

TECHNICAL DATA  
DATA SHEET 364, REV -

## HERMETIC POWER MOSFET N-CHANNEL

**FEATURES:**

- 60 Volt, 0.027 Ohm, 45A MOSFET
- Isolated Hermetic Metal Package
- Fast Switching
- Low  $R_{DS(on)}$
- Similar to IRFC054

**MAXIMUM RATINGS**

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

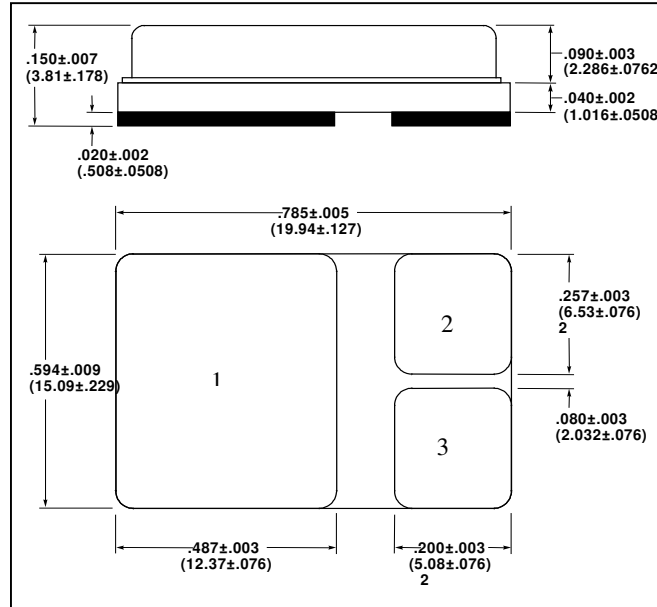
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	$V_{GS}$	-	-	$\pm 20$	Volts
ON-STATE DRAIN CURRENT $V_{GS} = 10V$	$I_D$	-	-	35	Amps
		-	-	35	
PULSED DRAIN CURRENT	$I_{DM}$	-	-	220	Amps
OPERATING AND STORAGE TEMPERATURE	$T_{OP}/T_{STG}$	-55	-	+150	$^\circ\text{C}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	$P_D$	-	-	300	Watts

**ELECTRICAL CHARACTERISTICS**

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 1.0mA$	$BV_{DSS}$	60	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10V, I_D = 35A$	$R_{DS(ON)}$	-	-	0.027	$\Omega$
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu A$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq 15V, I_{DS} = 35A$	$g_{fs}$	20	-	-	$S(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0V$ $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0V, T_J = 125^\circ\text{C}$	$I_{DSS}$	-	-	25 250	$\mu A$
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 RISE TIME TURN OFF DELAY TIME FALL TIME $V_{DD} = 30V,$ $I_D = 35A,$ $R_G = 2.35\Omega$	$t_{d(ON)}$ $t_r$ $t_{d(OFF)}$ $t_f$	-	-	33 180 100 100	nsec
DIODE FORWARD VOLTAGE $T_C = 25^\circ\text{C}, I_S = 35A,$ $V_{GS} = 0V$	$V_{SD}$	-	-	2.5	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C},$ $I_F = 35A,$ $di/ds \leq 100A/\mu\text{sec}, V_{DD} \leq 50V$	$t_{rr}$	-	-	280	nsec
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $V_{GS} = 0V$ $V_{DS} = 25V$ $f = 1.0MHz$	$C_{iss}$ $C_{oss}$ $C_{rss}$	-	4600 2000 340	-	pF
THERMAL RESISTANCE, JUNCTION TO CASE	$R_{thJC}$	-	-	0.4	$^\circ\text{C/W}$

**SENSITRON**  
**DATA SHEET 364**  
**REVISION -**

**MECHANICAL DIMENSIONS: in Inches / mm**



**SHD-6**

**PINOUT TABLE**

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

**TECHNICAL DATA**

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