($V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0V$), $T_J = 125^\circ\text{C}$	I_{DSS}	-	-	250 1000	μA
GATE TO SOURCE LEAKAGE FORWARD GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20V$	I_{GSS}	-	-	100 -100	nA
TOTAL GATE CHARGE $V_{GS} = 10V,$ GATE TO SOURCE CHARGE $V_{DS} = 300V,$ GATE TO DRAIN CHARGE $I_D = 10A$	Q_g Q_{gs} Q_{gd}	-	150 29 60	170 40 85	nC
TURN ON DELAY TIME $V_{DS} = 300V,$ RISE TIME $I_D = 10A,$ TURN OFF DELAY TIME $R_G = 2.0\Omega,$ FALL TIME $V_{GS} = 10V$	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	20 43 70 40	40 60 90 60	nsec
DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}, I_F = I_S$ $V_{GS} = 0V$	V_{SD}	-	-	1.5	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C},$ $I_F = I_S,$ $di/dt \leq 100A/\mu\text{sec}$	t_{rr}	-	600	-	nsec
INPUT CAPACITANCE $V_{GS} = 0V, V_{DS} = 25V,$ OUTPUT CAPACITANCE $f=1\text{MHz}$ REVERSE TRANSFER CAPACITANCE	C_{iss} C_{oss} C_{rss}	-	4500 420 140	-	pF

SENSITRON
DATA SHEET 623
REVISION -

MECHANICAL DIMENSIONS: in Inches / mm



SHD-6

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET SHD-6 PACKAGE	DRAIN	SOURCE	GATE

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