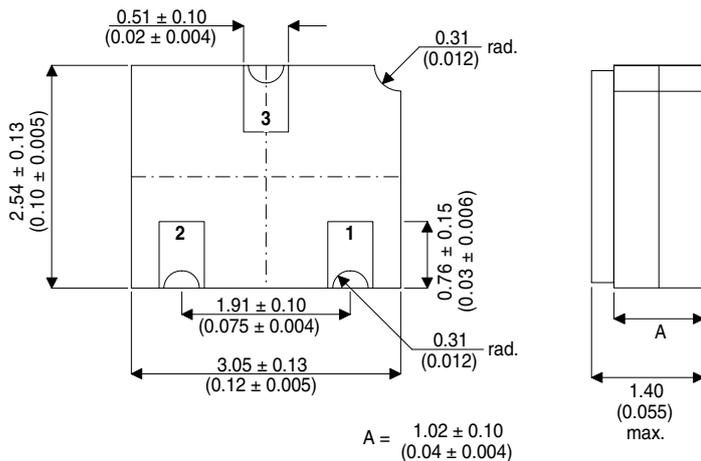


**MECHANICAL DATA**

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	±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°C
$T_{stg}$	Storage Temperature Range	-55 to 150°C

\* Pulse width limited by maximum junction temperature.

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

**ELECTRICAL CHARACTERISTICS** ( $T_{CASE} = 25^{\circ}C$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit	
<b>STATIC CHARACTERISTICS</b>						
$V_{(BR)DSS}$	Drain – Source Breakdown Voltage	$V_{GS} = 0V$	$I_D = 10\mu A$	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	$V_{GS} = \pm 20V$	$V_{DS} = 0V$		-10	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS} = 60V$	$V_{GS} = 0V$		1.0	$\mu A$
				$T_{CASE} = 125^{\circ}C$	1.0	mA
$I_{D(on)*}$	On–State Drain Current	$V_{DS} \geq 2V_{DS(ON)}$	$V_{GS} = 4.5V$	75		mA
$R_{DS(on)*}$	Drain – Source On Resistance	$V_{GS} = 10V$	$I_D = 0.5A$	$T_{CASE} = 125^{\circ}C$	5	$\Omega$
					9	
$V_{DS(on)*}$	Drain – Source On Voltage	$V_{GS} = 4.5V$	$I_D = 75mA$		0.4	V
				$V_{GS} = 10V$	$I_D = 0.5A$	
$g_{FS*}$	Forward Transconductance	$V_{GS} = 10V$	$I_D = 0.5A$	100		ms
<b>DYNAMIC CHARACTERISTICS</b>						
$C_{iss}$	Input Capacitance	$V_{DS} = 25V$			60	pF
$C_{oss}$	Output Capacitance	$V_{GS} = 0V$			25	
$C_{rss}$	Reverse Transfer Capacitance	$f = 1MHz$			5	
<b>SWITCHING CHARACTERISTICS</b>						
$t_{ON}$	Turn–On Time	$V_{DD} = 30V$	$V_{GEN} = 10V$		10	ns
		$R_L = 150\Omega$	$R_G = 25\Omega$			
$t_{OFF}$	Turn–Off Time	$I_D = 0.2A$			10	

\* Pulse Test:  $PW = 80 \mu s$ ,  $\delta \leq 1\%$

Parameter	Min.	Typ.	Max.	Unit
$R_{\theta JA}$			416	$^{\circ}C/W$