GSMBSS84T

Dual P-Channel Enhancement MOSFET

Product Description

These Dual 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.

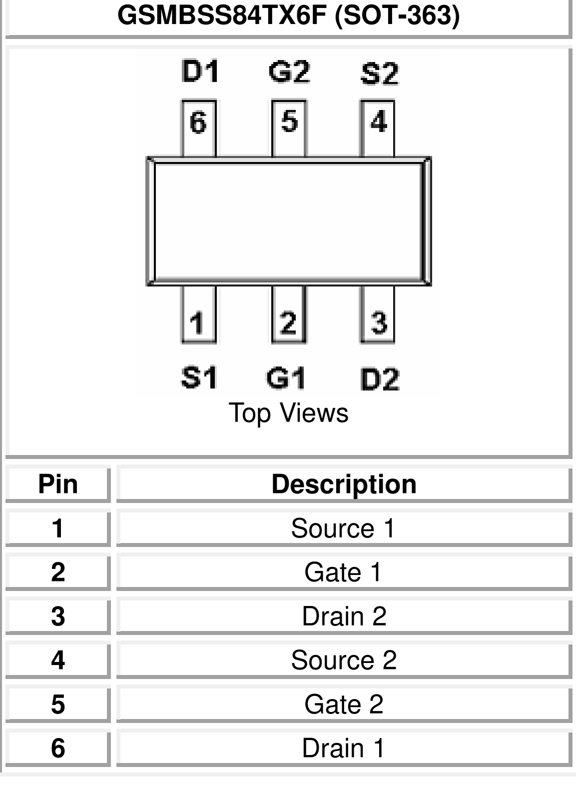
Features

- -60V/-0.13A,$R_{DS(ON)}$=10Ω@V_{GS}=-5V
- Super high density cell design for extremely low $R_{DS\ (ON)}$
- Exceptional on-resistance and maximum DC current capability
- SOT-363 package design

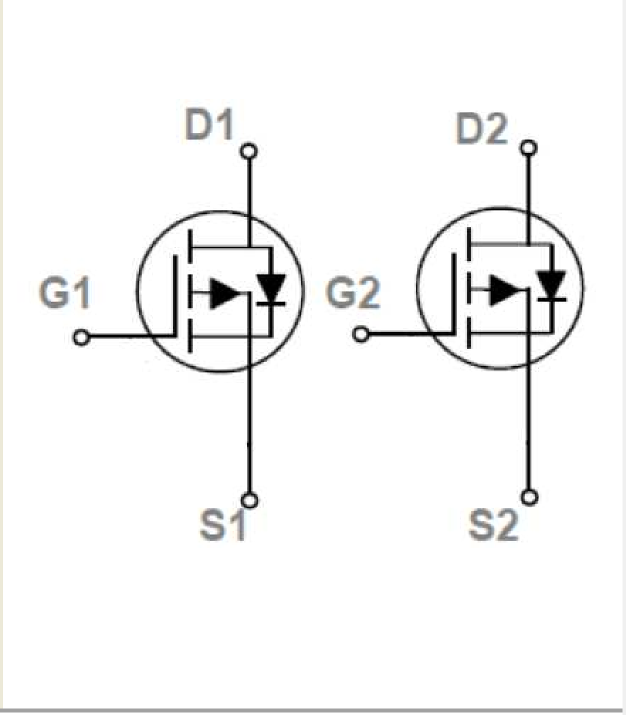
Applications

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

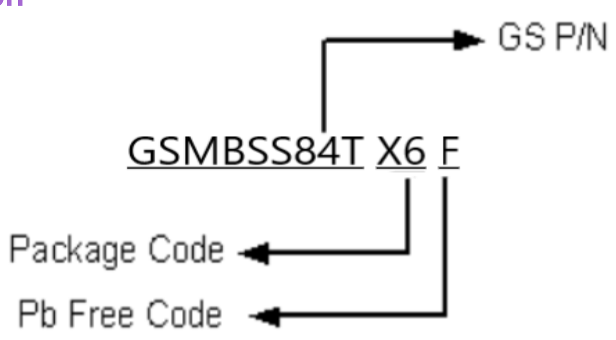
Packages & Pin Assignments



Pin	Description
1	Source 1
2	Gate 1
3	Drain 2
4	Source 2
5	Gate 2
6	Drain 1

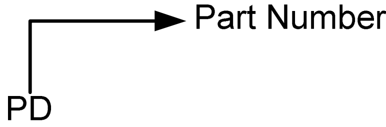


Ordering Information



Part Number	Package	Quantity
GSMBSS84TX6F	SOT-363	3000 PCS

Marking Information



Absolute Maximum Ratings

(T_A=25ºC unless otherwise noted)

