2SK1190

External dimensions 1 ..... FM20

Absolute Maximum Ratings (Ta = 25°C)

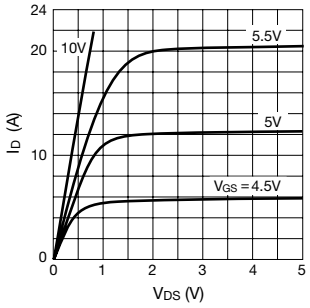
Symbol	Ratings	Unit
V_{DSS}	60	V
V_{GSS}	±20	V
I_D	±22	A
$I_{D\ (pulse)}$	±88 (Tch ≦150°C)	A
P_D	35 (Tc = 25°C)	W
E_{AS} *	17	mJ
Tch	150	°C
Tstg	–55 to +150	°C

*: V_{DD} = 25V, L = 50µH, I_L = 20A, unclamped, See Figure 1 on Page 5.

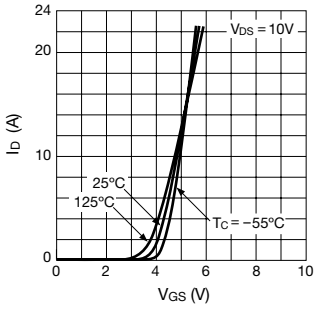
Electrical Characteristics (Ta = 25°C)

Symbol	Ratings min	Ratings typ	Ratings max	Unit	Conditions
$V_{(BR)\ DSS}$	60			V	I_D = 250µA, V_{GS} = 0V
I_{GSS}			±500	nA	V_{GS} = ±20V
I_{DSS}			250	µA	V_{DS} = 60V, V_{GS} = 0V
V_{TH}	2.0		4.0	V	V_{DS} = 10V, I_D = 250µA
$R_{e\ (yfs)}$	7.3	11		S	V_{DS} = 10V, I_D = 12A
$R_{DS\ (on)}$		0.04	0.05	Ω	V_{GS} = 10V, I_D = 12A
Ciss		1300		pF	V_{DS} = 25V, f = 1.0MHz, V_{GS} = 0V
Coss		650		pF	
t_{on}		130		ns	I_D = 12A, V_{DD} = 30V, V_{GS} = 10V, See Figure 2 on Page 5.
t_{off}		60		ns	

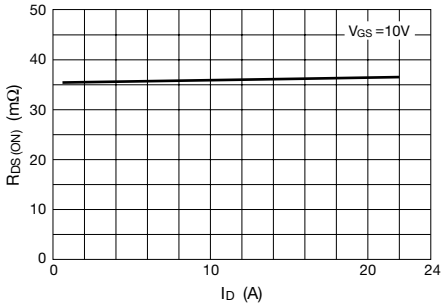
V_{DS} — I_D Characteristics



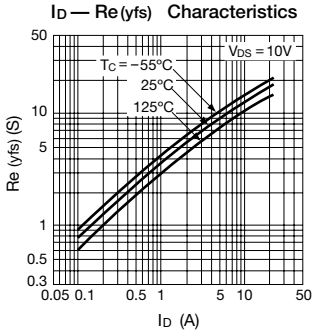
V_{GS} — I_D Characteristics



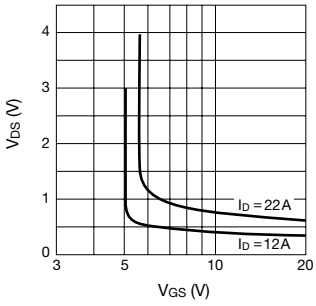
I_D — $R_{DS\ (ON)}$ Characteristics



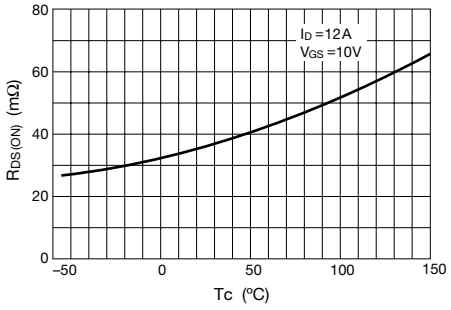
I_D — $R_{e\ (yfs)}$ Characteristics



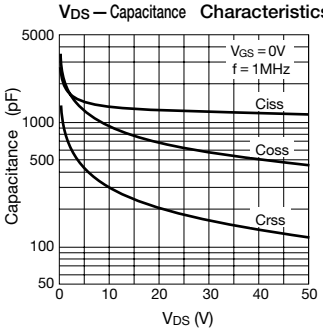
V_{GS} — V_{DS} Characteristics



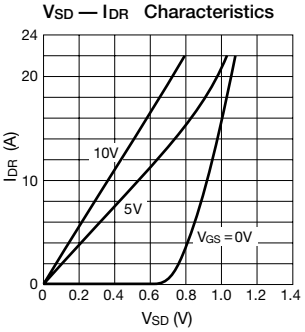
T_C — $R_{DS\ (ON)}$ Characteristics



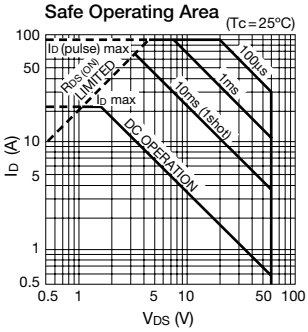
V_{DS} — Capacitance Characteristics



V_{SD} — I_{DR} Characteristics



Safe Operating Area (Tc = 25°C)



Ta — P_D Characteristics