

2SK2420

External dimensions 1 FM20

Absolute Maximum Ratings (Ta = 25°C)

Symbol	Ratings	Unit
V _{DSS}	60	V
V _{GSS}	±20	V
I _D	±30	A
I _D (pulse) *1	±120	A
P _D	40 (T _c = 25°C)	W
EAS *2	38	mJ
T _{ch}	150	°C
T _{stg}	-55 to +150	°C

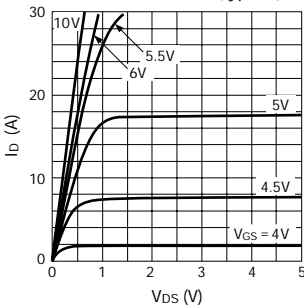
*1: P_W ≤ 100μs, duty cycle ≤ 1%

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

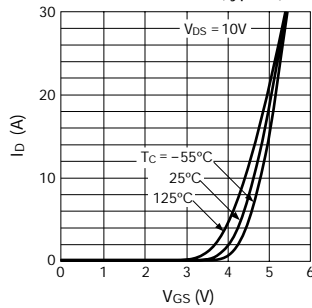
Electrical Characteristics (Ta = 25°C)

Symbol	Ratings			Unit	Conditions
	min	typ	max		
V _{(BR) DSS}	60			V	I _D = 100μA, V _{GS} = 0V
I _{GSS}			±100	nA	V _{GS} = ±20V
I _{DSS}			100	μA	V _{DS} = 60V, V _{GS} = 0V
V _{TH}	2.0		4.0	V	V _{DS} = 10V, I _D = 250μA
Re (yfs)	13	20		S	V _{DS} = 10V, I _D = 15A
R _{DS(on)}		21	28	mΩ	V _{GS} = 10V, I _D = 15A
C _{iss}		2200		pF	V _{DS} = 25V, f = 1.0MHz, V _{GS} = 0V
C _{oss}		850		pF	V _{DS} = 25V, f = 1.0MHz, V _{GS} = 0V
t _{on}		210		ns	I _D = 15A, V _{DD} = 30V, R _L = 2Ω, V _{GS} = 10V, See Figure 2 on Page 5.
t _{off}		145		ns	I _D = 15A, V _{DD} = 30V, R _L = 2Ω, V _{GS} = 10V, See Figure 2 on Page 5.

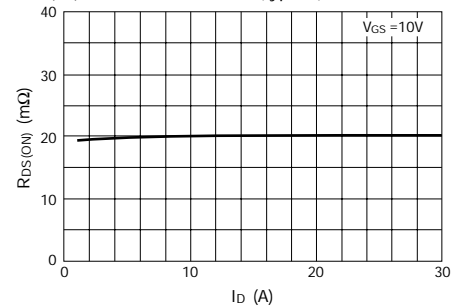
I_D - V_{DS} Characteristics (typical)



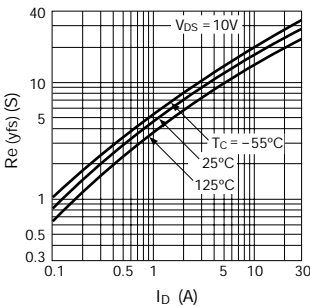
I_D - V_{GS} Characteristics (typical)



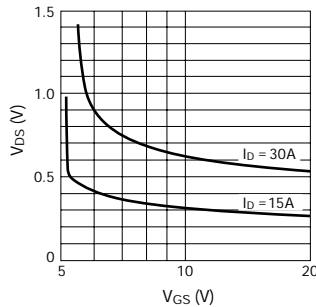
R_{DS(on)} - I_D Characteristics (typical)



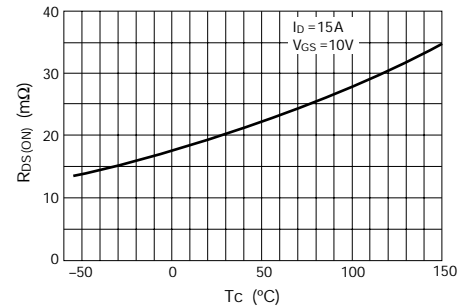
Re (yfs) - I_D Characteristics (typical)



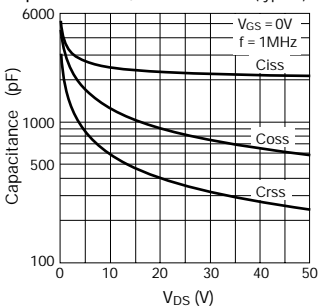
V_{DS} - V_{GS} Characteristics (typical)



