

MOS FET Array SMA5113

Absolute Maximum Ratings (Ta=25°C)

Symbol	Rated	Unit
V _{DSS}	450	V
V _{GSS}	±30	V
I _D	±7	A
I _D (pulse)*1	±28	A
P _T	4 (Ta=25°C, All circuits operate, No Fin)	W
	35 (Tc=25°C, All circuits operate, ∞ Fin)	W
E _{AS} *2	130	mJ
I _{AS}	7	A
θ _{J-a}	31.2 (Junction - Ambient, Ta=25°C, All circuits operate)	°C/W
θ _{J-c}	3.57 (Junction - Case, Ta=25°C, All circuits operate)	°C/W
T _{ch}	150	°C
T _{stg}	-55 to +150	°C

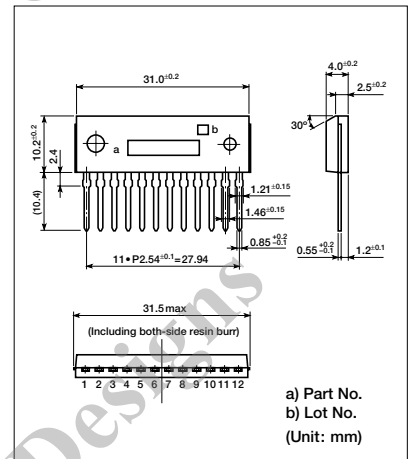
*1 P_W ≤ 100μs, duty ≤ 1%

*2 V_{DD} = 30V, L = 5mH, I_L = 7A, unclamped, R_G = 50Ω

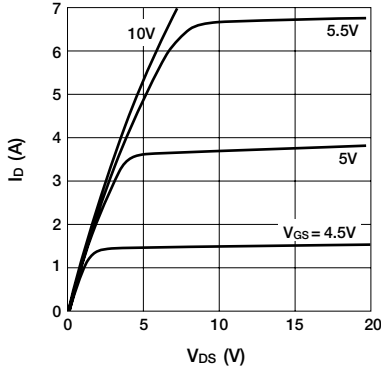
Electrical Characteristics (Ta=25°C)

Symbol	Test Conditions	Ratings			Unit
		min	typ	max	
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
C _{iss}	V _{DS} = 10V		720		pF
C _{oss}	f = 1.0MHz		150		pF
C _{rss}	V _{GS} = 0V		65		pF
t _{d(on)}	I _D = 3.5A		25		ns
t _r	V _{DD} = 200V R _L = 57Ω		40		ns
t _{d(off)}	V _{GS} = 10V		70		ns
t _f	R _G = 50Ω		50		ns
V _{S/D}	I _{S/D} = 7A, V _{GS} = 0V		1.0	1.5	V

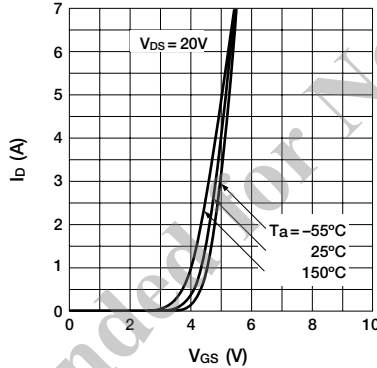
External Dimensions SMA (LF1000)



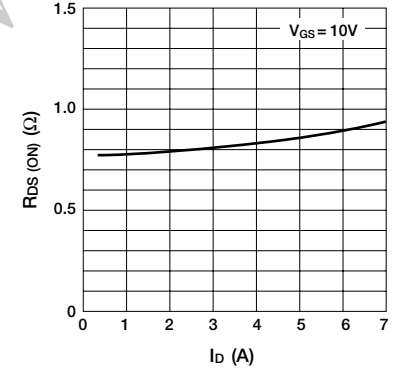
I_D - V_{DS} Characteristics



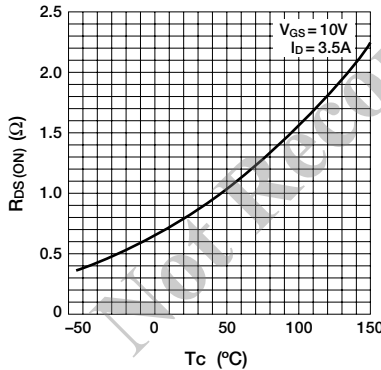
I_D - V_{GS} Characteristics



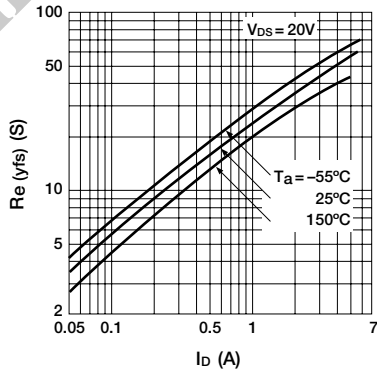
R_{DS(ON)} - I_D Characteristics



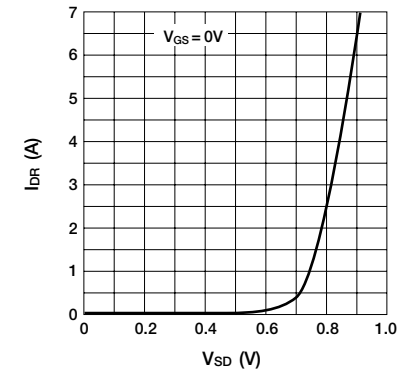
R_{DS(ON)} - T_C Characteristics



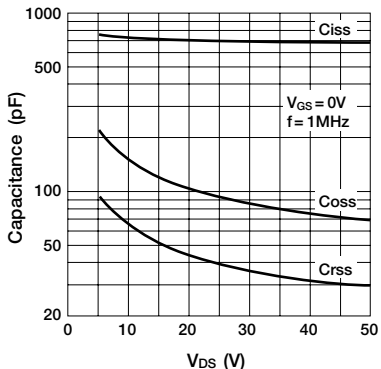
R_e (yfs) - I_D Characteristics



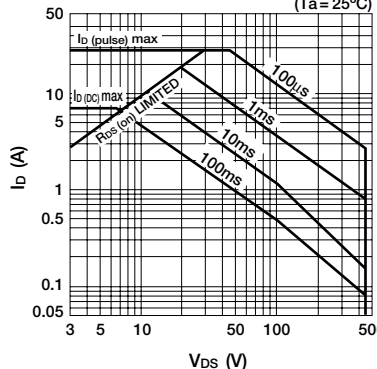
I_{DR} - V_{SD} Characteristics



Capacitance - V_{DS} Characteristics



Safe Operating Area (single pulse)



Equivalent Circuit Diagram

