

GSMBSS84JZF

60V P-Channel MOSFETs

Product Description

GSMBSS84, P-Channel enhancement mode MOSFET, uses Advanced Trench Technology to provide excellent $R_{DS(ON)}$, low gate charge.

These devices are particularly suited for low voltage power management, such as smart phone and notebook computer and other battery powered circuits, and low in-line power loss are needed in commercial industrial surface mount applications.

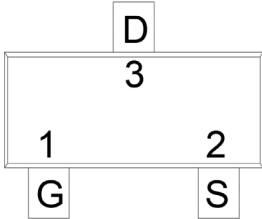
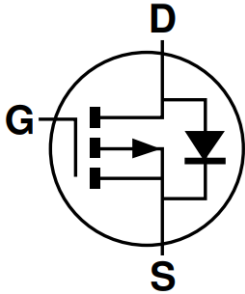
Features

- -60V/-0.13A, $R_{DS(ON)}=10\Omega@V_{GS}=-5V$
- Super high-density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability
- SOT-23 package design

Applications

- DC to DC Converter
- Cellular & PCMCIA Card
- Cordless Telephone
- Power Management in Portable and Battery etc.

Packages & Pin Assignments

SOT-23		Equivalent Circuit
 <p>Top Views</p>		
Pin	Description	
1	Gate	
2	Source	
3	Drain	

Ordering and Marking Information

Ordering Information			
Part Number	Package	Part Marking	Quantity / Reel
GSMBSS84JZF	SOT-23	PD	3,000 PCS
GSMBSS84 1 1 2 - Product Code: GSMBS84 - Package Code: 1 is JZ for SOT-23 - Green Level: 2 is F for RoHS Compliant and Halogen Free			
Marking Information			
- Product Code: PD			
<div style="border: 2px solid black; display: inline-block; padding: 5px 15px; margin: 10px;"> PD </div>			

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{DSS}	Drain-Source Voltage	-60	V
V _{GSS}	Gate-Source Voltage	±20	V
I _D	Continuous Drain Current (T _A =25°C)	-130	mA
I _{DM}	Pulsed Drain Current (tp≤10us)	-520	mA
I _S	Continuous Current	-0.13	A
P _D	Power Dissipation (T _A =25°C)	225	mW
T _J	Operating Junction Temperature	-55 to 150	°C
T _{STG}	Storage Temperature Range	-55 to 150	°C
R _{θJA}	Maximax Junction to Ambient	556	°C/ W

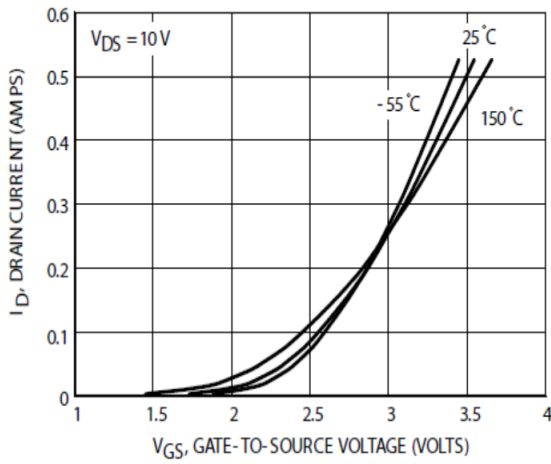
Note 1: Pulse Test: PW≤300us, Duty Cycle≤2%.

2: Switching Time is Essentially Independent of Operating Temperature.

