

2SK2804

External dimensions 1 FM20

Absolute Maximum Ratings (Ta = 25°C)

Symbol	Rated	Unit
V _{DSS}	450	V
V _{GSS}	±30	V
I _D	±5	A
I _D (pulse) *1	±20	A
P _D	35 (T _C = 25°C)	W
E _{AS} *2	90	mJ
I _{AS}	5	A
T _{ch}	150	°C
T _{stg}	-55 to +150	°C

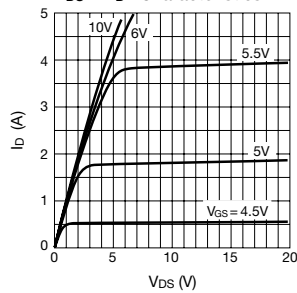
*1: P_W ≤ 100μs, duty cycle ≤ 1%

*2: V_{DD} = 30V, L = 6.7mH, I_L = 5.0A, unclamped, R_G = 50Ω, See Figure 1 on Page 5.

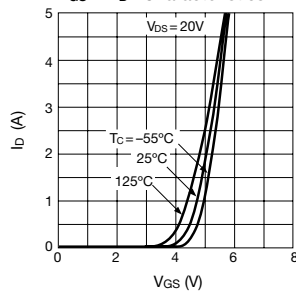
Electrical Characteristics (Ta = 25°C)

Symbol	Ratings			Unit	Conditions
	min	typ	max		
V _{(BR) DSS}	450			V	I _D = 100μA, V _{GS} = 0V
I _{GSS}			±100	nA	V _{GS} = ±30V
I _{DSS}			100	μA	V _{DS} = 450V, V _{GS} = 0V
V _{TH}	2.0		4.0	V	V _{DS} = 10V, I _D = 1mA
R _e (yfs)	2.6	3.7		S	V _{DS} = 20V, I _D = 2.5A
R _{DS (on)}		1.1	1.5	Ω	V _{GS} = 10V, I _D = 2.5A
C _{iss}		580		pF	V _{DS} = 10V, f = 1.0MHz, V _{GS} = 0V
C _{oss}		125		pF	
C _{rss}		50		pF	
t _{d (on)}		20		ns	I _D = 2.5A, V _{DD} ≅ 200V, R _L = 80Ω, V _{GS} = 10V, See Figure 2 on Page 5.
t _r		30		ns	
t _{d (off)}		55		ns	
t _f		50		ns	
V _{SD}		0.9	1.4	V	I _{SD} = 5A, V _{GS} = 0V

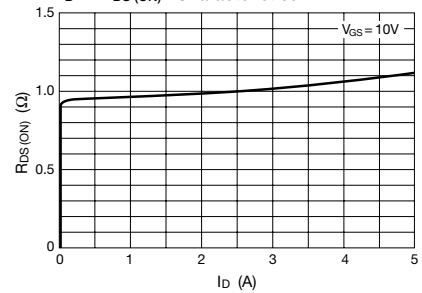
V_{DS} — I_D Characteristics



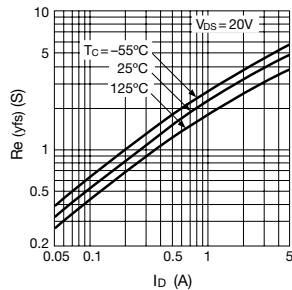
V_{GS} — I_D Characteristics



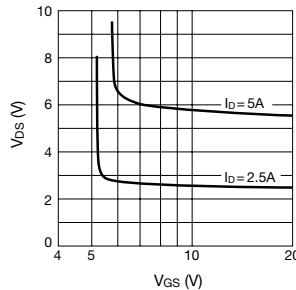
I_D — R_{DS (ON)} Characteristics



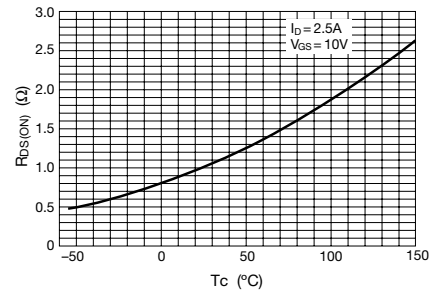
I_D — R_e (yfs) Characteristics



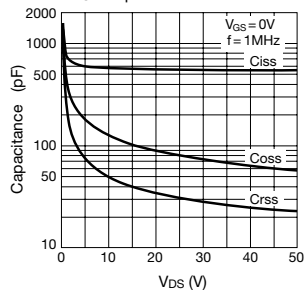
V_{GS} — V_{DS} Characteristics



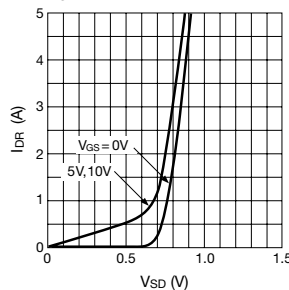
T_C — R_{DS (ON)} Characteristics



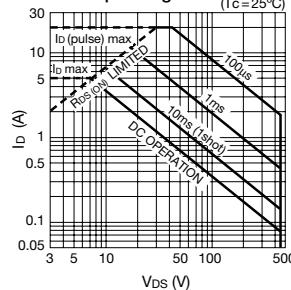
V_{DS} — Capacitance Characteristics



V_{SD} — I_{DR} Characteristics



Safe Operating Area (T_C = 25°C)



T_a — P_D Characteristics

