MOS FET Array SMA5113

Absolute Maximum Ratings (Ta=25ºC)

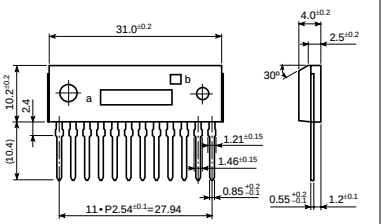
Symbol	Ratings	Unit
V_{DSS}	450	V
V_{GSS}	±30	V
I_D	±7	A
$I_{D\ (pulse)}$ *1	±28	A
P_T	4 (Ta=25ºC, All circuits operate, No Fin)	W
	35 (Tc=25ºC, All circuits operate, ∞ Fin)	W
E_{AS} *2	130	mJ
I_{AS}	7	A
θj-a	31.2 (Junction - Ambientare, Ta=25ºC, All circuits operate)	ºC/W
θj-c	3.57 (Junction - Case, Ta=25ºC, All circuits operate)	ºC/W
Tch	150	ºC
Tstg	–55 to +150	ºC

*1 $P_W \leqq 100\mu s$, duty ≦1%
*2 V_{DD}=30V, L=5mH, I_L=7A, unclamped, R_G=50Ω

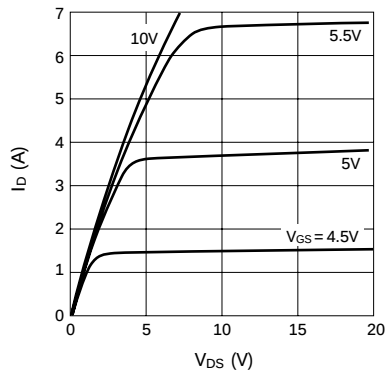
Electrical Characteristics (Ta=25ºC)

Symbol	Test Conditions	Ratings min	Ratings typ	Ratings max	Unit
$V_{(BR)\ DSS}$	I_D=100µA, V_{GS}=0V	450			V
I_{GSS}	V_{GS}=±30V			±100	nA
I_{DSS}	V_{DS}=450V, V_{GS}=0V			100	µA
V_{TH}	V_{DS}=10V, I_D=1mA	2.0		4.0	V
$R_{e\ (yfs)}$	V_{DS}=20V, I_D=3.5A	3.5	5.0		S
$R_{DS\ (ON)}$	V_{GS}=10V, I_D=3.5A		0.84	1.1	Ω
Ciss	V_{DS}=10V, f=1.0MHz, V_{GS}=0V		720		pF
Coss			150		pF
Crss			65		pF
$t_{d\ (on)}$	I_D=3.5A, V_{DD}≒200V, R_L=57Ω, V_{GS}=10V, R_G=50Ω		25		ns
t_r			40		ns
$t_{d\ (off)}$			70		ns
t_f			50		ns
V_{SD}	I_{SD}=7A, V_{GS}=0V		1.0	1.5	V

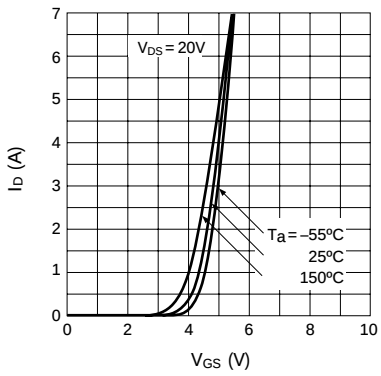
External Dimensions SMA (LF1000)



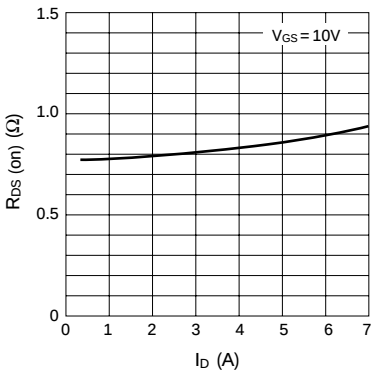
■ I_D — V_{DS} Characteristics



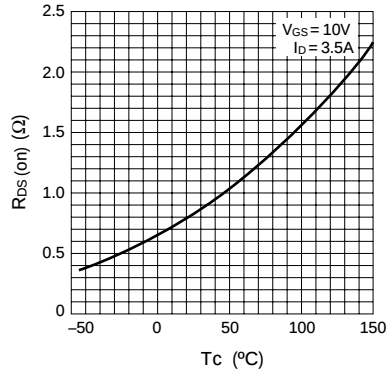
■ I_D — V_{GS} Characteristics



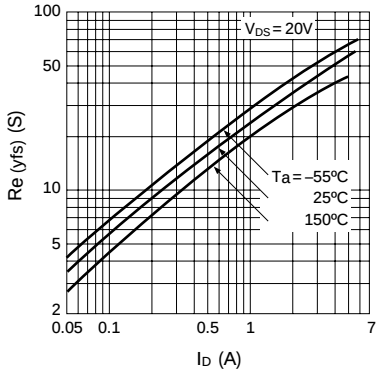
■ R_{DS} (on) — I_D Characteristics



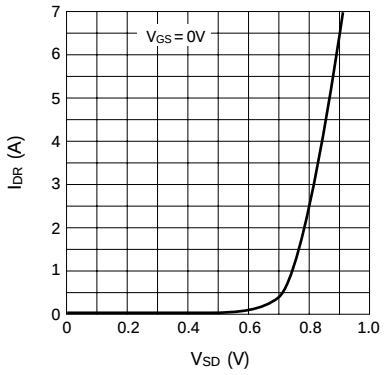
■ R_{DS} (on) — T_C Characteristics



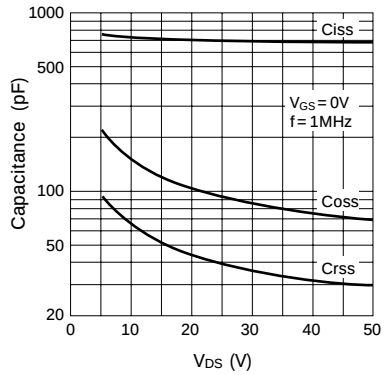
■ Re (yfs) — I_D Characteristics



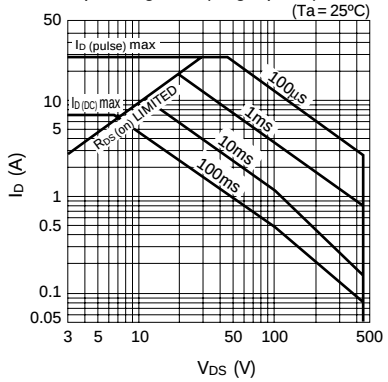
■ I_{DR} — V_{SD} Characteristics



■ Capacitance — V_{DS} Characteristics



■ Safe Operating Area (single pulse)



Equivalent Circuit Diagram