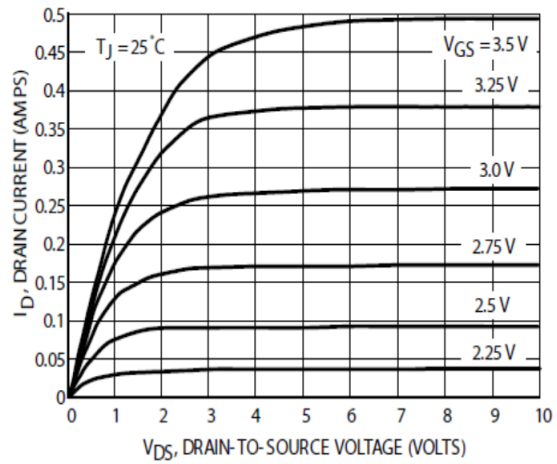
Electrical Characteristics (T_A=25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Static characteristics						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250μA	-60			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-1.0mA	-0.8		-2.0	
I _{GSS}	Gate-Source Leakage Current	V _{DS} =0V, V _{GS} =±20V			±60	μA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = -25V, V _{GS} =0V			-0.1	μA
		V _{DS} = -50V, V _{GS} =0V			-15	
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =-5V, I _D =-100mA			10	Ω
g _{fs}	Forward Transconductance	V _{DS} =-25V, I _D =-100mA, f=1.0KHz	50			mS
V _{SD}	Forward Voltage			-2.5		V
Dynamic characteristics						
C _{iss}	Input Capacitance	V _{DS} =-5V, V _{GS} =0V, f=1MHz		30		pF
C _{oss}	Output Capacitance			10		
C _{rss}	Reverse Transfer Capacitance			5.0		
Q _G	Gate Charge			6		nC
t _{d(on)}	Turn-On Time	V _{DD} =-15V, R _L =50Ω, I _D =-2.5A		25		ns
t _r				1.0		
t _{d(off)}	Turn-Off Time			16		
t _f				8.0		

