

Absolute Maximum Ratings (Ta=25°C)

Symbol	Ratings	Unit
V _{DSS}	120	V
V _{GSS}	±20	V
I _D	±6	A
I _D (pulse)*1	±10	A
P _T	4 (Ta = 25°C)	W
	20 (Tc = 25°C)	W
E _{AS} *2	80	mJ
T _{ch}	150	°C
T _{stg}	-55 to +150	°C

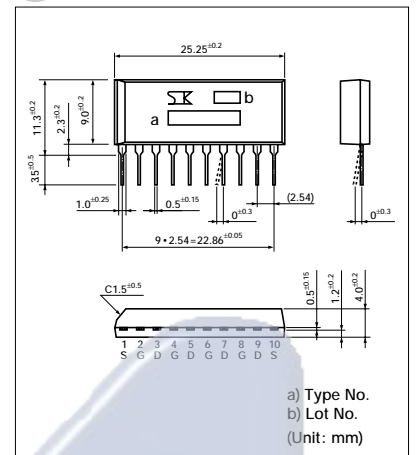
*1 P_W ≤ 100μs, duty ≤ 1%

*2 V_{DD} = 12V, L = 10mH, unclamped, R_G = 50Ω

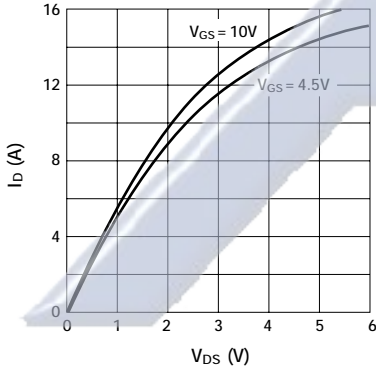
Electrical Characteristics (Ta=25°C)

Symbol	Test Conditions	Ratings			Unit
		min	typ	max	
V _{(BR)DSS}	I _D = 100μA, V _{GS} = 0V	120			V
I _{GSS}	V _{GS} = ±20V			±5	μA
I _{DSS}	V _{DS} = 120V, V _{GS} = 0V			100	μA
V _{TH}	V _{DS} = 10V, I _D = 250μA	1.0		2.0	V
Re (yfs)	V _{DS} = 10V, I _D = 4.0A	5.0			S
R _{DS(on)}	V _{GS} = 10V, I _D = 4.0A		0.15	0.2	Ω
	V _{GS} = 4V, I _D = 4.0A		0.2	0.25	Ω
C _{iss}	V _{DS} = 10V		400		pF
C _{oss}	f = 1.0MHz		130		pF
C _{rss}	V _{GS} = 0V		30		pF
t _{d(on)}	I _D = 4A		100		ns
t _r	V _{DD} = 12V R _L = 3Ω		300		ns
t _{d(off)}	V _{GS} = 5V		250		ns
t _f	R _G = 50Ω		200		ns
V _{SD}	I _{SD} = 6A, V _{GS} = 0V	1.0	1.5		V

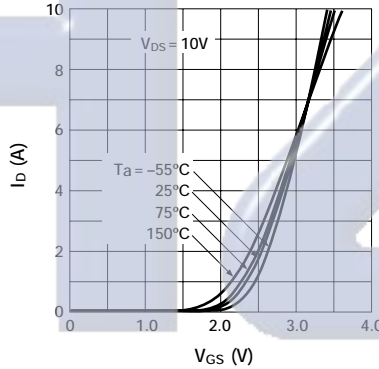
External Dimensions STA4 (LF412)



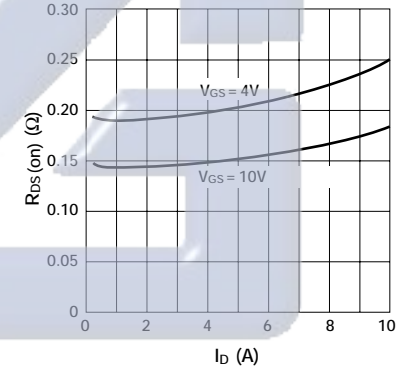
I_D—V_{DS} Characteristics



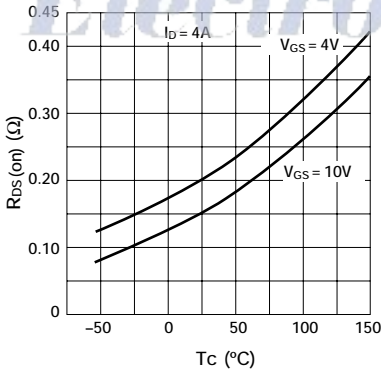
I_D—V_{GS} Characteristics



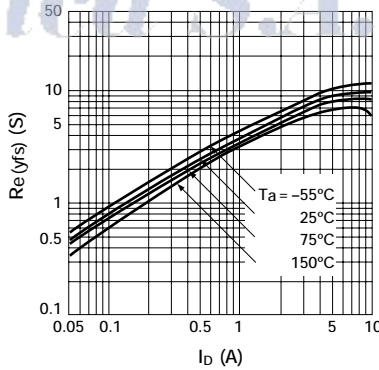
R_{DS(on)}—I_D Characteristics



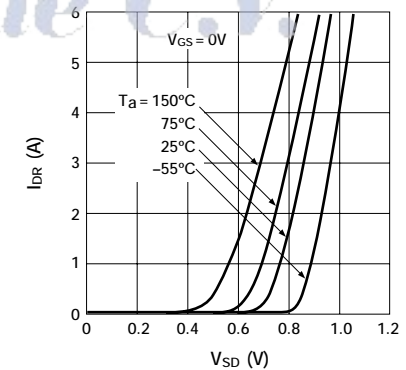
R_{DS(on)}—T_c Characteristics



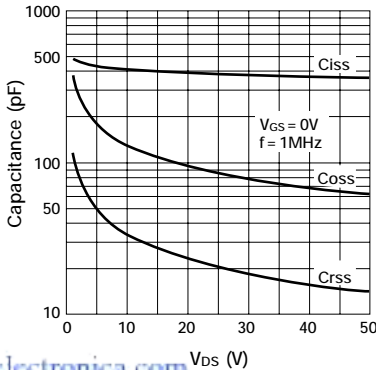
Re (yfs)—I_D Characteristics



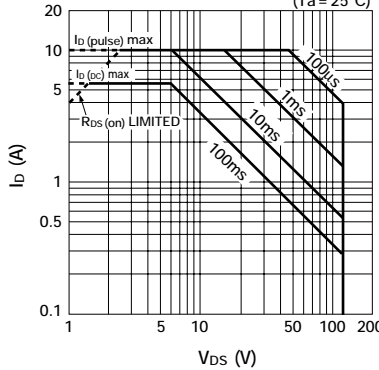
I_{DR}—V_{SD} Characteristics



Capacitance—V_{DS} Characteristics



Safe Operating Area (single pulse)



Equivalent Circuit Diagram

