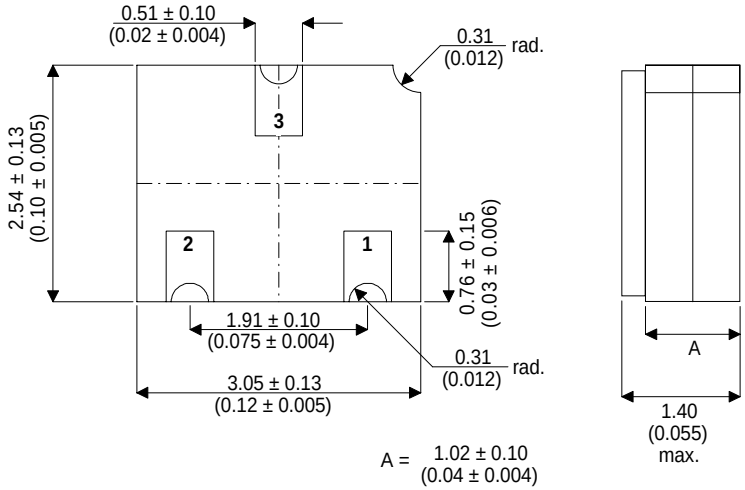
2N7002CSM

MECHANICAL DATA
Dimensions in mm (inches)



SOT23 CERAMIC
(LCC1 PACKAGE)

Underside View

PAD 1 – Gate PAD 2 – Source PAD 3 – Drain

N–CHANNEL ENHANCEMENT MODE MOS TRANSISTOR

FEATURES

- $V_{(BR)DSS}$ = 60V
- $RDS_{(ON)}$ = 7.5Ω
- I_D = 0.115A

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	±0.115A
I_D	Drain Current	@ T_{CASE} = 100°C	±0.073A
I_{DM}	Pulsed Drain Current *		0.8A
P_D	Power Dissipation	@ T_{CASE} = 25°C	200mW
P_D	Power Dissipation	@ T_{CASE} = 100°C	80mW
T_j	Operating Junction Temperature Range		–55 to 150°C
T_{stg}	Storage Temperature Range		–55 to 150°C

* Pulse width limited by maximum junction temperature.

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612. e-mail sales@semelab.co.uk
Website http://www.semelab.co.uk

SEME LAB

2N7002CSM

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

	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
	STATIC CHARACTERISTICS						
$V_{(BR)DSS}$	Gate – Source Breakdown Voltage	V_{GS} = 0V	I_D = 10µA	60	70		V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS} = V_{GS}	I_D = 0.25mA	1	2.15	2.5	
I_{GSS}	Gate – Body Leakage Current	V_{GS} = ±20V	V_{DS} = 0V			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS} = 60V	V_{GS} = 0V			1	µA
			T_{CASE} = 125°C			500	
$I_{D(on)*}$	On–State Drain Current	V_{DS}≥2$V_{DS(ON)}$	V_{GS} = 10V	500	1000		mA
$R_{DS(on)*}$	Drain – Source On Resistance	V_{GS} = 5V			5	7.5	Ω
		I_D = 50mA	T_{CASE} = 125°C		9	13.5	
		V_{GS} = 10V			2.5	7.5	
		I_D = 0.5A	T_{CASE} = 125°C		4.4	13.5	
$V_{DS(on)*}$	Drain – Source On Voltage	V_{GS} = 5V	I_D = 50mA		0.25	0.375	V
		V_{GS} = 10V			1.25	3.75	
		I_D = 0.5A	T_{CASE} = 125°C		2.2	6.75	
g_{FS*}	Forward Transconductance	V_{DS} = 10V	I_D = 0.2A	80	170		ms
g_{OS*}	Common Source Output Conductance	V_{DS} = 5V	I_D = 50mA		500		µs
	DYNAMIC CHARACTERISTICS						
C_{iss}	Input Capacitance	V_{DS} = 25V			16	50	pF
C_{oss}	Output Capacitance	V_{GS} = 0V			11	25	
C_{rss}	Reverse Transfer Capacitance	f = 1MHz			2	5	
	SWITCHING CHARACTERISTICS						
t_{ON}	Turn–On Time	V_{DD} = 30V	V_{GEN} = 10V		7	20	ns
t_{OFF}	Turn–Off Time	R_L = 150Ω	R_G = 25Ω		7	20	
		I_D = 0.2A					

* Pulse Test: PW = 80 µs , δ ≤ 1%

	Parameter	Min.	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient			625	°C/W

littlediode
COMPONENTS FOR ALL

Littlediode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.