TECHNICAL DATA
DATA SHEET 303, REV. B
Formerly Part Number SHD2181/A/B

HERMETIC POWER MOSFET N-CHANNEL

FEATURES:

- · 60 Volt, 0.027 Ohm, 45A MOSFET
- Isolated Hermetic Metal Package
- Fast Switching
- Low R_{DS (on)}
- Equivalent to IRFM054 Series

MAXIMUM RATINGS

ALL RATINGS ARE AT $T_{\rm C}$ = 25°C UNLESS OTHERWISE SPECIFIED.

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RATING		SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE		V_{GS}	-	-	±20	Volts
ON-STATE DRAIN CURRENT	@ T _C = 25°C	I _D	-	-	45	Amps
$V_{GS} = 10V$	$@ T_C = 100^{\circ}C$		-	-	35	
PULSED DRAIN CURRENT	@ $T_C = 25^{\circ}C$	I_{DM}	-	-	220	Amps
OPERATING AND STORAGE TEMPERATURE		T_{OP}/T_{STG}	-55	-	+150	°C
TOTAL DEVICE DISSIPATION @ T _C = 25°C		P_{D}	-	-	200	Watts

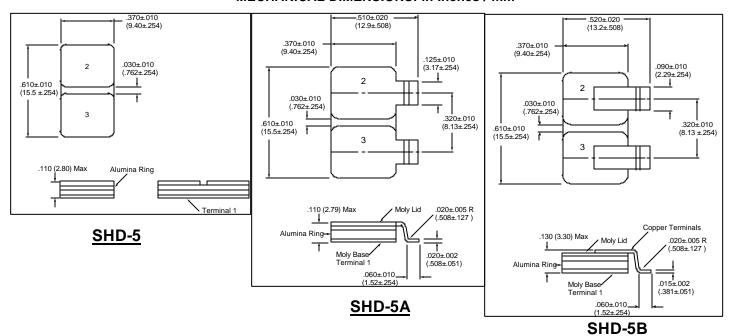
ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE	BV _{DSS}	60	-	-	Volts
$V_{GS} = 0V, I_{D} = 1.0mA$					
STATIC DRAIN TO SOURCE ON STATE RESISTANCE		-	-		
$V_{GS} = 10V, I_{D} = 35A$	R _{DS(ON)}			0.027	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}$, $I_D = 250\mu A$	V _{GS(th)}	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE	g _{fs}	20	-	-	S(1/Ω)
$V_{DS} \ge 15V, I_{DS} = 35A$, , ,
ZERO GATE VOLTAGE DRAIN CURRENT		-	-		
$V_{DS} = 0.8xMax$. Rating, $V_{GS} = 0V$	I _{DSS}			25	μΑ
$V_{DS} = 0.8xMax$. Rating, $V_{GS} = 0V$, $T_{J} = 125$ °C				250	-
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 $V_{DD} = 30V$,	t _{d(ON)}	-	-	33	
RISE TIME $I_D = 35A$,	t _r			180	nsec
TURN OFF DELAY TIME $R_G = 2.35\Omega$	t _{d(OFF)}			100	
FALL TIME	t _f			100	
DIODE FORWARD VOLTAGE $T_C = 25^{\circ}C$, $I_S = 35A$,	V_{SD}	-	-	2.5	Volts
$V_{GS} = 0V$					
REVERSE RECOVERY TIME $T_J = 25^{\circ}C$,	t _{rr}	-	-	280	
$I_F = 35A$,					nsec
$di/ds \le 100A/\mu sec$, $V_{DD} \le 50V$					
INPUT CAPACITANCE $V_{GS} = 0 V$	C _{iss}	-	4600	-	
OUTPUT CAPACITANCE $V_{DS} = 25 \text{ V}$	C _{oss}		2000		pF
REVERSE TRANSFER CAPACITANCE f = 1.0MHz	C _{rss}		340		
THERMAL RESISTANCE, JUNCTION TO CASE	R_{thJC}	-	-	0.6	°C/W

SENSITRON

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MECHANICAL DIMENSIONS: in Inches / mm



PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET, SURFACE MOUNT	DRAIN	SOURCE	GATE
SHD-5, 5A, 5B PACKAGE			



TECHNICAL DATA

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