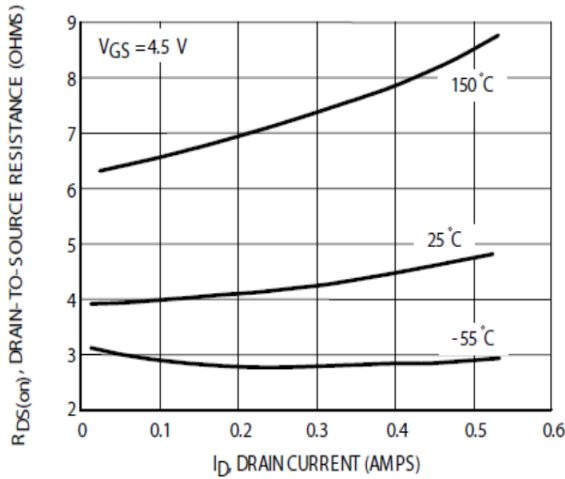
Typical Performance Characteristics



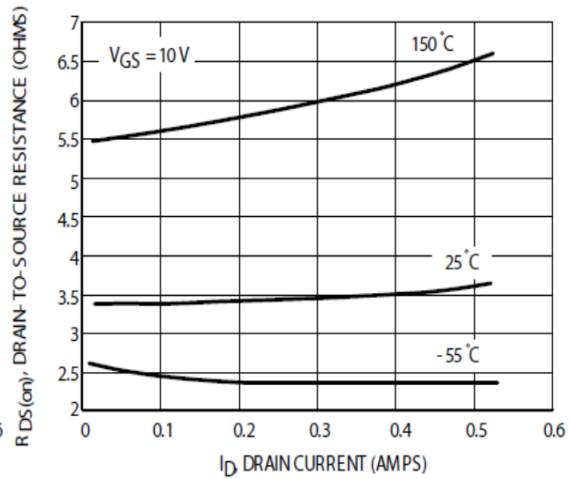
Transfer Characteristics



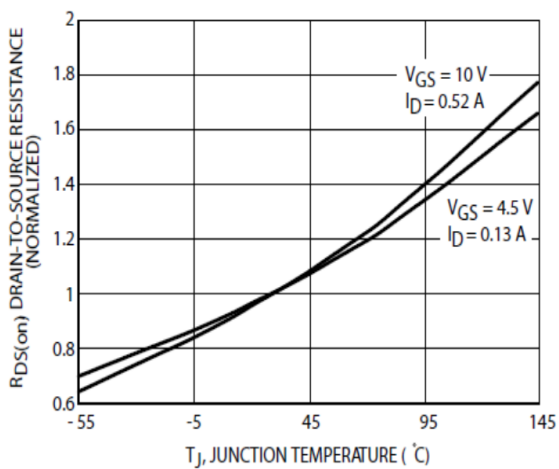
On-Region Characteristics



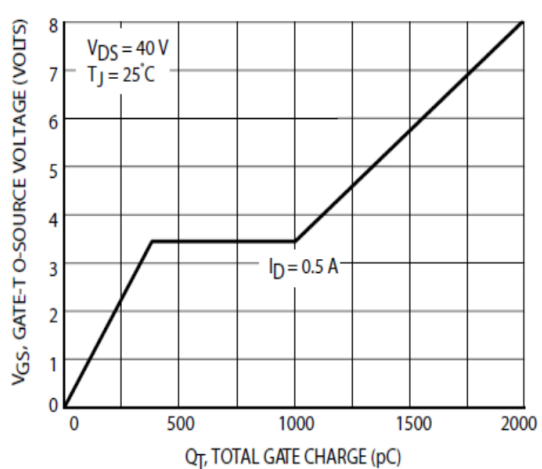
On-Resistance versus Drain Current



On-Resistance versus Drain Current

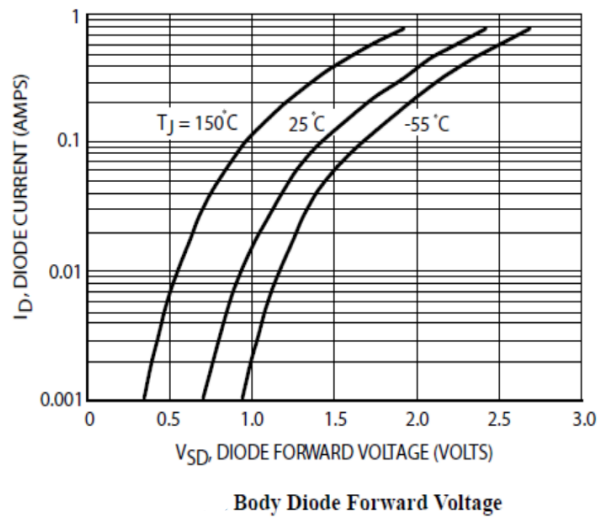


On-Resistance Variation with Temperature



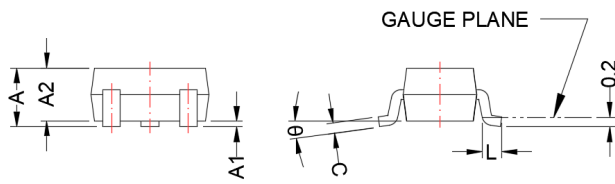
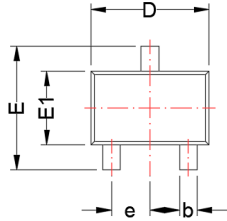
Gate Charge

Typical Performance Characteristics (continue)

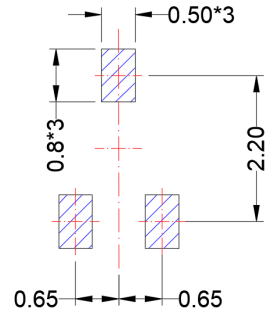


SOT-323

Package Dimension



Recommended Land Pattern



Unit:mm

Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	0.80	1.10	0.031	0.043
A1	0.00	0.10	0.000	0.004
A2	0.80	1.00	0.031	0.039
b	0.20	0.40	0.008	0.016
c	0.08	0.26	0.003	0.010
D	1.80	2.20	0.071	0.087
E	1.80	2.40	0.071	0.094
E1	1.15	1.35	0.045	0.053
e	0.65 BSC		0.026 BSC	
L	0.26	0.45	0.010	0.018
θ	0°	8°	0°	8°





NOTE:



Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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