

Transistors

N-ch

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Gate-source leakage	I_{GSS}	–	–	10	μA	$V_{GS}=12V, V_{DS}=0V$
Drain-source breakdown voltage	$V_{(BR)DSS}$	30	–	–	V	$I_D=1mA, V_{GS}=0V$
Zero gate voltage drain current	I_{DSS}	–	–	1	μA	$V_{DS}=30V, V_{GS}=0V$
Gate threshold voltage	$V_{GS(th)}$	0.5	–	1.5	V	$V_{DS}=10V, I_D=1mA$
Static drain-source on-state resistance	$R_{DS(on)}$ *	–	170	240	$m\Omega$	$I_D=1.5A, V_{GS}=4.5V$
		–	180	250	$m\Omega$	$I_D=1.5A, V_{GS}=4V$
		–	240	340	$m\Omega$	$I_D=1.5A, V_{GS}=2.5V$
Forward transfer admittance	$ Y_{fs} $ *	1.5	–	–	S	$V_{DS}=10V, I_D=1.5A$
Input capacitance	C_{iss}	–	80	–	pF	$V_{DS}=10V$
Output capacitance	C_{oss}	–	13	–	pF	$V_{GS}=0V$
Reverse transfer capacitance	C_{rss}	–	12	–	pF	$f=1MHz$
Turn-on delay time	$t_{d(on)}$ *	–	7	–	ns	$V_{DD}\doteq 15V$
Rise time	t_r *	–	9	–	ns	$I_D=0.75A$
Turn-off delay time	$t_{d(off)}$ *	–	15	–	ns	$V_{GS}=4.5V$
Fall time	t_f *	–	6	–	ns	$R_L=20\Omega$
Total gate charge	Q_g *	–	1.6	2.2	nC	$V_{DD}\doteq 15V, V_{GS}=4.5V$
Gate-source charge	Q_{gs} *	–	0.5	–	nC	$I_D=1.5A$
Gate-drain charge	Q_{gd} *	–	0.3	–	nC	$R_L=10\Omega, R_G=10\Omega$

*Pulsed

●Body diode characteristics (Source-drain) (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_{SD}	–	–	1.2	V	$I_S=0.6A, V_{GS}=0V$

Transistors

P-ch

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Gate-source leakage	I_{GSS}	–	–	10	μA	$V_{GS} = -12V, V_{DS} = 0V$
Drain-source breakdown voltage	$V_{(BR)DSS}$	-20	–	–	V	$I_D = -1mA, V_{GS} = 0V$
Zero gate voltage drain current	I_{DSS}	–	–	-1	μA	$V_{DS} = -20V, V_{GS} = 0V$
Gate threshold voltage	$V_{GS(th)}$	-0.7	–	-2.0	V	$V_{DS} = -10V, I_D = -1mA$
Static drain-source on-state resistance	$R_{DS(on)}$ *	–	280	390	m Ω	$I_D = -1A, V_{GS} = -4.5V$
		–	310	430	m Ω	$I_D = -1A, V_{GS} = -4V$
		–	570	800	m Ω	$I_D = -0.5A, V_{GS} = -2.5V$
Forward transfer admittance	$ Y_{fs} $ *	0.7	–	–	S	$V_{DS} = -10V, I_D = -0.5A$
Input capacitance	C_{iss}	–	150	–	pF	$V_{DS} = -10V$
Output capacitance	C_{oss}	–	20	–	pF	$V_{GS} = 0V$
Reverse transfer capacitance	C_{rss}	–	20	–	pF	$f = 1MHz$
Turn-on delay time	$t_{d(on)}$ *	–	9	–	ns	$V_{DD} = -15V$
Rise time	t_r *	–	8	–	ns	$I_D = -0.5A$
Turn-off delay time	$t_{d(off)}$ *	–	25	–	ns	$V_{GS} = -4.5V$
Fall time	t_f *	–	10	–	ns	$R_L = 30\Omega$
Total gate charge	Q_g *	–	2.1	–	nC	$V_{DD} = -15V, V_{GS} = -4.5V$
Gate-source charge	Q_{gs} *	–	0.5	–	nC	$I_D = -1A$
Gate-drain charge	Q_{gd} *	–	0.5	–	nC	$R_L = 15\Omega, R_G = 10\Omega$

*Pulsed

●Body diode characteristics (Source-drain) (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_{SD}	–	–	-1.2	V	$I_S = -0.4A, V_{GS} = 0V$

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