

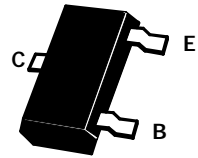
SOT23 N CHANNEL ENHANCEMENT

MODE VERTICAL DMOS FET

Issue 2 - October 1997

BST82

PARTMARKING DETAIL - O2



SOT23

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Drain Source Voltage	V_{DS}	80	V
Drain Source Voltage (non repetitive peak $t_p \leq 2ms$)	$V_{DS(sm)}$	100	V
Continuous Drain Current at $T_{amb}=25^{\circ}C$	I_D	175	mA
Drain Current Peak	I_{DM}	600	mA
Gate-Source Voltage	V_{GS}	± 20	V
Max Power Dissipation at $T_{amb}=25^{\circ}C$	P_D	300	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Drain Source Breakdown Voltage	$B_{V_{DS}}$	80			V	$I_C=100\mu A$
Gate Source Threshold Voltage	$V_{GS(th)}$	1.5		3.5	V	$I_D=1mA, V_{DS}=V_{GS}$
Gate Body Leakage	I_{GSS}			100	nA	$V_{GS}=20V$
Emitter Cut-Off Current	I_{DSS}			1	μA	$V_{DS}=60V$
Static Drain-Source On-state Resistance	$R_{DS(on)}$		7	10	Ω	$I_D=150mA, V_{GS}=5V$
Transfer Admittance	$ y_{fs} $		150		mS	$I_D=175mA, V_{DS}=5V$
Input Capacitance (2)	C_{iss}		15	30	pF	$V_{DS}=10V, V_{GS}=0V$ $f=1MHz$
Common Source Output Capacitance (2)	C_{oss}		13	20	pF	
Reverse Transfer Capacitance (2)	C_{rss}		3	6	pF	
Switching Times	T_{on}		4	10	ns	$I_D=175mA, V_{DD}=50V$ $V_{GS}=0$ to $10V$
	T_{off}		4	10	ns	

(1) Switching times measured at 150Ω source impedance and $<5ns$ rise time on a pulse generator

(2) Sample test

*Measured under pulsed conditions. Pulse width= $300\mu s$. Duty cycle $\leq 2\%$

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