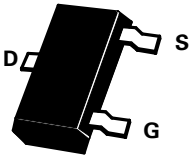


SOT23 P-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

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

* (1) Measured under pulsed conditions. Pulse width = 300 μs . Duty cycle 2%
(2) Sample test.