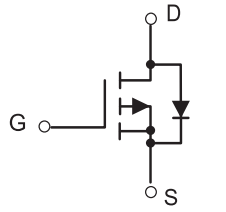
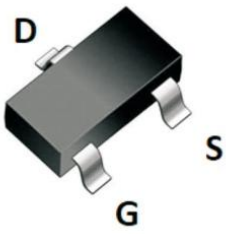
-50V P-CHANNEL ENHANCEMENT MODE MOSFET

MAIN CHARACTERISTICS

I_D	-0.13A
V_{DS}	-50V
R_{DSON}-typ(@V_{GS}=-10V)	＜8Ω(Typ:4.5 Ω)
R_{DSON}-typ(@V_{GS}=-5V)	＜10Ω(Typ:5.8 Ω)





SOT-23

Marking Code	
BSS84	PD

DESCRIPTION

These miniature surface mount MOSFETs reduce power loss conserve energy, making this device ideal for use in small power management circuitry.

FEATURE

- Energy Efficient
- Low Threshold Voltage
- High-speed Switching
- Miniature Surface Mount Package Saves Board Space

APPLICATIONS

DC−DC converters,load switching, power management in portable and battery−powered products such as computers, printers, cellular and cordless telephones.

Maximum ratings (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-50	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	-0.13	A
Pulsed Drain Current (note 1) @tp <10 μs	I_{DM}	-0.52	A
Power Dissipation	P_D	225	mW
Thermal Resistance from Junction to Ambient (note 2)	$R_{\theta JA}$	556	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~+150	℃
Maximum Lead Temperature for Soldering Purposes , Duration for 5 Seconds	T_L	260	℃

MOSFET ELECTRICAL CHARACTERISTICS

Ta =25℃ unless otherwise specified

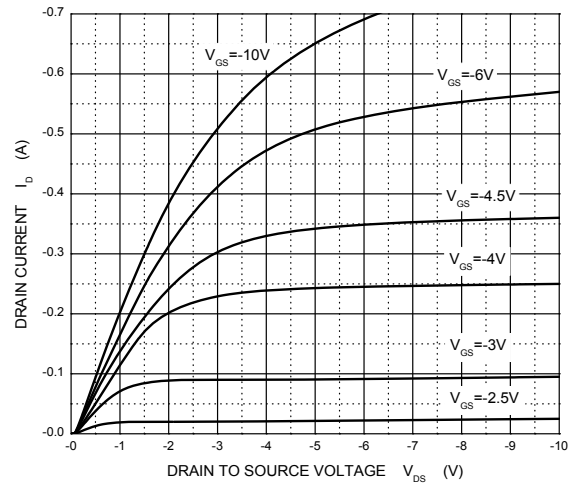
Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
Drain-source breakdown voltage	V_{GS} = 0V, I_D =-250μA	BV_{DSS}	-50			V
Zero gate voltage drain current	V_{DS} =-50V,V_{GS} = 0V	I_{DSS}			-15	μA
	V_{DS} =-25V,V_{GS} = 0V				-0.1	μA
Gate-body leakage current	V_{GS} =±20V, V_{DS} = 0V	I_{GSS}			±5	μA
Gate threshold voltage (note 3)	V_{DS} =V_{GS}, I_D =-250μA	$V_{GS(th)}$	-0.9	-1.6	-2	V
Drain-source on-resistance (note 3)	V_{GS} =-5V, I_D =-0.1A	$R_{DS(ON)}$		5.8	10	Ω
	V_{GS} =-10V, I_D =-0.1A			4.5	8	Ω
Forward transconductance (note 1)	V_{DS}=-25V; I_D=-100mA	g_{FS}	50			mS
Input capacitance	V_{DS} =5V V_{GS} =0V f =1MHz	C_{iss}		30		pF
Output capacitance		C_{oss}		10		pF
Reverse transfer capacitance		C_{rss}		5		pF
Turn-on delay time	V_{DD}= -15 R_L=50Ω I_D =-2.5A	$t_{d(on)}$		2.5		ns
Turn-on rise time		t_r		1		ns
Turn-off delay time		$t_{d(off)}$		16		ns
Turn-off fall time		t_f		8		ns
Continuous Current		I_S			-0.13	A
Pulsed Current		I_{SM}			-0.52	A
Diode forward voltage (note 3)	I_S=-0.13A, V_{GS} = 0V	V_{SD}			-2.2	V

