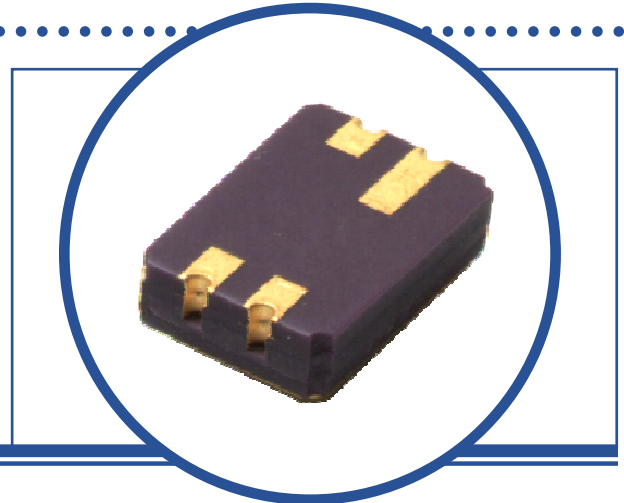


P-CHANNEL ENHANCEMENT MODE MOSFET

VP1008CSM4

- Low On-Resistance, $R_{DS(on)}$
- Moderate Threshold, $V_{GS(th)}$
- Low Input Capacitance, C_{ISS}
- Fast Switching Speed
- Hermetic Ceramic Surface Mount Package
- Ideally Suited For Power Supply Circuits, Switching And Driver (Relay, Solenoid, Lamp etc.) Applications
- Screening Options Available



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise stated)

V_{DS}	Drain – Source Voltage		100V
V_{GS}	Gate – Source Voltage		$\pm 30\text{V}$
I_D	Continuous Drain Current	$T_A = 25^\circ\text{C}$	300mA
		$T_A = 100^\circ\text{C}$	195mA
I_{DM}	Pulsed Drain Current ⁽¹⁾		3A
P_D	Total Power Dissipation at	$T_A = 25^\circ\text{C}$	400mW
		Derate Above 25°C	3.2mW/ $^\circ\text{C}$
T_J	Operating Temperature Range		-55 to $+150^\circ\text{C}$
T_{stg}	Storage Temperature Range		-55 to $+150^\circ\text{C}$

THERMAL PROPERTIES

Symbols	Parameters	Min.	Typ.	Max.	Units
$R_{\theta JA}$	Thermal Resistance, Junction To Ambient			312.5	$^\circ\text{C/W}$

Notes

(1) Repetitive Rating: Pulse width limited by maximum junction temperature

P-CHANNEL ENHANCEMENT MODE MOSFET VP1008CSM4

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise stated)

Symbols	Parameters	Test Conditions	Min.	Typ.	Max.	Units
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS} = 0$ $I_D = -10\mu\text{A}$	-100	-110		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}$ $I_D = -1.0\text{mA}$	-2	-3.4	-4.5	V
I_{GSS}	Gate-Source Leakage Current	$V_{GS} = \pm 20\text{V}$ $V_{DS} = 0\text{V}$ $T_J = 125^\circ\text{C}$			± 100	nA
					± 500	
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = -100\text{V}$ $V_{GS} = 0$ $T_J = 125^\circ\text{C}$			-10	μA
					-500	
$I_{D(ON)}^{(2)}$	On-State Drain Current	$V_{DS} = -15\text{V}$ $V_{GS} = -10\text{V}$	-1.1	-2		A
$R_{DS(on)}^{(2)}$	Static Drain-Source On-State Resistance	$V_{GS} = -10\text{V}$ $I_D = -1.0\text{A}$ $T_J = 125^\circ\text{C}$		2.5	5	Ω
				4.3	8	
$g_{fs}^{(2)}$	Forward Transconductance	$V_{DS} = -10\text{V}$ $I_D = -0.5\text{A}$	200	325		m Ω
$g_{os}^{(2)}$	Common Source Output Conductance	$V_{DS} = -7.5\text{V}$ $I_D = -0.1\text{A}$		0.45		

DYNAMIC CHARACTERISTICS

C_{iss}	Input Capacitance	$V_{GS} = 0$ $V_{DS} = -25\text{V}$ $f = 1.0\text{MHz}$		75	150	pF
C_{oss}	Output Capacitance			40	60	
C_{rss}	Reverse Transfer Capacitance			18	25	
$t_{d(on)}$	Turn-On Time	$V_{DD} = -25\text{V}$, $R_L = 47\Omega$, $R_G = 50\Omega$ $I_D = -0.5\text{A}$, $V_{GEN} = -10\text{V}$		7	15	ns
t_r				52	60	
$t_{d(off)}$	Turn-Off Time			40	50	
t_f				56	65	

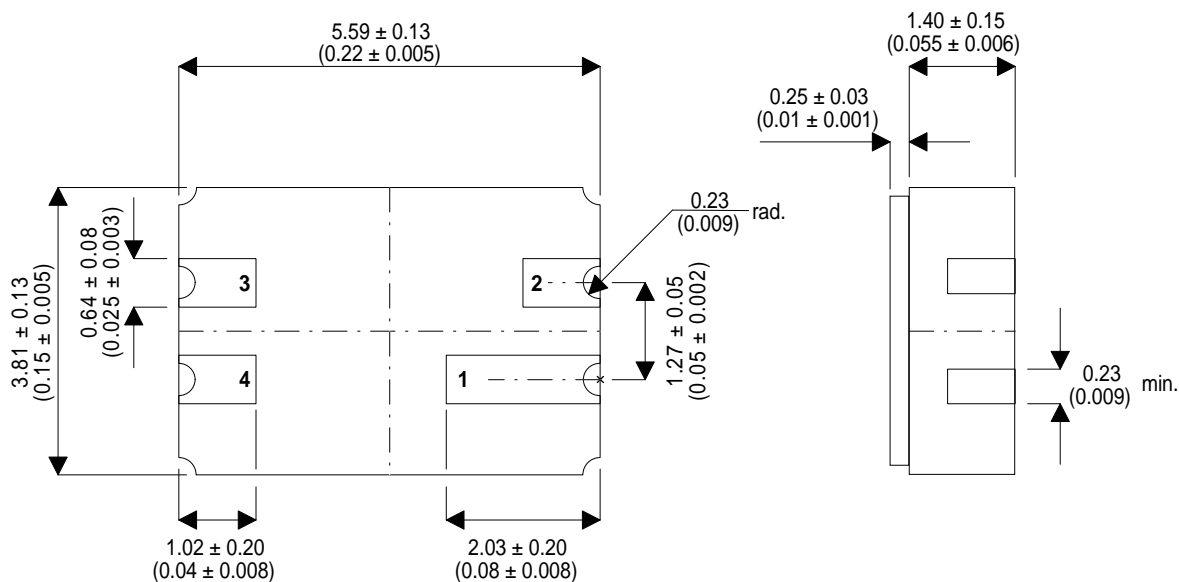
Notes

(2) Pulse Width $\leq 300\mu\text{s}$, $\delta \leq 2\%$

P-CHANNEL ENHANCEMENT MODE MOSFET VP1008CSM4

MECHANICAL DATA

Dimensions in mm (inches)



LCC3 PACKAGE (MO-041BA) Underside View

PAD 1 – Drain PAD 3 – Source
PAD 2 – N/C PAD 4 – Gate