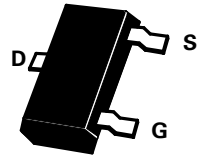


# SOT23 P-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

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## BSS84

PARTMARKING DETAIL — SP



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Drain-Source Voltage	$V_{DS}$	-50	V
Continuous Drain Current	$I_D$	-130	mA
Pulsed Drain Current	$I_{DM}$	-520	mA
Gate-Source Voltage Peak	$V_{GS}$	$\pm 20$	V
Power Dissipation at $T_{amb}=25^\circ\text{C}$	$P_{TOT}$	360	mW
Operating and Storage Temperature Range	$t_j; t_{stg}$	-55 to +150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ ).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Drain-Source Breakdown Voltage	$BV_{DSS}$	-50			V	$V_{GS}=0V, I_D=0.25mA$
Gate-Source Threshold Voltage	$V_{GS(th)}$	-0.8	-1.5	-2.0	V	$V_{DS}=V_{GS}, I_D=-1mA$
Zero gate Voltage Drain Current	$I_{DSS}$		-1 -2	-15 -60	$\mu A$ $\mu A$	$T_j=25^\circ\text{C}$ $T_j=125^\circ\text{C}$ $V_{DS}=-50V, V_{GS}=0V(2)$
				-100		$T_j=25^\circ\text{C}$ $V_{DS}=-25V, V_{GS}=0V$
Gate-Source Leakage Current	$I_{GSS}$		-1	-10	nA	$V_{GS} = \pm 20V$ $V_{DS}=0V$
Drain Source On-State Resistance (1)	$R_{DS(on)}$		6	10	$\Omega$	$V_{GS}=-5V$ $I_D=-100mA$
Forward Transconductance (1) (2)	$g_{fs}$	0.05	0.07		S	$V_{DS}=-25V$ $I_D=-100mA$
Input Capacitance (2)	$C_{iss}$		40		pF	$V_{GS}=0V$ $V_{DS}=-25V$ $f=1MHz$
Output Capacitance	$C_{oss}$		15			
Reverse Transfer Capacitance (2)	$C_{rss}$		6			
Turn-On Time $t_{on}$	$td(on)$		10		ns	$V_{DD}=-30V$ $I_D=-0.27A$ $V_{GS}=-10V$ $R_{GS}=50\Omega$
	$t_r$		10			
Turn-Off Time $t_{off}$	$t_{d(off)}$		18			
	$t_f$		25			

\* (1) Measured under pulsed conditions. Pulse width = 300 $\mu s$ . Duty cycle 2%  
(2) Sample test.