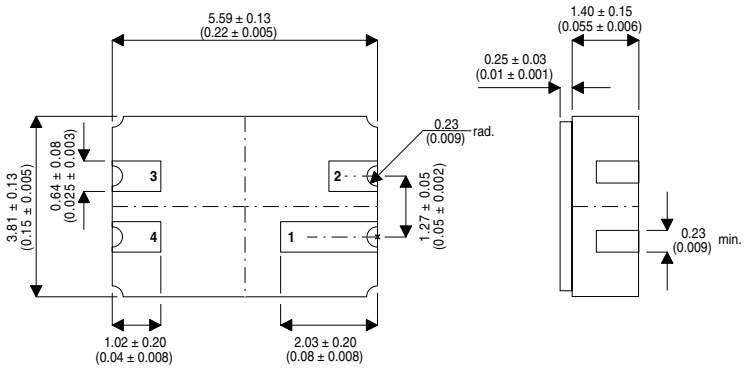
2N6660CSM4

MECHANICAL DATA
Dimensions in mm (inches)



Underside View

LCC3 PACKAGE (MO-041BA)

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

N–CHANNEL ENHANCEMENT MODE MOS TRANSISTOR

FEATURES

- **Switching Regulators**
- **Converters**
- **Motor Drivers**
- **JAN Level Screening Options**
- **CECC Screening Options**
- **Space Quality Level Options**

ABSOLUTE MAXIMUM RATINGS (T_{CASE} = 25°C unless otherwise stated)

V_{DS}	Drain – Source Voltage		60V
V_{GS}	Gate – Source Voltage		±40V
I_D	Drain Current	@ T_{CASE} = 25°C	1.1A
I_D	Drain Current	@ T_{CASE} = 100°C	0.8A
I_{DM}	Pulsed Drain Current *		3A
P_D	Power Dissipation	@ T_{CASE} = 25°C	6.25W
P_D	Power Dissipation	@ T_{CASE} = 100°C	2.5W
T_j	Operating Junction Temperature Range		–55 to 150°C
T_{stg}	Storage Temperature Range		–55 to 150°C
T_L	Lead Temperature ($\frac{1}{16}$ " from case for 10 sec.)		300°C

* Pulse Width Limited by Maximum Junction Temperature

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SEME LAB

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ELECTRICAL CHARACTERISTICS (T_{CASE} = 25°C unless otherwise stated)

	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
	STATIC CHARACTERISTICS						
$V_{(BR)DSS}$	Drain – Source Breakdown Voltage	V_{GS} = 0V	I_D = 10µA	60	100		V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS} = V_{GS}	I_D = 1.0mA	0.8	1.5	2	
I_{GSS}	Gate – Body Leakage Current	V_{GS} = ±15V				±100	nA
		V_{DS} = 0V	T_{CASE} = 125°C			±500	
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS} = 60V	V_{GS} = 0V			10	µA
		V_{DS} = 48V	V_{GS} = 0V, T_{CASE} = 125°C			500	
$I_{D(on)}$*	On–State Drain Current	V_{DS} =>2V	V_{GS} = 10V	1.5	1.7		A
$R_{DS(on)}$*	Drain – Source On Resistance	V_{GS} = 5V	I_D = 0.3A		4.7	5	Ω
		V_{GS} = 10V			2.7	3	
		I_D = 1.0A	T_{CASE} = 125°C		3.9	4.2	
$V_{DS(on)}$*	Drain – Source On Voltage	V_{GS} = 5V	I_D = 0.3A		1.4	1.5	V
		V_{GS} = 10V	I_D = 1A		2.7	3	
	DYNAMIC CHARACTERISTICS						
g_{FS}*	Forward Transconductance	V_{DS} = 25V	I_D = 0.5A	170	195		ms
C_{iss}	Input Capacitance	V_{DS} = 25V			35	50	pF
C_{oss}	Output Capacitance	V_{GS} = 0V			33	40	
C_{rss}	Reverse Transfer Capacitance	f = 1MHz			2	10	
	SWITCHING CHARACTERISTICS						
t_{ON}	Turn–On Time	V_{DD} = 25V	I_D = 1.0A		8	10	ns
t_{OFF}	Turn–Off Time	R_L = 23Ω	R_G= 25Ω		8	10	
	BODY-DRAIN DIODE CHARACTERISTICS						
I_S	Continuous Source Current (Body Diode)	Modified MOSPOWER Symbol Showing The Integral PN Juncion Rectifier 				-1.1	A
I_{SM}	Source Current[1] (Body Diode)					-3	
V_{SD}	Diode Forward Voltage [1]	I_S = -1.1A	V_{GS} = 0V			-0.9	V
		T_{CASE} = 125°C					

* Pulse Test: $t_p \leq 80$ µs , $\delta \leq 1\%$

	Parameter	Min.	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient			210	°C/W
$R_{\theta JC}$	Thermal Resistance, Junction to Case			20	°C/W

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