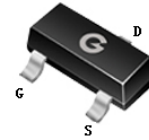


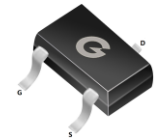
Features

- Low on-resistance
- High-speed switching
- Drive circuits can be simple
- Parallel use is easy

HF



BSS84
SOT-23



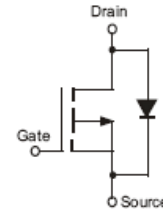
BSS84W
SOT-323

Typical Applications

- P-channel enhancement mode effect transistor
- Switching application

Mechanical Data

- Case: SOT-23, SOT-323
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BSS84	SOT-23	3000 pcs / Tape & Reel	SP
BSS84W	SOT-323	3000 pcs / Tape & Reel	K84

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

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	V _{DSS}	-50	V
Gate-to-Source Voltage	V _{GSS}	±12	V
Continuous Drain Current *1	I _D	-130	mA
Pulsed Drain Current *4	I _{DM}	-520	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit	
Power Dissipation *1	P _D	SOT-23	0.36	W
		SOT-323	0.20	
Thermal Resistance Junction-to-Air *1	R _{θJA}	SOT-23	347	°C/W
		SOT-323	625	
Operating Junction Temperature Range	T _J	-55 ~ +150	°C	
Storage Temperature Range	T _{STG}	-55 ~ +150	°C	

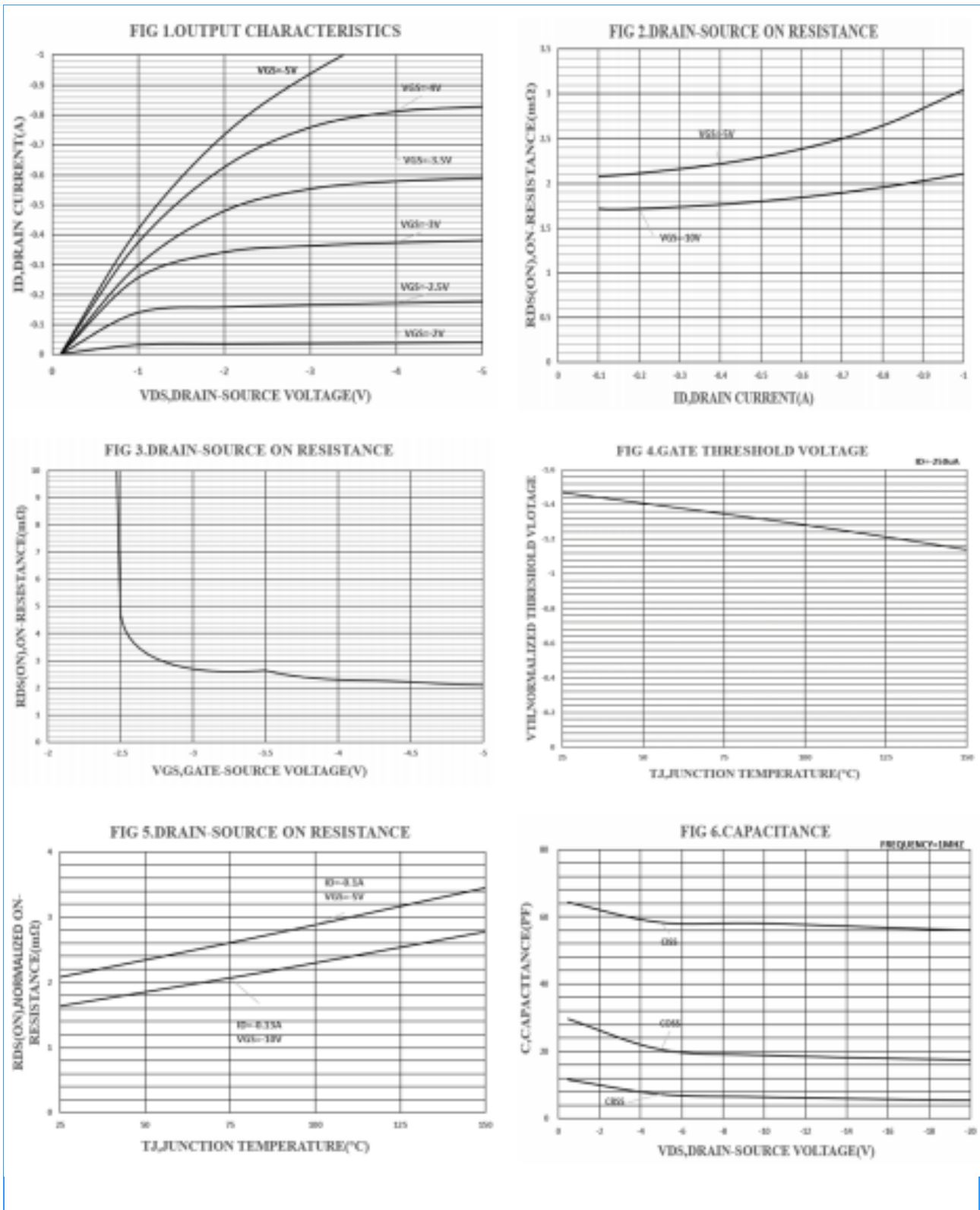
Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
V_{DSS}	Drain-Source Breakdown Voltage	$V_{GS} = 0V, I_D = -250\mu A$	-50	-	-	V
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = -50V, V_{GS} = 0V$	-	-	-1	μA
I_{GSS}	Gate-Body Leakage Current	$V_{GS} = \pm 20V, V_{DS} = 0V$	-	-	± 10	μA
On Characteristics ^{*2}						
$R_{DS(ON)}$	Static Drain-Source On-resistance	$V_{GS} = -5V, I_D = -0.1A$	-	2.1	10	Ω
$V_{GS(TH)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}, I_D = -1mA$	-0.8	-	-2	V
Dynamic Characteristics ^{*3}						
C_{ISS}	Input Capacitance	$V_{GS} = 0V$	-	56	-	pF
C_{OSS}	Output Capacitance	$V_{DS} = -20V$	-	17	-	
C_{RSS}	Reverse Transfer Capacitance	$f = 1.0MHz$	-	5	-	
R_G	Gate Resistance	$V_{GS} = 0V, V_{DS} = -20V$ $f = 1.0MHz$	-	324	-	Ω
Switching Characteristics ^{*3}						
$t_{d(on)}$	Turn-on Delay Time	$V_{DD} = 30V, I_D = 0.2A$ $V_{GS} = 10V, R_G = 25\Omega$ $R_L = 150\Omega$	-	6	-	nS
t_r	Turn-on Rise Time		-	5	-	
$t_{d(off)}$	Turn-Off Delay Time		-	25	-	
t_f	Turn-Off Fall Time		-	15	-	
Source-Drain Diode Characteristics						
V_{SD}	Diode Forward Voltage ^{*2}	$I_S = -0.26A, V_{GS} = 0V$	-	-1.15	-1.4	V
I_S	Maximum Body-Diode Continuous Current	$T_C = 25^\circ\text{C}$	-	-	-0.3	A