Notes :

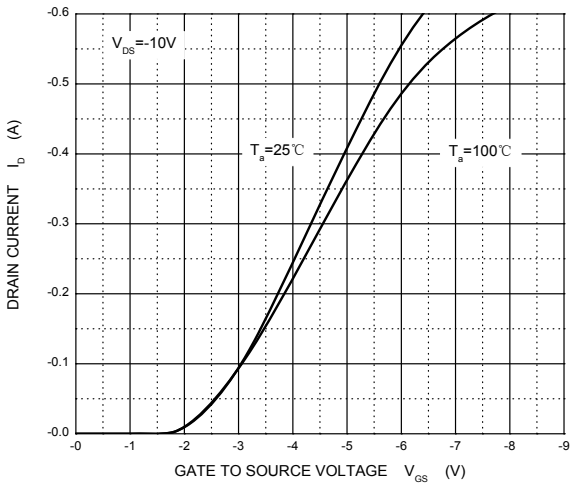
1. Repetitive rating : Pulse width limited by junction temperature.
2. Surface mounted on FR4 board , t≤10s.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle≤2%.
4. Guaranteed by design, not subject to producting.

Typical Characteristics

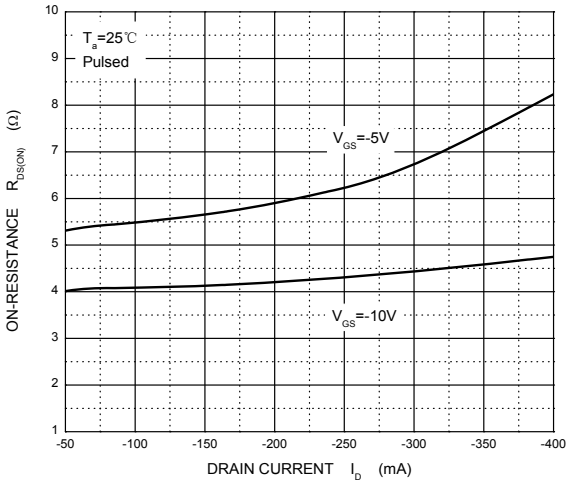
Output Characteristics



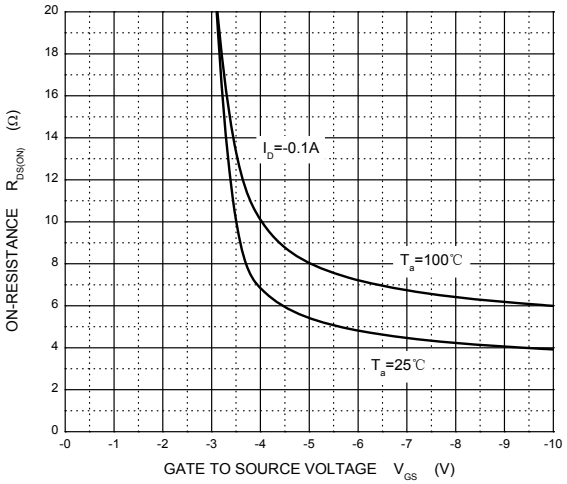
Transfer Characteristics



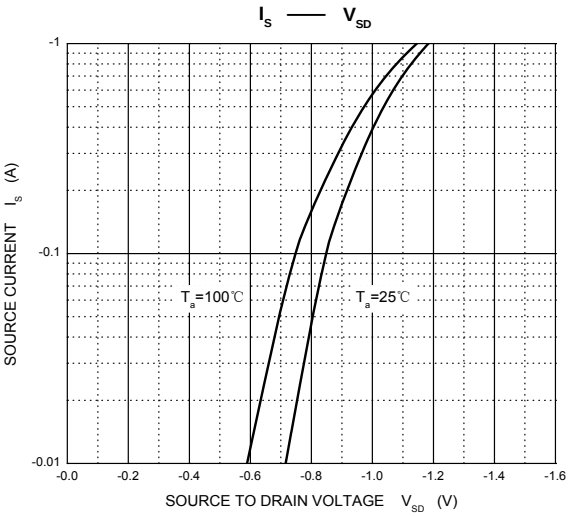
$R_{DS(ON)}$ —— I_D



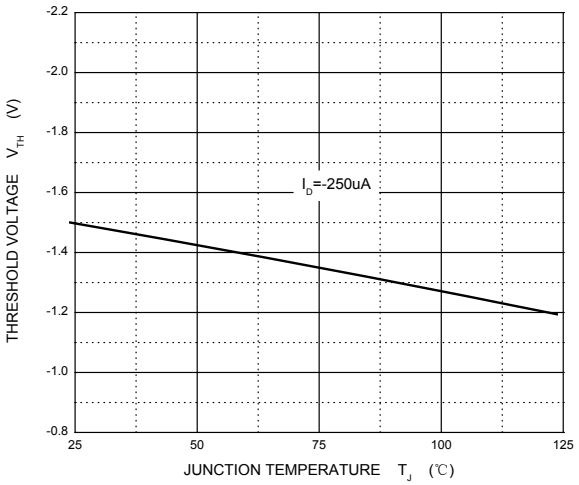
