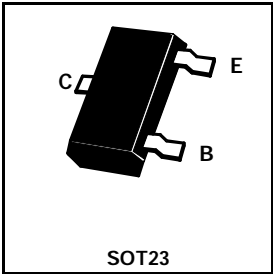


SOT23 N CHANNEL ENHANCEMENT
MODE VERTICAL DMOS FET
Issue 2 - October 1997

BST82

PARTMARKING DETAIL – O2



ABSOLUTE MAXIMUM RATINGS.

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

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

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

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

(2) Sample test

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