Notes:

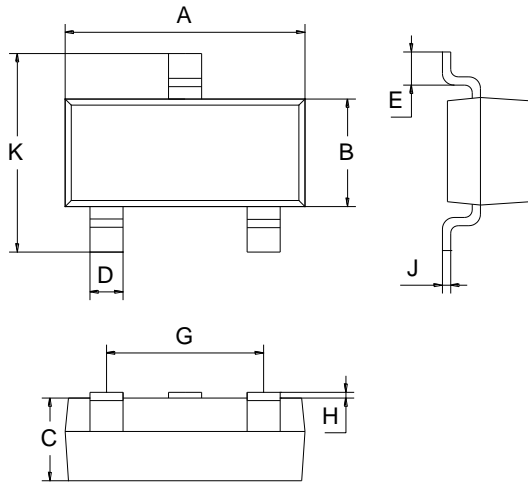
- 1、 Surface mounted on FR4 board, and standard footprint, $t \leq 10$ sec
- 2、 Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$
- 3、 Guaranteed by design, not subject to production
- 4、 Pulse width limited by maximum junction temperature

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



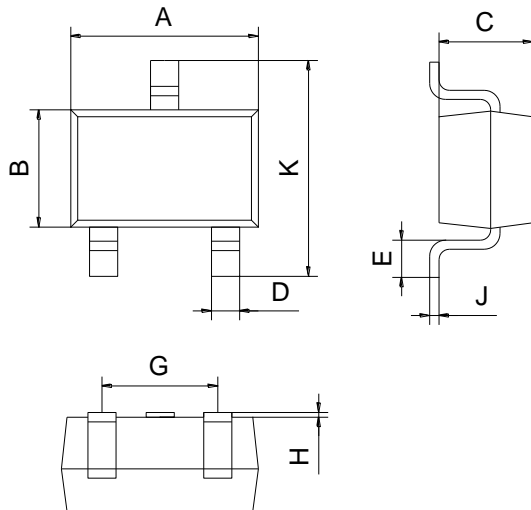
Package Outline Dimensions (Unit: mm)

SOT-23



SOT-23		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

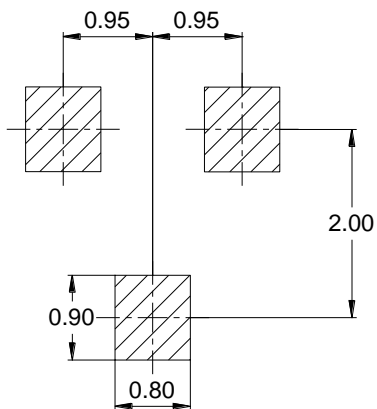
SOT-323



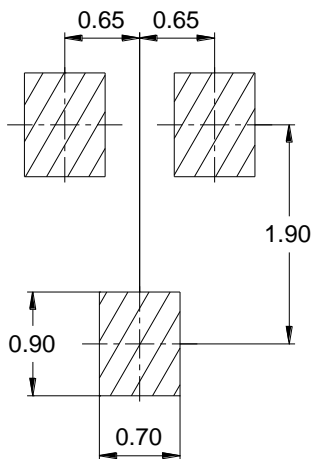
SOT-323		
Dimension	Min.	Max.
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Mounting Pad Layout (Unit: mm)

SOT-23



SOT-323



IMPORTANT NOTICE

Changzhou Galaxy Century Microelectronics (GME) reserves the right to make changes without further notice to any product information (copyrighted) herein to make corrections, modifications, improvements, or other changes. GME does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others.