Symbol	Parameter	Typical	Unit
V_{DSS}	Drain-Source Voltage	-60	V
V_{GSS}	Gate-Source Voltage	±20	V
I_D	Continuous Drain Current(T_A=25℃)	-130	mA
I_{DM}	Pulsed Drain Current (tp≤10us)	-520	mA
I_S	Continuous Current	-0.13	A
P_D	Power Dissipation (T_A=25ºC)	225	mW
T_J	Operating Junction Temperature	-55 to 150	ºC
T_{STG}	Storage Temperature Range	-55 to 150	ºC
$R_{\theta JA}$	Maximax Junction to Ambient	556	ºC/ W

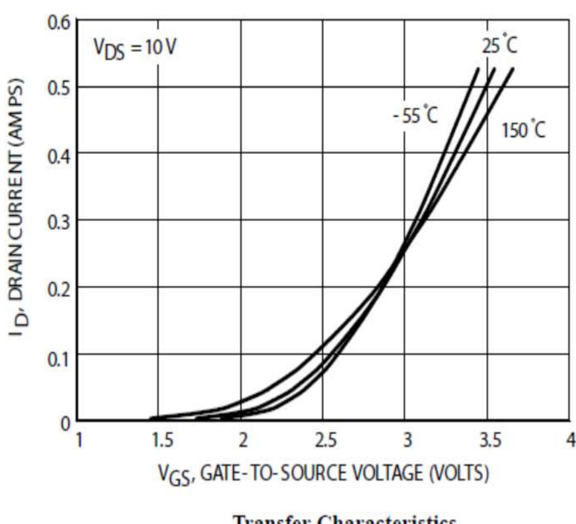
Note 1: Pulse Test: PW≦300us, Duty Cycle≦2%.
2: Switching Time is Essentially Independent of Operating Temperature.

Electrical Characteristics

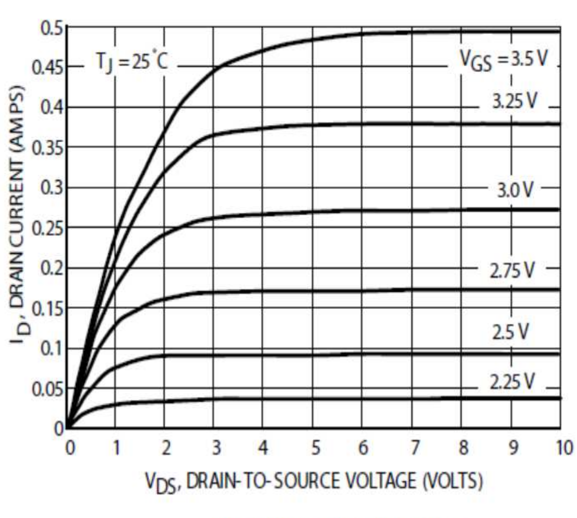
(T_A=25ºC unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Static						
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}=0V,I_D=-250uA	-60			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS},I_D=-1.0mA	-0.8		-2.0	V
I_{GSS}	Gate-Source Leakage Current	V_{DS}=0V,V_{GS}=±20V			±60	uA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}= -25V,V_{GS}=0V			-0.1	uA
		V_{DS}= -50V,V_{GS}=0V			-15	uA
$R_{DS(on)}$	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						
C_{iss}	Input Capacitance	V_{DS}=-5V, V_{GS}=0V,f=1MHz		30		pF
C_{oss}	Output Capacitance			10		pF
C_{rss}	Reverse Transfer Capacitance			5		pF
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		ns
$t_{d(off)}$	Turn-Off Time			16		ns
t_f				8.0		ns

