

SFT1342

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}$, $V_{GS} = 0\text{V}$	-60			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -60\text{V}$, $V_{GS} = 0\text{V}$			-1	μA
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16\text{V}$, $V_{DS} = 0\text{V}$			± 10	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = -10\text{V}$, $I_D = -1\text{mA}$	-1.2		-2.6	V
Forward Transconductance	g_{FS}	$V_{DS} = -10\text{V}$, $I_D = -6\text{A}$		11		S
Static Drain to Source On-State Resistance	$R_{DS(on)1}$	$I_D = -6\text{A}$, $V_{GS} = -10\text{V}$		47	62	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D = -6\text{A}$, $V_{GS} = -4.5\text{V}$		62	87	$\text{m}\Omega$
	$R_{DS(on)3}$	$I_D = -6\text{A}$, $V_{GS} = -4\text{V}$		68	96	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS} = -20\text{V}$, $f = 1\text{MHz}$		1150		pF
Output Capacitance	C_{oss}			115		pF
Reverse Transfer Capacitance	C_{rss}			95		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		10		ns
Rise Time	t_r			37		ns
Turn-OFF Delay Time	$t_{d(off)}$			135		ns
Fall Time	t_f			75		ns
Total Gate Charge	Q_g	$V_{DS} = -30\text{V}$, $V_{GS} = -10\text{V}$, $I_D = -12\text{A}$		26		nC
Gate to Source Charge	Q_{gs}			3.5		nC
Gate to Drain "Miller" Charge	Q_{gd}			5		nC
Forward Diode Voltage	V_{SD}	$I_S = -12\text{A}$, $V_{GS} = 0\text{V}$		-0.95	-1.2	V

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

Switching Time Test Circuit







