

2SK1189

External dimensions 1 FM20

Absolute Maximum Ratings (Ta = 25°C)

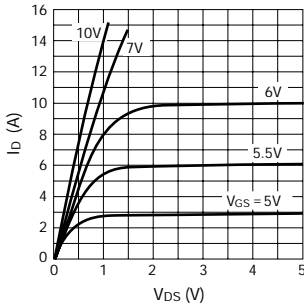
Symbol	Ratings	Unit
V _{DSS}	60	V
V _{GSS}	±20	V
I _D	±15	A
I _D (pulse)	±60 (T _{ch} ≤ 150°C)	A
P _D	30 (T _c = 25°C)	W
E _{AS} *	6.2	mJ
T _{ch}	150	°C
T _{stg}	-55 to +150	°C

*: V_{DD} = 25V, L = 50μH, I_L = 12A, unclamped, See Figure 1 on Page 5.

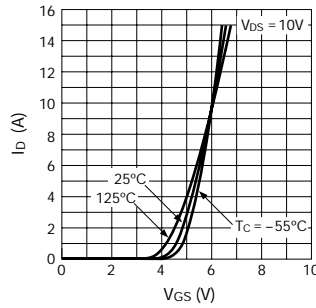
Electrical Characteristics (Ta = 25°C)

Symbol	Ratings			Unit	Conditions
	min	typ	max		
V _{(BR) DSS}	60			V	I _D = 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
Re (yfs)	4.2	6.2		S	V _{DS} = 10V, I _D = 8.0A
R _{DS(on)}		0.07	0.1	Ω	V _{GS} = 10V, I _D = 8.0A
C _{iss}		640		pF	V _{DS} = 25V, f = 1.0MHz, V _{GS} = 0V
C _{oss}		350		pF	
t _{on}		110		ns	I _D = 8A, V _{DD} = 30V, V _{GS} = 10V, See Figure 2 on Page 5.
t _{off}		45		ns	

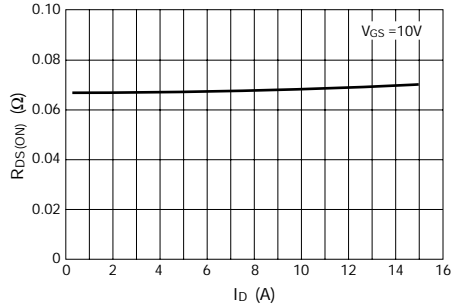
I_D - V_{DS} Characteristics (typical)



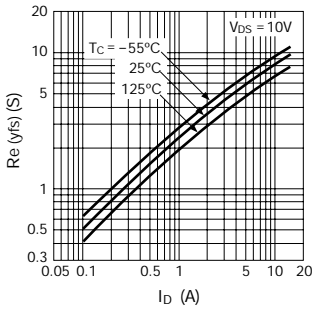
I_D - V_{GS} Characteristics (typical)



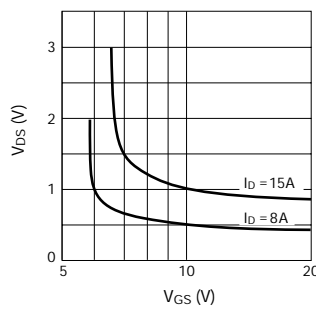
R_{DS(on)} - I_D Characteristics (typical)



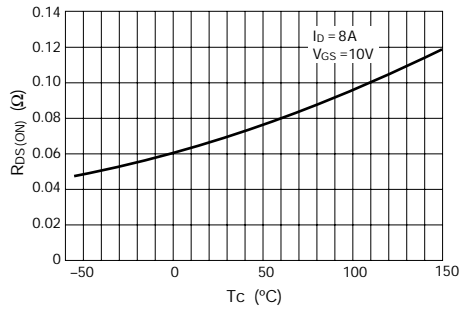
Re (yfs) - I_D Characteristics (typical)



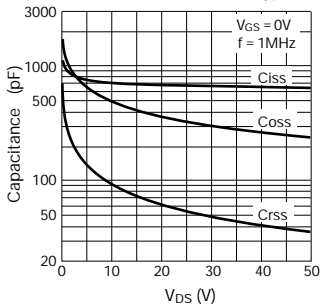
V_{DS} - V_{GS} Characteristics (typical)