Typical Performance Characteristics

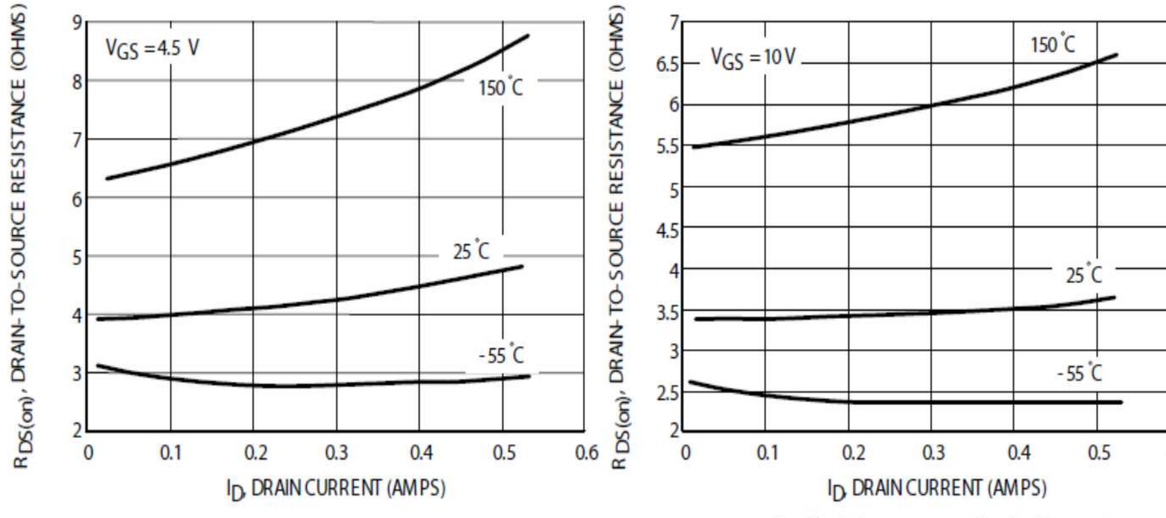


Transfer Characteristics

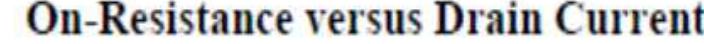


On-Region Characteristics

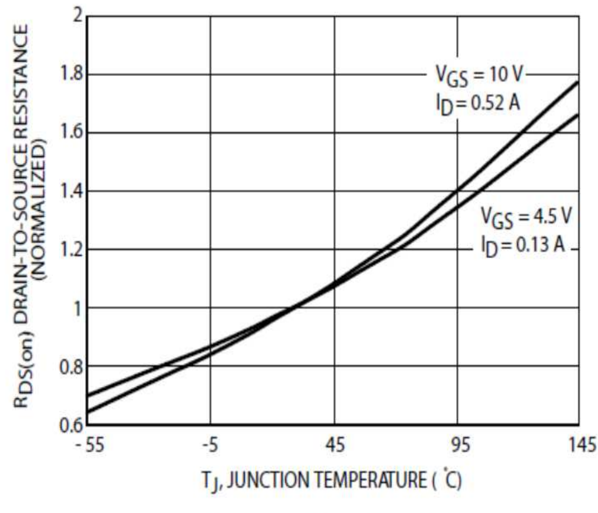
Typical Performance Characteristics (continue)



