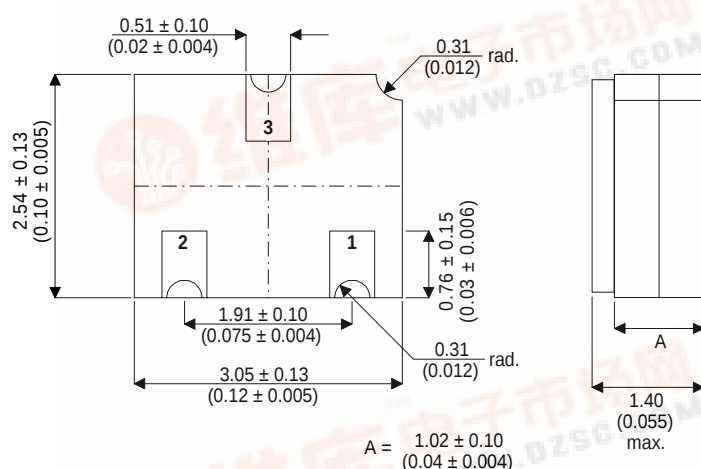


2N7000CSM

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

- $V_{(BR)DSS} = 60V$
- $R_{DS(ON)} = 5\Omega$
- $I_D = 200mA$
- Hermetic Ceramic Surface Mount package
- Screening Options Available

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

V_{DS}	Drain – Source Voltage	60V
V_{GS}	Gate – Source Voltage	$\pm 40V$
I_D	Drain Current @ $T_{CASE} = 25^\circ C$	200mA
I_{DM}	Pulsed Drain Current *	500mA
P_D	Power Dissipation @ $T_{CASE} = 25^\circ C$	300mW
T_j	Operating Junction Temperature Range	-55 to $150^\circ C$
T_{stg}	Storage Temperature Range	-55 to $150^\circ C$

* Pulse width limited by maximum junction temperature.



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	0.8		3.0	
I _{GSS}	Gate – Body Leakage Current	V _{GS} = ±20VV _{DS} = 0V				-10	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 60V	V _{GS} = 0V			1	μA
			T _{CASE} = 125°C			1	mA
I _{D(on)*}	On–State Drain Current	V _{DS} ≥2V _{DS(ON)} V _{GS} = 4.5V		75			mA
R _{DS(on)*}	Drain – Source On Resistance	V _{GS} = 10V				5	Ω
		I _D = 0.5A	T _{CASE} = 125°C			9	
V _{DS(on)*}	Drain – Source On Voltage	V _{GS} = 4.5V	I _D = 75mA			0.4	V
		V _{GS} = 10V	I _D = 0.5A			2.5	
g _{FS*}	Forward Transconductance	V _{GS} = 10V	I _D = 0.5A	100			ms
DYNAMIC CHARACTERISTICS							
C _{iss}	Input Capacitance	V _{DS} = 25V				60	pF
C _{oss}	Output Capacitance	V _{GS} = 0V				25	
C _{rss}	Reverse Transfer Capacitance	f = 1MHz				5	
SWITCHING CHARACTERISTICS							
t _{ON}	Turn–On Time	V _{DD} = 30V	V _{GEN} = 10V			10	ns
t _{OFF}	Turn–Off Time	R _L = 150Ω	R _G = 25Ω			10	
		I _D = 0.2A					

* Pulse Test: PW = 80 μs , δ ≤ 1%

Parameter	Min.	Typ.	Max.	Unit
R _{θJA} Thermal Resistance, Junction to Ambient			416	°C/W