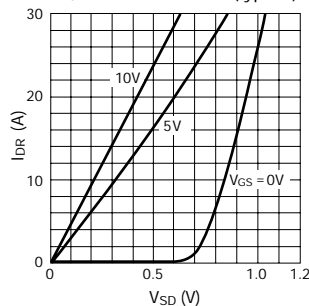
R_{DS(on)} - T_c Characteristics (typical)



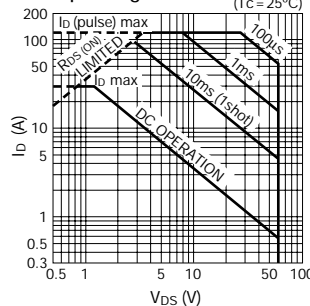
Capacitance - V_{DS} Characteristics (typical)



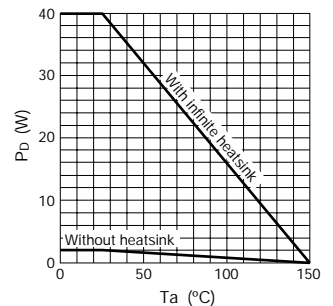
I_{DR} - V_{SD} Characteristics (typical)



Safe Operating Area (Tc = 25°C)



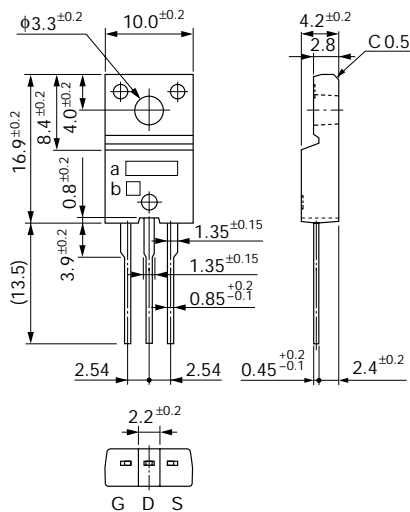
P_D - T_a Characteristics



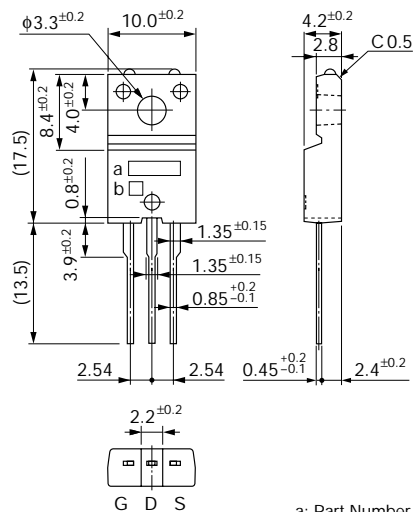
External dimensions (Unit: mm)

① FM20 (TO-220F)

General product



UL approved product

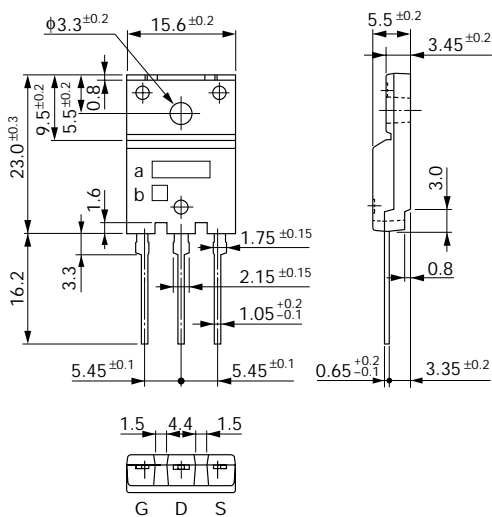


a: Part Number
b: Lot Number

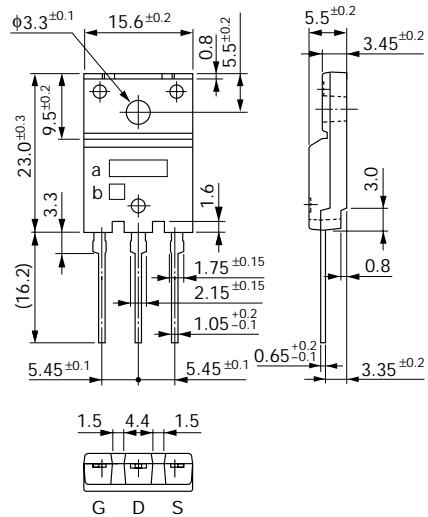
Weight: Approx 2.0g

② FM100 (TO-3PF)

General product



UL approved product



a: Part Number
b: Lot Number

Weight: Approx 6.5g