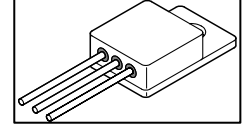


TECHNICAL DATA  
DATA SHEET 171, REV. B  
Formerly Part Number SHD2263

## HERMETIC POWER MOSFET - N-CANNEL

### FEATURES:

- 200 Volt, 0.21 Ohm, 14A MOSFET
- Isolated Hermetic Metal Package
- Fast Switching
- Low  $R_{DS(on)}$
- Ceramic Seals available (Add a "C" to the part number, i.e. SHDC226403)
- Similar to IRFY240



### MAXIMUM RATINGS

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

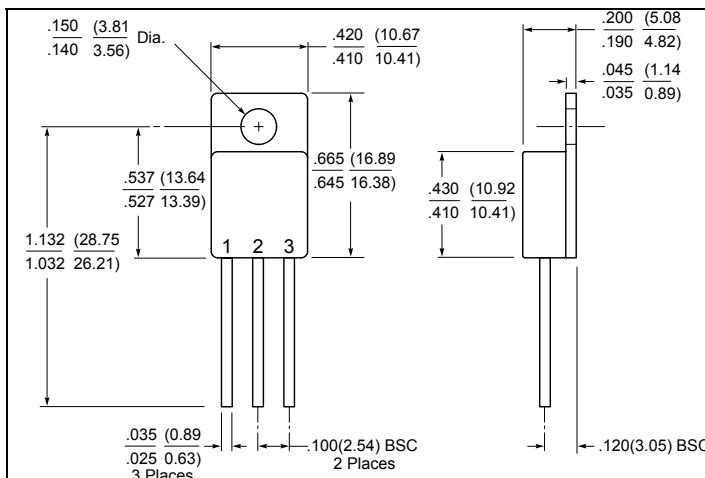
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	$V_{GS}$	-	-	$\pm 20$	Volts
ON-STATE DRAIN CURRENT $V_{DS} \geq 2V_{DS(on)}, V_{GS} = 10V$	$I_{D(on)}$	-	-	14	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	$I_{DM}$	-	-	$\pm 56$	Amps
OPERATING AND STORAGE TEMPERATURE	$T_{OP}/T_{STG}$	-55	-	+150	$^\circ\text{C}$
THERMAL RESISTANCE, JUNCTION TO CASE	$R_{\theta JC}$	-	-	2.1	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	$P_D$	-	-	60	Watts

### ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 250 \mu\text{A}$	$BV_{DSS}$	200	-	-	Volts
DRAIN TO SOURCE ON-STATE VOLTAGE $V_{GS} = 10V, I_D = 10A$	$V_{DS(ON)}$	-	1.8	2.1	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10V, I_D = 10A$ $V_{GS} = 10V, I_D = 10A, T_C = 125^\circ\text{C}$	$R_{DS(ON)}$	-	-	0.21 0.40	$\Omega$
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250 \mu\text{A}$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq 2V_{DS(on)}, I_D = 10A$	$g_{fs}$	6.0	-	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0V$ $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0V, T_C = 125^\circ\text{C}$	$I_{DSS}$	-	0.1 0.2	0.25 1.0	mA
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20V$ GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20V$	$I_{GSS}$	-	-	100 -100	nA
TURN ON DELAY TIME $V_{DD} = 100V,$ RISE TIME $I_D = 14A,$ TURN OFF DELAY TIME $R_G = 5.0\Omega,$ FALL TIME $V_{GS} = 10V$	$t_{d(ON)}$ $t_r$ $t_{d(OFF)}$ $t_f$	-	17 52 36 30	-	nsec
DIODE FORWARD VOLTAGE $T_C = 25^\circ\text{C}, I_S = -14A,$ $V_{GS} = 0V$	$V_{SD}$	-	-	-1.5	Volts
REVERSE RECOVERY TIME $T_J = 150^\circ\text{C},$ $I_f = I_S,$ $di_f/ds = 100A/\mu\text{sec},$	$t_{rr}$	-	350	-	nsec
INPUT CAPACITANCE $V_{GS} = 0V$ OUTPUT CAPACITANCE $V_{DS} = 25V$ REVERSE TRANSFER CAPACITANCE $f = 1.0\text{MHz}$	$C_{iss}$ $C_{oss}$ $C_{rss}$	-	1300 400 130	-	pF

**SENSITRON**  
**DATA SHEET 171**  
**REVISION B**

**MECHANICAL DIMENSIONS: in Inches / mm**



**TO-257**

**PINOUT TABLE**

DEVICE TYPE	PIN 1	PIN 2	PIN 3
SHD226403	DRAIN	SOURCE	GATE
SHD226403R	GATE	DRAIN	SOURCE

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