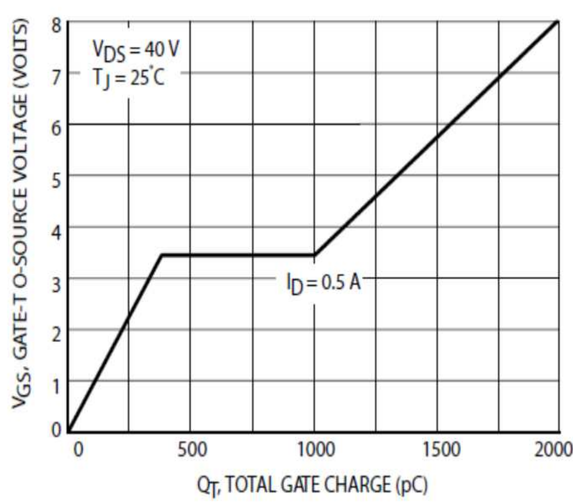
On-Resistance versus Drain Current



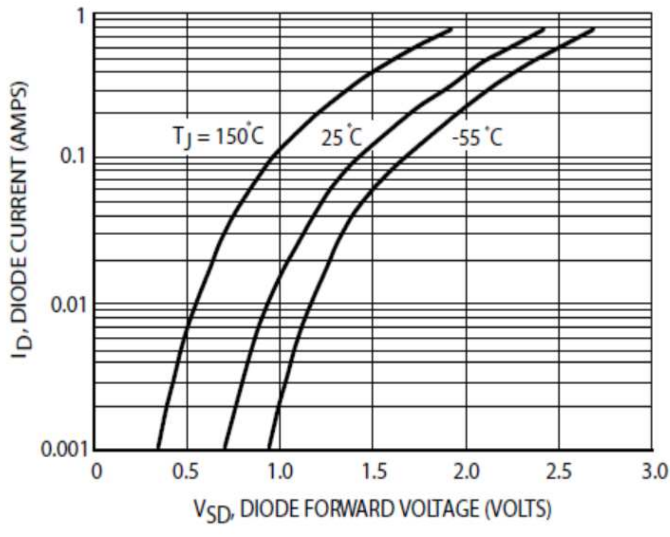
On-Resistance versus Drain Current



On-Resistance Variation with Temperature



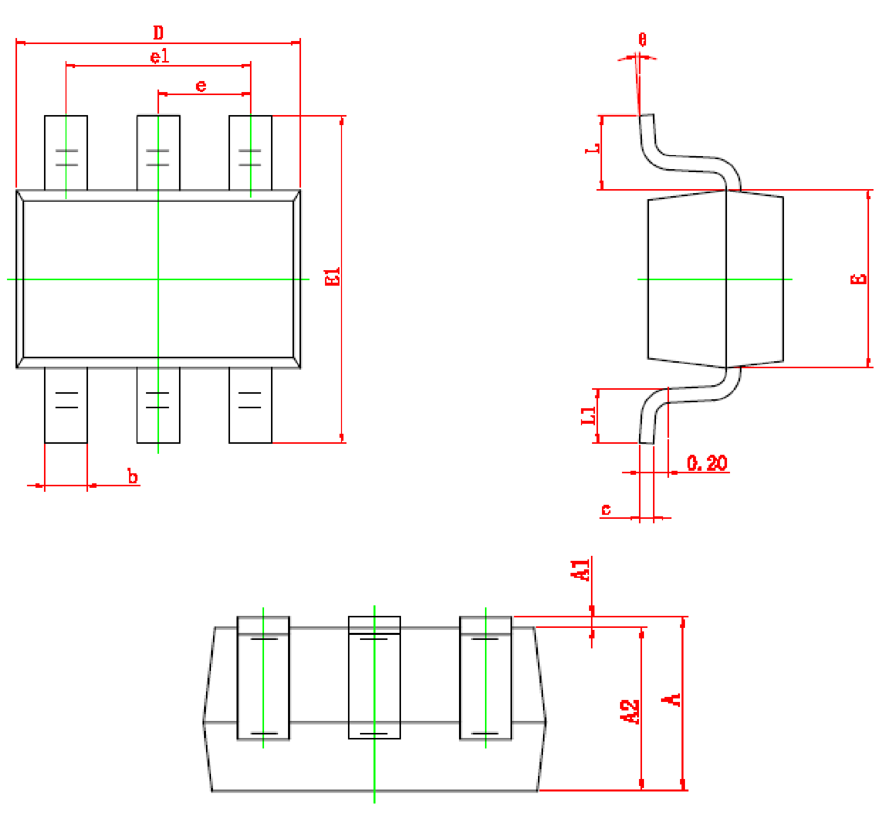
Gate Charge



Body Diode Forward Voltage

Package Dimension

SOT-363



Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 (TYP)		0.026 (TYP)	
e1	1.200	1.400	0.047	0.055
L	0.525 (REF)		0.021 (REF)	
L1	0.260	0.460	0.010	0.018
θ	0º	8 º	0º	8 º

NOTICE

Information furnished is believed to be accurate and reliable. However Globaltech Semiconductor assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties, which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Globaltech Semiconductor. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information without express written approval of Globaltech Semiconductor.

CONTACT US

GS Headquarter	
Address	4F.,No.43-1,Lane11,Sec.6,Minquan E.Rd Neihu District Taipei City 114, Taiwan (R.O.C)
Tel	886-2-2657-9980
Fax	886-2-2657-3630
E-mail	sales_twn@gs-power.com

RD Division	
Address	824 Bolton Drive Milpitas. CA. 95035
Tel	1-408-457-0587