

TECHNICAL DATA
DATA SHEET 553, REV -

HERMETIC POWER MOSFET N-CHANNEL

FEATURES:

- 500 Volt, 0.85, Ohm, 5.5Amp MOSFET
- Isolated and Hermetically Sealed
- Surface Mount Package

MAXIMUM RATINGS

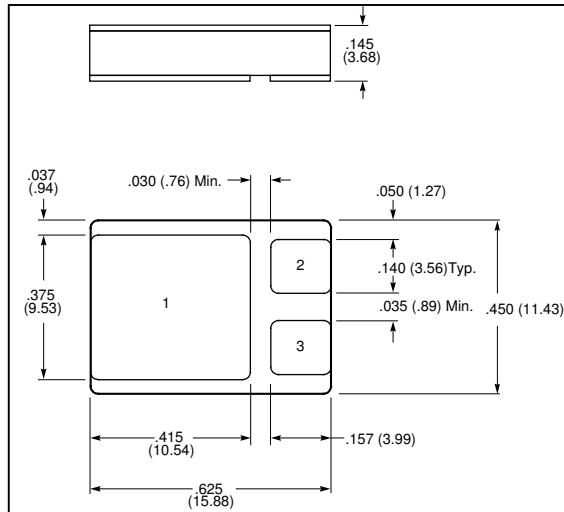
ALL RATINGS ARE AT $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
CONTINUOUS DRAIN CURRENT $T_C = 25^\circ\text{C}$	I_D	-	-	5.5	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	22	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	0.62	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	200	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 1.0\text{mA}$	BV_{DSS}	500	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10\text{V}, I_D = 3.5\text{A}$	$R_{DS(ON)}$	-	-	0.85	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq 15\text{V}, I_D = 3.5\text{A}$	g_{fs}	4.7	-	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT, $(V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0\text{V}), T_J = 125^\circ\text{C}$	I_{DSS}	-	-	25 250	μA
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20\text{V}$	I_{GSS}	-	-	100	nA
GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20\text{V}$				-100	
TOTAL GATE CHARGE $V_{GS} = 10\text{V},$	Q_g	-	-	68.5	nC
GATE TO SOURCE CHARGE $V_{DS} = 250\text{V},$	Q_{gs}			12.5	
GATE TO DRAIN CHARGE $I_D = 5.5\text{A}$	Q_{gd}			40.5	
TURN ON DELAY TIME $V_{DD} = 250\text{V},$	$t_{d(ON)}$	-	21	-	nsec
RISE TIME $I_D = 5.5\text{A},$	t_r		73		
TURN OFF DELAY TIME $R_G = 9.1\Omega,$	$t_{d(OFF)}$		72		
FALL TIME $V_{GS} = 10\text{V}$	t_f		51		
CONTINUOUS SOURCE CURRENT	I_S	-	5.5	-	Amps
DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}, I_S = 5.5\text{V}$ $V_{GS} = 0\text{V}$	V_{SD}	-	-	1.5	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C},$ $I_S = 5.5\text{A},$ $di/dt \leq -100\text{A}/\mu\text{sec},$	t_{rr}	-	-	700	nsec
REVERSE RECOVERY CHARGE $V_{DD} \leq 50\text{V}$	Q_{rr}			8.9	μC
INPUT CAPACITANCE $V_{GS} = 0\text{V}, V_{DS} = 25\text{V},$	C_{iss}	-	1300	-	pF
OUTPUT CAPACITANCE $f = 1.0\text{MHz}$	C_{oss}		310		
REVERSE TRANSFER CAPACITANCE	C_{rss}		120		

MECHANICAL DIMENSIONS: in Inches / mm



LCC-3P

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET LCC-3P PACKAGE	DRAIN	SOURCE	GATE

TECHNICAL DATA

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