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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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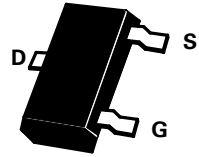
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SOT23 P-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

ISSUE 3 - JANUARY 1996

BS250F



SOT23

PARTMARKING DETAIL – MX

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Drain-Source Voltage	V_{DS}	-45	V
Continuous Drain Current at $T_{amb}=25^{\circ}C$	I_D	-90	mA
Pulsed Drain Current	I_{DM}	-1.6	A
Gate Source Voltage	V_{GS}	± 20	V
Power Dissipation at $T_{amb}=25^{\circ}C$	P_{tot}	330	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$ unless otherwise stated).

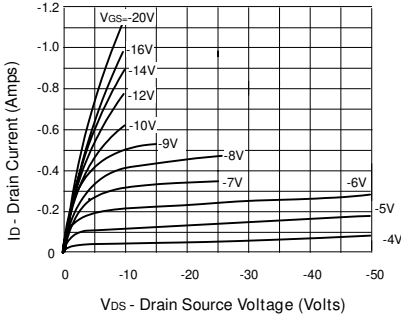
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Drain-Source Breakdown Voltage	BV_{DSS}	-45	-70		V	$I_D = -100\mu A, V_{GS} = 0V$
Gate-Source Threshold Voltage	$V_{GS(th)}$	-1		-3.5	V	$I_D = -1mA, V_{DS} = V_{GS}$
Gate-Body Leakage	I_{GSS}			-20	nA	$V_{GS} = -15V, V_{DS} = 0V$
Zero Gate Voltage Drain Current	I_{DSS}			-0.5	μA	$V_{DS} = -25V, V_{GS} = 0V$
Static Drain-Source On-State Resistance (1)	$R_{DS(on)}$		9	14	Ω	$V_{GS} = -10V, I_D = -200mA$
Forward Transconductance (1)(2)	g_{fs}		90		mS	$V_{DS} = -10V, I_D = -200mA$
Input Capacitance (2)	C_{iss}		25		pF	$V_{DS} = -10V, V_{GS} = 0V, f = 1MHz$
Turn-On Delay Time (2)(3)	$t_{d(on)}$			10	ns	$V_{DD} \approx -25V, I_D = -200mA$
Rise Time (2)(3)	t_r			10	ns	
Turn-Off Delay Time (2)(3)	$t_{d(off)}$			10	ns	
Fall Time (2)(3)	t_f			10	ns	

(1) Measured under pulsed conditions. Width=300 μs . Duty cycle $\leq 2\%$ (2) Sample test.

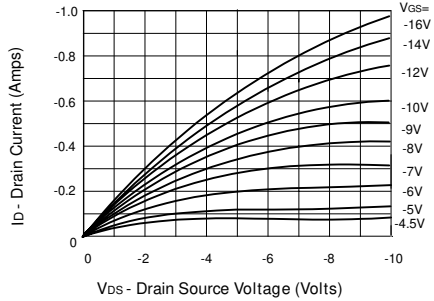
(3) Switching times measured with 50 Ω source impedance and <5ns rise time on a pulse generator
Spice parameter data is available upon request for this device

BS250F

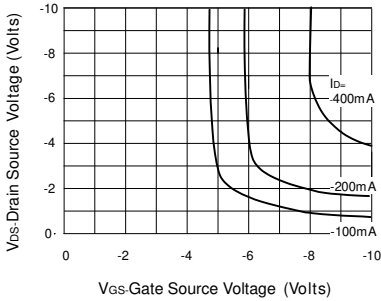
TYPICAL CHARACTERISTICS



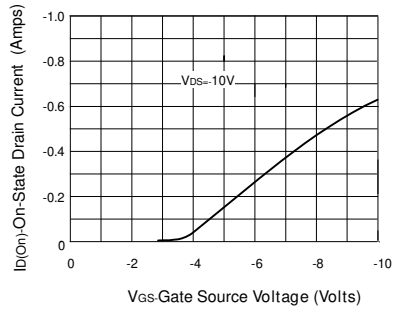
Output Characteristics



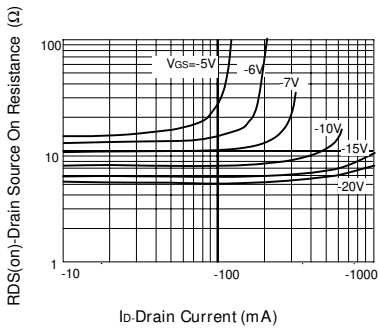
Saturation Characteristics



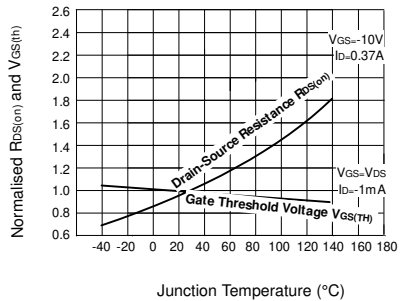
Voltage Saturation Characteristics



Transfer Characteristics

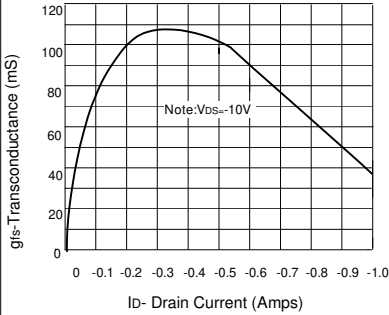


On-resistance vs Drain Current

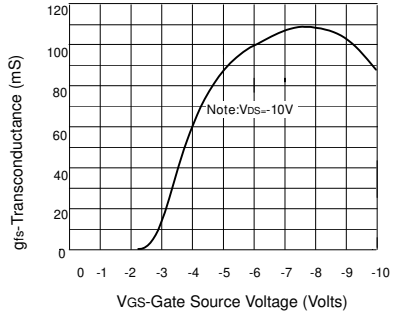


Normalised $R_{DS(on)}$ and $V_{GS(th)}$ vs Temperature

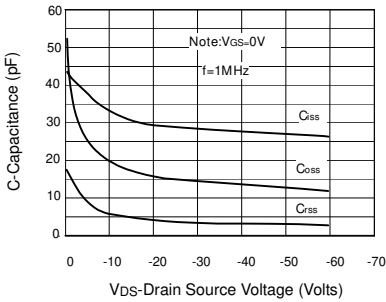
TYPICAL CHARACTERISTICS



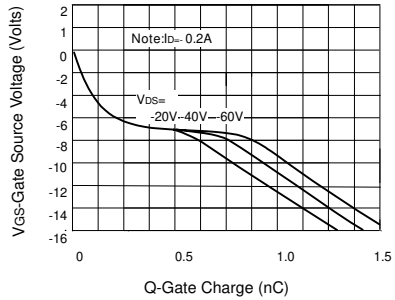
Transconductance v drain current



Transconductance v gate-source voltage



Capacitance v drain-source voltage



Gate charge v gate-source voltage