

SSD5000, SSD5001
SSD5002

ELECTRICAL CHARACTERISTICS (T_A = +25°C unless otherwise noted)

#	PARAMETER	SSD5000			SSD5001			SSD5002			UNIT	TEST CONDITIONS
		MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX		
1	BV _{DS} Drain-Source Breakdown Voltage	20	25		10	25		15	25		V	I _D = 10nA V _{GS} = V _{BS} = -5V
2	BV _{SD} Source-Drain Breakdown Voltage	20			10			15			V	I _S = 10nA V _{GD} = V _{BD} = -5V
3	BV _{DB} Drain-Substrate Breakdown Voltage	25			15			22.5			V	I _D = 10nA, V _{GS} = 0 Source Open
4	BV _{SB} Source-Substrate Breakdown Voltage	25			15			22.5			V	I _S = 10μA, V _{GB} = 0 Drain Open
5	I _{D(off)} Drain-Source Off Current						10				nA	V _{DS} = 10V
6										10	nA	V _{DS} = 15V
7				10							nA	V _{DS} = 20V
8	I _{S(off)} Source-Drain OFF Current						10				nA	V _{SD} = 10V
9										10	nA	V _{SD} = 15V
10				10							nA	V _{SD} = 20V
11	I _{GBS} Gate-Body Leakage Current					1.0					μA	V _{GB} = 25V
12				1.0						1.0	μA	V _{GB} = 30V
13	V _{GS(th)} Gate Threshold Voltage	0.1	1.0	2.0	0.1	1.0	2.0	0.1	1.0	2.0	V	V _{DS} = V _{GS} , I _D = 1μA V _{SB} = 0
14	r _{DS(on)} Drain-Source ON Resistance		50	70		50	70		50	70	ohms	V _{GS} = 5V
15			30			30			30		ohms	V _{GS} = 10V
16				23		23			23		ohms	V _{GS} = 15V
17				19		19			19		ohms	V _{GS} = 20V
18	r _{DSM} ON Resistance Match		1.0	5.0		1.0	5.0		1.0	5.0	ohms	V _{GS} = 5V
19	g _{fs} Common-Source Forward Transcond.	10	12		10	12		10	12		mmhos	V _{DS} = 10V, I _D = 20mA f = 1KHz, V _{SB} = 0
20	C _(gs + pd + gb) Gate Node Capacitance		2.4	3.5		2.4	3.5		2.4	3.5	pF	V _{DS} = 10V V _{GS} = V _{BS} = -15V f = 1MHz
21	C _(gs + db) Drain Node Capacitance		1.3	1.5		1.3	1.5		1.3	1.5	pF	
22	C _(gs + pd) Source Node Capacitance		3.5	4.0		3.5	4.0		3.5	4.0	pF	
23	C _(dg) Reverse Transfer Capacitance		0.3	0.5		0.3	0.5		0.3	0.5	pF	
24	C _T Cross Talk		-107			-107			-107		dB	

SSD5100, SSD5101

ELECTRICAL CHARACTERISTICS ($T_A = +25^\circ\text{C}$ unless otherwise noted)

#	CHARACTERISTIC	SSD5100			SSD5101			UNIT	TEST CONDITIONS	
		MIN	TYP	MAX	MIN	TYP	MAX			
1	BV_{DS} Drain-Source Breakdown Voltage	30	35		15	30		V	$I_D = 1.0\mu\text{A}, V_{GS} = 0$	
2	BV_{SD} Source-Drain Breakdown Voltage	0.5			0.5			V	$I_S = 10\text{nA}, V_{GD} = V_{BD} = 0$	
3	BV_{DB} Drain-Substrate Breakdown Voltage	30			15			V	$I_D = 1.0\mu\text{A}, V_{GB} = 0$ Source Open	
4	BV_{SB} Source-Substrate Breakdown Voltage	0.5			0.5			V	$I_S = 100\text{nA}, V_{GB} = 0$ Drain Open	
5	$I_{D(off)}$ Drain-Source OFF Current		1.0	10		1.0	10	nA	$V_{DS} = 10\text{V}, V_{GS} = V_{BS} = 0$	
6	I_{GBS} Gate-Substrate Leakage Current			10			10	μA	$V_{GS} = 20\text{V}, V_{DB} = V_{SB} = 0$	
7	$V_{GS(th)}$ Gate-Source Threshold Voltage	0.5	1.0	2.0	0.5	1.0	2.0	V	$I_D = 1.0\mu\text{A}, V_{DS} = V_{GS}$ $V_{SB} = 0$	
8	$r_{DS(on)}$ Drain-Source ON Resistance		50	70		50	70	ohms	$V_{GS} = 5\text{V}$	$I_D = 1\text{mA}$ $V_{SB} = 0$
9			30	45		30	45	ohms	$V_{GS} = 10\text{V}$	
10			23			23		ohms	$V_{GS} = 15\text{V}$	
11			19			19		ohms	$V_{GS} = 20\text{V}$	
12	r_{DSM} ON Resistance Match		1.0	5.0		1.0	5.0	ohms	$V_{GS} = 5\text{V}$	
13	g_{fs} Common-Source Forward Transcond	.10	15		10	15		mmhos	$V_{DS} = 10\text{V}, I_D = 20\text{mA}$ $f = 1\text{KHz}, V_{SB} = 0$	
14	$C_{(gs+gd+gb)}$ Gate Node Capacitance		2.4	3.5		2.4	3.5	pF	$V_{DS} = 10\text{V}$ $V_{GS} = V_{BS} = -5\text{V}$ $f = 1\text{MHZ}$	
15	$C_{(gd+db)}$ Drain Node Capacitance		1.3	1.5		1.3	1.5	pF		
16	C_{dg} Reverse Transfer Capacitance		0.3	0.5		0.3	0.5	pF		
17	C_T Cross Talk		-107			-107		dB		$f = 3\text{KHz}$