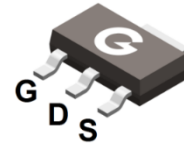
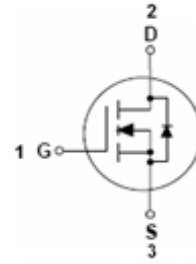


Features

- Ultra Low gate charge
- Low reverse transfer capacitance
- Fast switching capability
- Avalanche energy specified
- Improved dv/dt capability, high ruggedness

HF



SOT-223

Mechanical Data

- Case: SOT-223
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matted-Tin plated; Solderable Per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BL1N60R	SOT-223	4000 pcs / Tape & Reel	1N60R

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	V _{DSS}	600	V
Gate-to-Source Voltage	V _{GSS}	±30	V
Continuous Drain Current	I _D	1.2	A
Pulsed Drain Current	I _{DM}	4.8	A
Power Dissipation	P _D	1	W

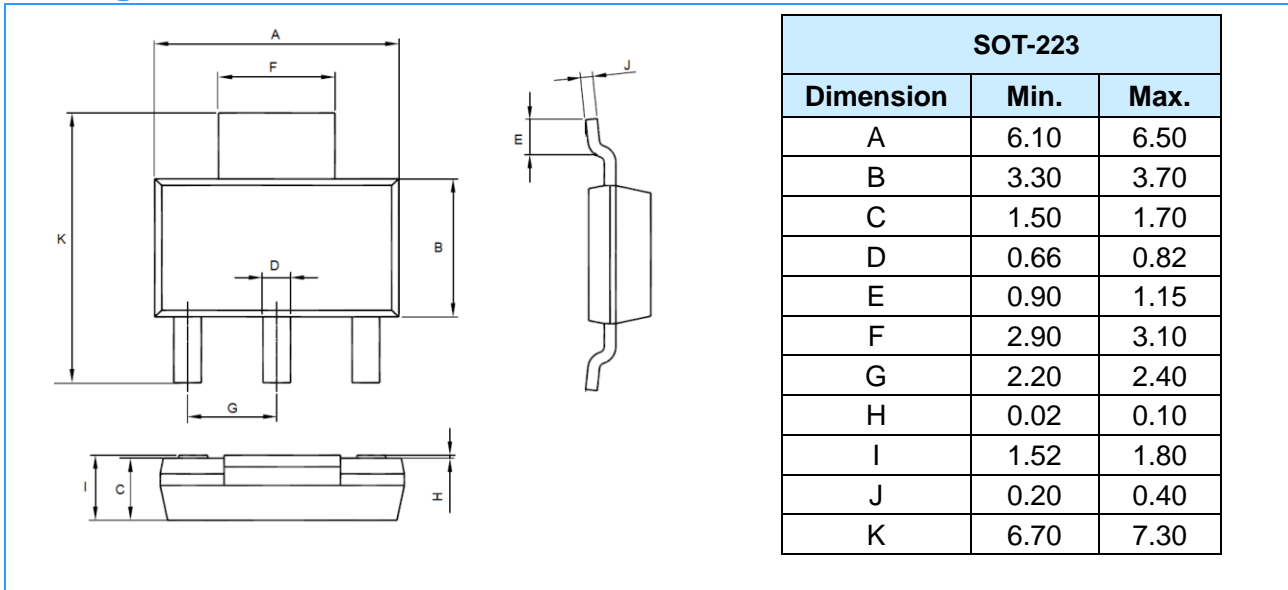
Thermal Characteristics

Parameter	Symbol	Value	Unit
Operating Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

