

»Features

$V_{DS} = 60V$   
 $I_D = 0.2A$   
 $R_{DS(ON)} @V_{GS} = 10V, \text{ Max} = 3 \Omega$   
 $R_{DS(ON)} @V_{GS} = 4.5V, \text{ Max} = 4 \Omega$

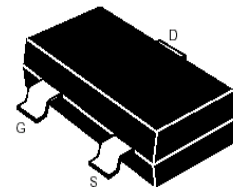
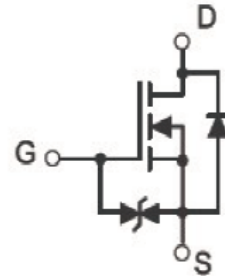
»General Description

- Advanced trench cell design
- High speed switch
- High saturation current capability
- SOT-523 for Surface Mount Package.
- ESD protected

»General Description

- Portable appliances
- Load switch appliances

»Pin Configurations



SOT-523

»Absolute Maximum Ratings @ $T_A=25^\circ C$  unless otherwise noted

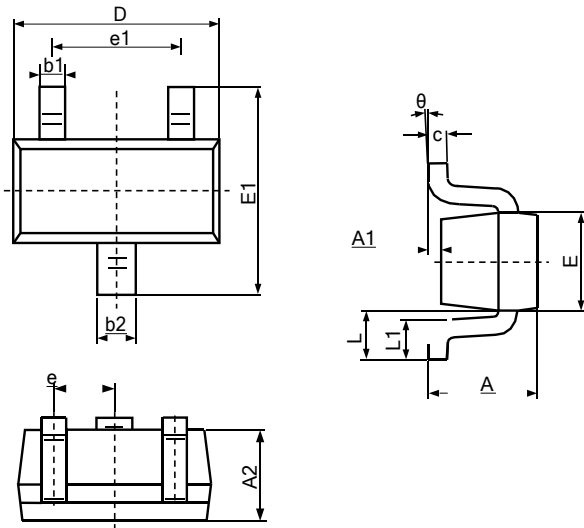
Parameter	Symbol	Limit	Units
Drain-Source Voltage	VDS	60	V
Gate-Source Voltage	VGS	±20	V
Drain Current-Continuous	ID	0.2	A
Power Dissipation	PD	0.225	W
Thermal Resistance from Junction to Ambient	RθJA	556	°C /W
Junction Temperature	TJ	150	°C
Storage Temperature	Tstg	-50~+150	

**»Electrical Characteristics** @ $T_A=25^{\circ}\text{C}$  unless otherwise noted

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
<b>Static Characteristics</b>						
Drain-Source Breakdown Voltage	$V_{DS}$	$V_{GS} = 0V, I_D = 250\mu A$	60			V
Gate Threshold Voltage*	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 1mA$	0.8	1.5	2.5	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 48V, V_{GS} = 0V$			1	$\mu A$
Gate –Source leakage current	$I_{GSS1}$	$V_{GS} = \pm 20V, V_{DS} = 0V$			$\pm 10$	$\mu A$
	$I_{GSS2}$	$V_{GS} = \pm 10V, V_{DS} = 0V$			$\pm 200$	nA
	$I_{GSS3}$	$V_{GS} = \pm 5V, V_{DS} = 0V$			$\pm 100$	nA
Drain-Source On-Resistance*	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 200mA$		2.4	4.0	$\Omega$
		$V_{GS} = 10V, I_D = 500mA$		1.9	3.0	$\Omega$
<b>Diode Characteristics</b>						
Diode Forward Voltage	$V_{SD}$	$V_{GS} = 0V, I_S = 500mA$		0.7	1.3	V

»Package Information

SOT-523



Symbol	Dimensions			
	Millimeter		Inches	
	MIN	MAX	MIN	MAX
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.325	0.010	0.013
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.750	0.850	0.030	0.033
E1	1.450	1.750	0.057	0.069
e	0.50 BSC		0.02 BSC	
e1	0.900	1.100	0.035	0.043
L	0.300	0.500	0.012	0.020
L1	0.028	0.440	0.011	0.017
θ	0	8°	0	8°

»Ordering information

Order code	Package	Marking	Base qty	Delivery mode
2N7002T	SOT-523	72K	3K	Tape and reel