

TECHNICAL DATA
DATA SHEET 4068, REV -

HERMETIC POWER MOSFET N-CHANNEL

FEATURES:

- 55 Volt, 0.04 Ohm MOSFET
- Hermetically Sealed
- Add a "C" after the SHD for ceramic seals (SHDC220301)
- Surface Mount Package

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 $V_{GS} = 10\text{V}$, $T_C = 25^\circ\text{C}$ $V_{GS} = 10\text{V}$, $T_C = 100^\circ\text{C}$	I_D	-	-	22 16	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	88	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+175	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	3.1	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	40	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}$, $I_D = 250 \mu\text{A}$	BV_{DSS}	55	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10\text{V}$, $I_D = 16\text{A}$	$R_{DS(ON)}$	-	-	0.04	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}$, $I_D = 250\mu\text{A}$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} = V_{GS}$, $I_D = 16\text{A}$	g_{fs}	8	-	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT, $T_J = 25^\circ\text{C}$ ($V_{DS} = 55\text{V}$, $V_{GS} = 0\text{V}$), $T_J = 125^\circ\text{C}$	I_{DSS}	-	-	25 250	μA
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20\text{V}$ GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20\text{V}$	I_{GSS}	-	-	100 -100	nA
TOTAL GATE CHARGE GATE TO SOURCE CHARGE GATE TO DRAIN CHARGE $V_{GS} = 10\text{V}$, $V_{DS} = 44\text{V}$, $I_D = 16\text{A}$	Q_g Q_{gs} Q_{gd}	-	-	34 7 14	nC
TURN ON DELAY TIME RISE TIME TURN OFF DELAY TIME FALL TIME $V_{DD} = 28\text{V}$, $I_D = 22\text{A}$, $R_G = 13\Omega$, $V_{GS} = 10\text{V}$	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	-	12 28 30 30	nsec
DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}$, $I_S = 22\text{A}$ $V_{GS} = 0\text{V}$	V_{SD}	-	-	1.6	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C}$, $I_S = 22\text{A}$, $di/dt \leq 100\text{A}/\mu\text{sec}$,	t_{rr}	-	57	86	nsec
REVERSE RECOVERY CHARGE $V_{DD} \leq 25\text{V}$	Q_{rr}	-	130	200	μC
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $V_{GS} = 0\text{V}$, $V_{DS} = 25\text{V}$, $f = 1.0\text{MHz}$	C_{iss} C_{oss} C_{rss}	-	700 250 100	-	pF

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