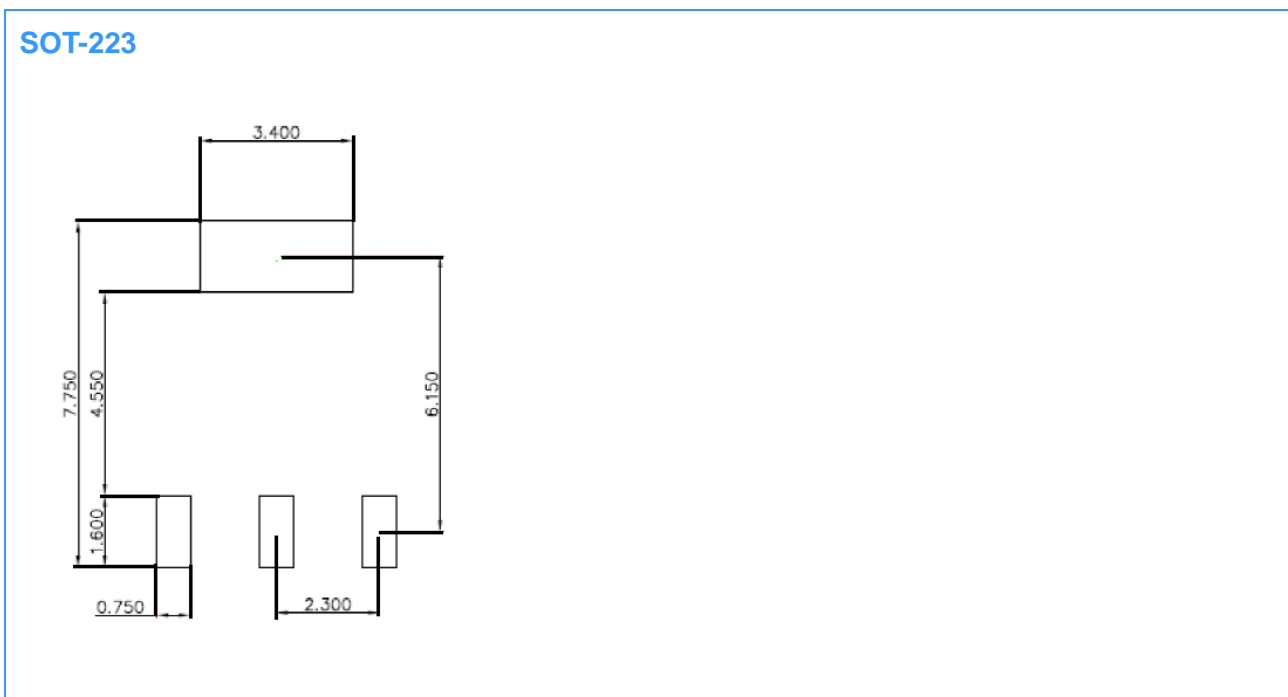
Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
V_{DSS}	Drain-Source Breakdown Voltage	$V_{GS} = 0V, I_D = 250\mu A$	600	-	-	V
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = 600V, V_{GS} = 0V$	-	-	10	μA
I_{GSS}	Gate-Body Leakage Current	$V_{GS} = \pm 30V, V_{DS} = 0V$	-	-	± 100	nA
On Characteristics						
$R_{DS(ON)}$	Static Drain-Source On-resistance	$V_{GS} = 10V, I_D = 0.6A$	-	-	11.5	Ω
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}, I_D = 250\mu A$	2	-	4	V
Dynamic Characteristics						
C_{ISS}	Input Capacitance	$V_{GS} = 0V$	-	120	-	pF
C_{OSS}	Output Capacitance	$V_{DS} = 25V$	-	20	-	
C_{RSS}	Reverse Transfer Capacitance	$f = 1.0MHz$	-	3.0	-	
Switching Characteristics						
$t_{d(ON)}$	Turn-on Delay Time	$V_{DD} = 300V$ $V_{GS} = 10V$ $I_D = 1.2A$	-	5	-	ns
t_r	Turn-on Rise Time		-	25	-	
$t_{d(OFF)}$	Turn-Off Delay Time		-	7	-	
t_f	Turn-Off Fall Time		-	25	-	
Q_G	Total Gate-Charge	$V_{DD} = 480V$	-	5.0	-	nC
Q_{GS}	Gate to Source Charge	$I_D = 1.2A$	-	1.0	-	
Q_{GD}	Gate to Drain (Miller) Charge	$V_{GS} = 10V$	-	2.6	-	
Source-Drain Diode Characteristics						
V_{SD}	Diode Forward Voltage	$I_{SD} = 1.2A, V_{GS} = 0V$	-	-	1.4	V

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



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