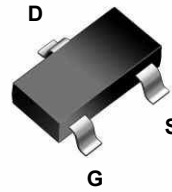
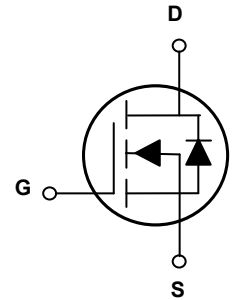


Main Product Characteristics

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.

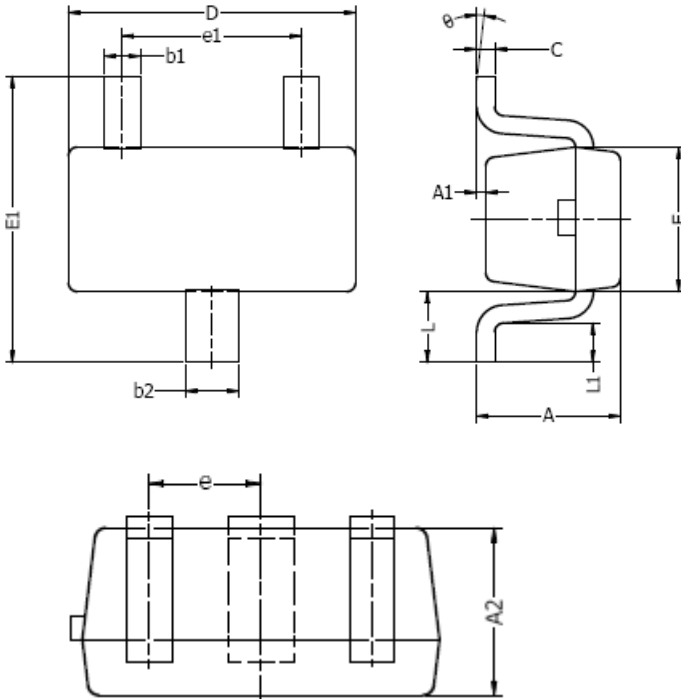
Absolute Maximum Ratings ($T_A=25^{\circ}C$ unless otherwise specified)

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)

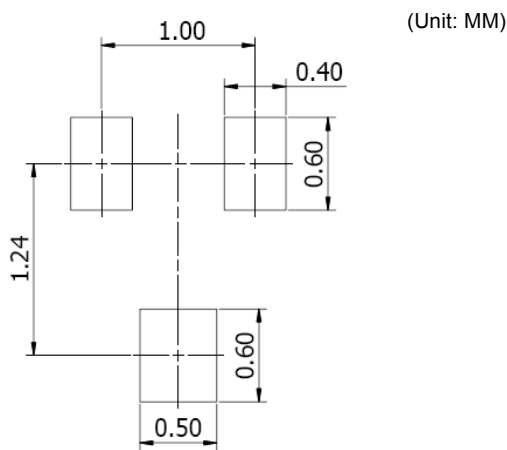
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=10\mu A$	60	-	-	V
Gate-Body Leakage	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$	-	-	± 1	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60V, V_{GS}=0V$	-	-	100	nA
On Characteristics						
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	Ω
		$V_{GS}=5V, I_D=50mA$	-	-	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
Dynamic and Switching Characteristics						
Input Capacitance	C_{iss}	$V_{DS}=25V, V_{GS}=0V, F=1.0MHz$	-	-	50	μF
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
θ	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