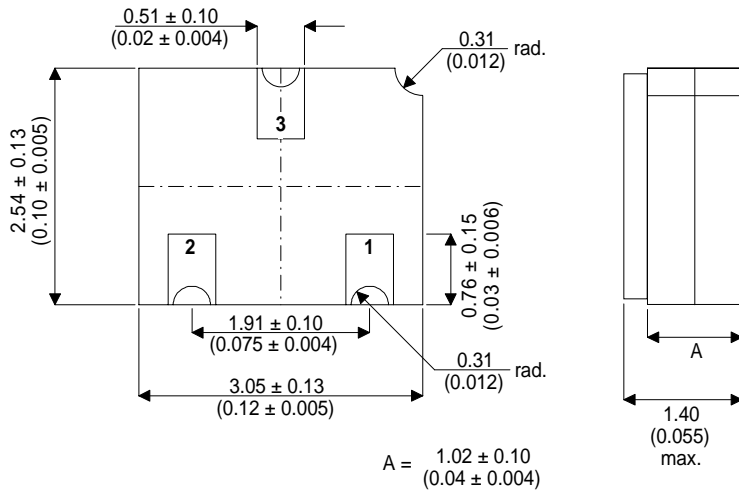


**MECHANICAL DATA**

Dimensions in mm (inches)



**N-CHANNEL  
ENHANCEMENT MODE  
MOS TRANSISTOR**

**FEATURES**

- $V_{(BR)DSS} = 60V$
- $R_{DS(ON)} = 7.5\Omega$
- $I_D = 0.115A$

**SOT23 CERAMIC  
(LCC1 PACKAGE)**

**Underside View**

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

**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 @ $T_{CASE} = 25^\circ C$	$\pm 0.115A$
$I_D$	Drain Current @ $T_{CASE} = 100^\circ C$	$\pm 0.073A$
$I_{DM}$	Pulsed Drain Current *	0.8A
$P_D$	Power Dissipation @ $T_{CASE} = 25^\circ C$	200mW
$P_D$	Power Dissipation @ $T_{CASE} = 100^\circ C$	80mW
$T_j$	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** ( $T_{CASE} = 25^{\circ}C$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit		
<b>STATIC CHARACTERISTICS</b>							
$V_{(BR)DSS}$	Gate – Source Breakdown Voltage	$V_{GS} = 0V$	$I_D = 10\mu A$	60	70	V	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}$	$I_D = 0.25mA$	1	2.15		2.5
$I_{GSS}$	Gate – Body Leakage Current	$V_{GS} = \pm 20V$	$V_{DS} = 0V$			$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS} = 60V$	$V_{GS} = 0V$			1	$\mu A$
			$T_{CASE} = 125^{\circ}C$			500	
$I_{D(on)*}$	On–State Drain Current	$V_{DS} \geq 2V_{DS(ON)}$	$V_{GS} = 10V$	500	1000		mA
$R_{DS(on)*}$	Drain – Source On Resistance	$V_{GS} = 5V$			5	7.5	$\Omega$
		$I_D = 50mA$	$T_{CASE} = 125^{\circ}C$		9	13.5	
		$V_{GS} = 10V$			2.5	7.5	
		$I_D = 0.5A$	$T_{CASE} = 125^{\circ}C$		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	
		$I_D = 0.5A$	$T_{CASE} = 125^{\circ}C$		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		$\mu s$
<b>DYNAMIC CHARACTERISTICS</b>							
$C_{iss}$	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	
<b>SWITCHING CHARACTERISTICS</b>							
$t_{ON}$	Turn–On Time	$V_{DD} = 30V$	$V_{GEN} = 10V$		7	20	ns
		$R_L = 150\Omega$	$R_G = 25\Omega$				
$t_{OFF}$	Turn–Off Time	$I_D = 0.2A$			7	20	

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

Parameter	Min.	Typ.	Max.	Unit
$R_{\theta JA}$			625	$^{\circ}C/W$