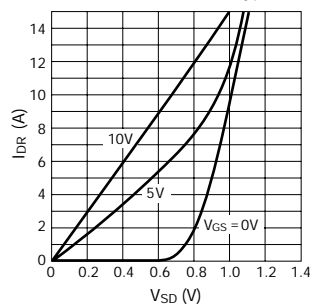
R_{DS(on)} - T_c Characteristics (typical)



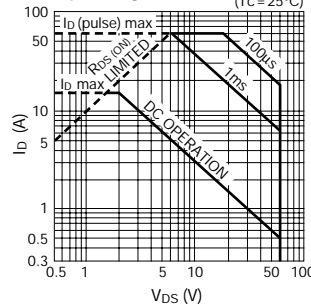
Capacitance - V_{DS} Characteristics (typical)



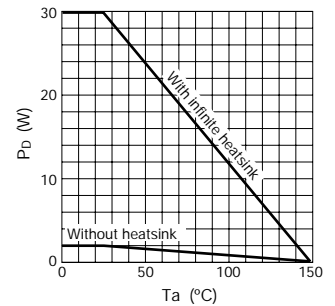
I_{DR} - V_{SD} Characteristics (typical)



Safe Operating Area (T_c = 25°C)



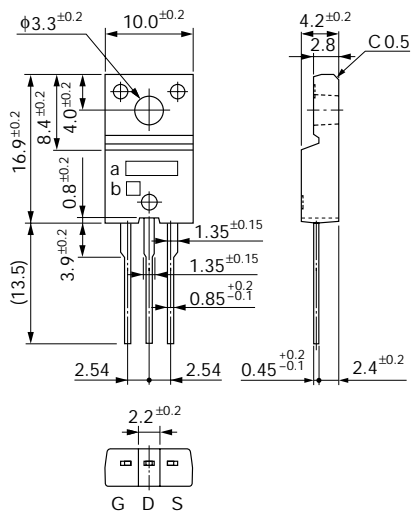
P_D - T_a Characteristics



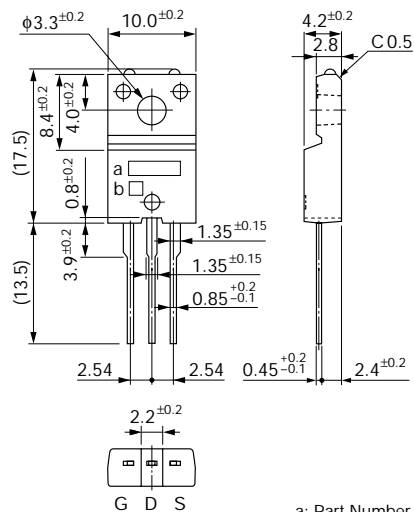
External dimensions (Unit: mm)

① FM20 (TO-220F)

General product



UL approved product

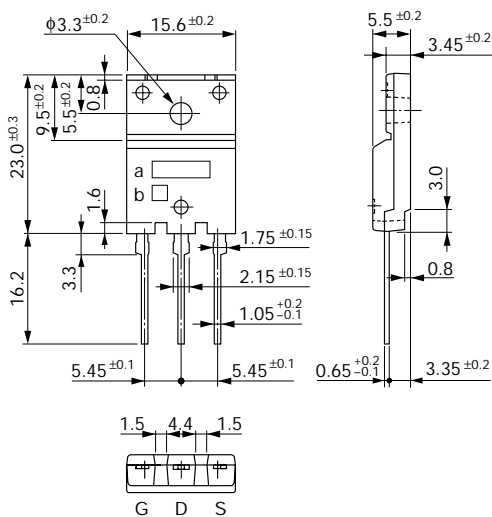


a: Part Number
b: Lot Number

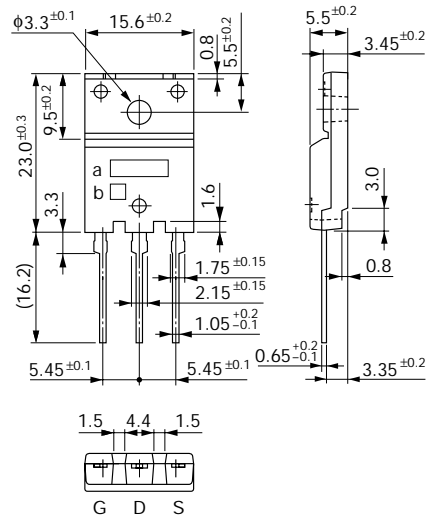
Weight: Approx 2.0g

② FM100 (TO-3PF)

General product



UL approved product



a: Part Number
b: Lot Number

Weight: Approx 6.5g