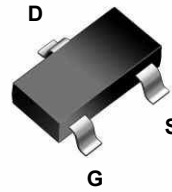
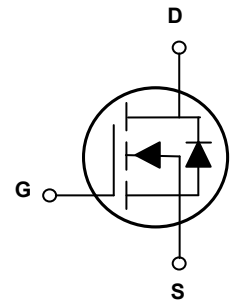


### Main Product Characteristics

$BV_{DSS}$	60V
$R_{DS(ON)}$	7.5Ω
$I_D$	115mA



SOT-523



Schematic Diagram

### Features and Benefits

- Advanced MOSFET process technology
- Ideal for high efficiency switched mode power supplies
- Low on-resistance with low gate charge
- Fast switching and reverse body recovery



### Description

The GSF7002AT utilizes the latest techniques to achieve high cell density and low on-resistance. These features make this device extremely efficient and reliable for use in high efficiency switch mode power supply and a wide variety of other applications.

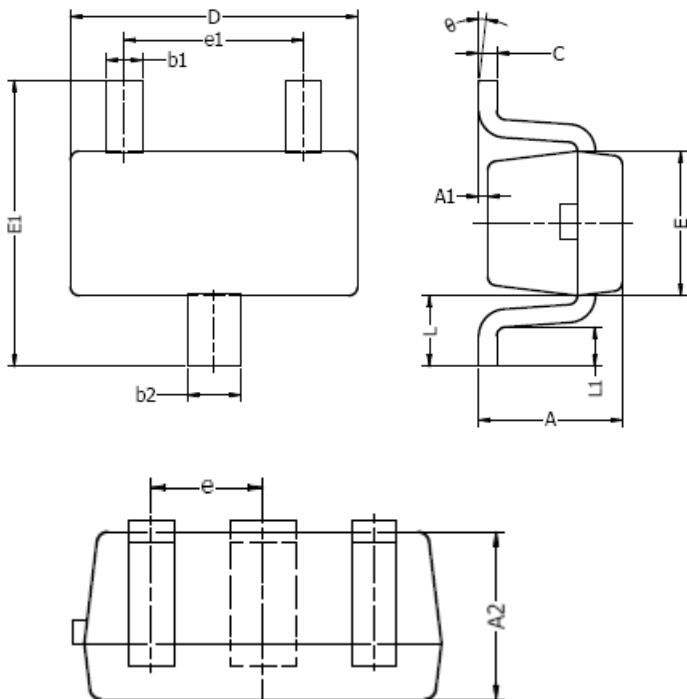
### Absolute Maximum Ratings ( $T_A=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	60	V
Gate-Source Voltage	$V_{GS}$	±20	V
Drain Current-Continuous	$I_D$	115	mA
Power Dissipation	$P_D$	150	mW
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	833	$^{\circ}C/W$
Storage Temperature Range	$T_{STG}$	-55 To +150	$^{\circ}C$
Operating Junction Temperature Range	$T_J$	-55 To +150	$^{\circ}C$

**Electrical Characteristics** ( $T_A=25^{\circ}\text{C}$  unless otherwise specified)

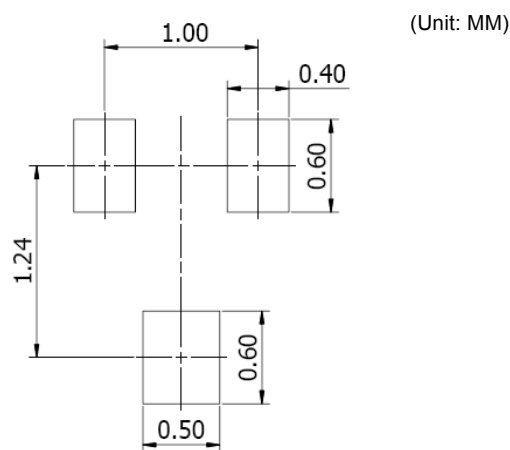
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
<b>Off Characteristics</b>						
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V, I_D=10\mu A$	60	-	-	V
Gate-Body Leakage	$I_{GSS}$	$V_{GS}=\pm 20V, V_{DS}=0V$	-	-	$\pm 1$	$\mu A$
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=60V, V_{GS}=0V$	-	-	100	nA
<b>On Characteristics</b>						
Gate Threshold Voltage	$V_{th(GS)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	1	-	2.5	V
On-state Drain Current	$I_{D(ON)}$	$V_{GS}=10V, V_{DS}=7V$	500	-	-	mA
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=500mA$	-	-	7.5	$\Omega$
		$V_{GS}=5V, I_D=50mA$	-	-	7.5	
Forward Transconductance	$g_{FS}$	$V_{DS}=10V, I_D=200mA$	80	-	500	mS
Drain-Source On-Voltage	$V_{DS(on)}$	$V_{GS}=10V, I_D=500mA$	-	-	3.75	V
		$V_{GS}=5V, I_D=50mA$	-	-	0.375	V
Diode Forward Voltage	$V_{SD}$	$I_S=250mA, V_{GS}=0V$	-	-	1	V
<b>Dynamic and Switching Characteristics</b>						
Input Capacitance	$C_{iss}$	$V_{DS}=25V, V_{GS}=0V, F=1.0MHz$	-	-	50	pF
Output Capacitance	$C_{oss}$		-	-	25	
Reverse Transfer Capacitance	$C_{rss}$		-	-	5	
Turn-On Time	$t_{d(on)}$	$V_{DD}=10V, I_D=500mA, V_{GEN}=10V, R_L=20\Omega, R_G=10\Omega$	-	5.6	-	nS
Turn-Off Time	$t_{d(off)}$		-	25	-	

### Package Outline Dimensions (SOT-523)



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.70	0.90	0.028	0.035
A1	0.00	0.10	0.000	0.004
A2	0.70	0.80	0.028	0.031
b1	0.15	0.25	0.006	0.010
b2	0.25	0.35	0.010	0.014
c	0.10	0.20	0.004	0.008
D	1.50	1.70	0.059	0.067
E	0.70	0.90	0.028	0.035
E1	1.45	1.75	0.057	0.069
e	0.50 TYP.		0.020 TYP.	
e1	0.90	1.10	0.035	0.043
L	0.40 REF.		0.016 REF.	
L1	0.10	0.30	0.004	0.012
theta	0°	8°	0°	8°

### Recommended Pad Layout



### Order Information

Device	Package	Marking Code	Carrier	Quantity	HSF Status
GSF7002AT	SOT-523	K72	Tape & Reel	3000/Reel	RoHS Compliant