$R_{DS(ON)}$ —— V_{GS}



I_S —— V_{SD}



Threshold Voltage

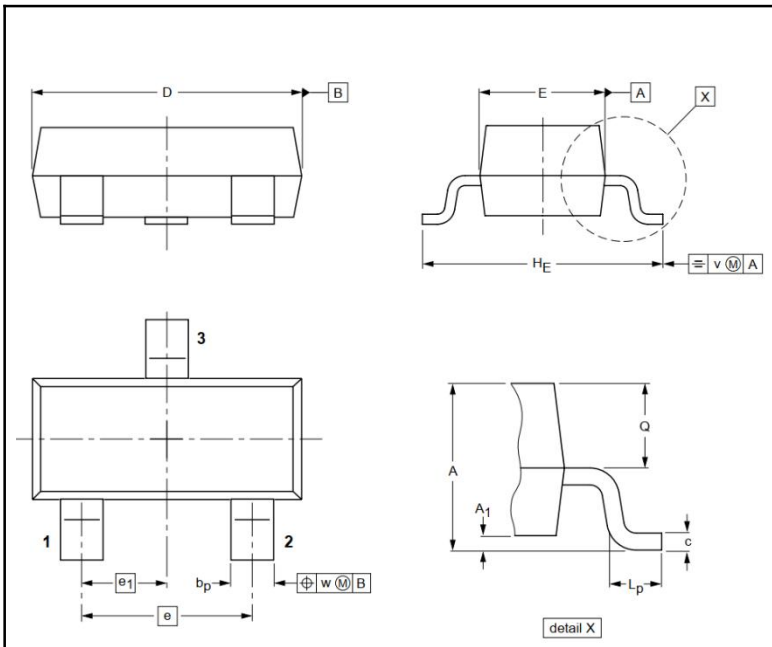


Ordering information

Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel,7"reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

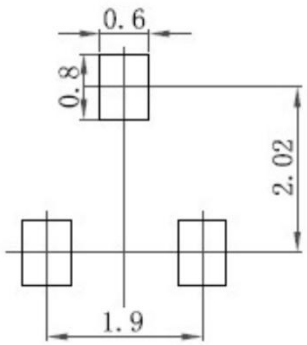
Package Dimensions

SOT-23



Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
e	1.9		75	
e1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



Disclaimer

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