

2SK3004

External dimensions 1 FM20

Absolute Maximum Ratings (Ta = 25°C)

Symbol	Ratings	Unit
V _{DSS}	250	V
V _{GSS}	±20	V
I _D	±18	A
I _D (pulse) *1	±72	A
P _D	35 (T _c = 25°C)	W
E _{AS} *2	120	mJ
I _{AS}	18	A
T _{ch}	150	°C
T _{stg}	-55 to +150	°C

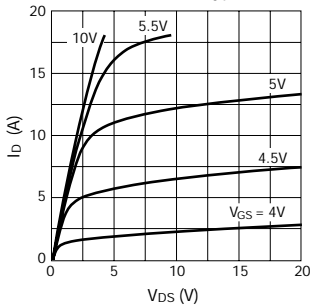
*1: P_w ≤ 100μs, duty cycle ≤ 1%

*2: V_{DD} = 25V, L = 670μH, I_L = 18A, unclamped, R_G = 50Ω, See Figure 1 on Page 5.

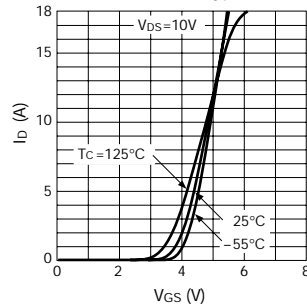
Electrical Characteristics (Ta = 25°C)

Symbol	Ratings			Unit	Conditions
	min	typ	max		
V(BR)DSS	250			V	I _D = 100μA, V _{GS} = 0V
I _{GSS}			±100	nA	V _{GS} = ±20V
I _{DSS}			100	μA	V _{DS} = 250V, V _{GS} = 0V
V _{TH}	2.0		4.0	V	V _{DS} = 10V, I _D = 1mA
Re (yfs)	7	11		S	V _{DS} = 10V, I _D = 9A
R _{DS(on)}		200	250	mΩ	V _{GS} = 10V, I _D = 9A
C _{iss}		850		pF	V _{DS} = 10V, f = 1.0MHz, V _{GS} = 0V
C _{oss}		550		pF	
C _{rss}		250		pF	
t _{d(on)}		20		ns	I _D = 9A, V _{DD} ≐ 100V, R _L = 11.1Ω, V _{GS} = 10V, See Figure 2 on Page 5.
t _r		50		ns	
t _{d(off)}		65		ns	
t _f		80		ns	
V _{SD}		1.0	1.5	V	I _{SD} = 18A, V _{GS} = 0V
t _{rr}		700		ns	I _{SD} = ±100mA

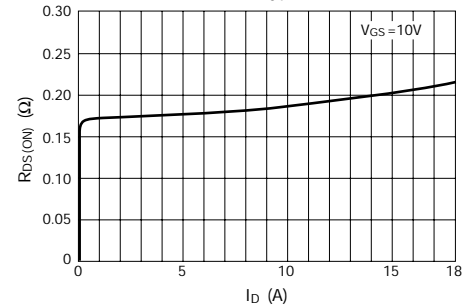
I_D - V_{DS} Characteristics (typical)



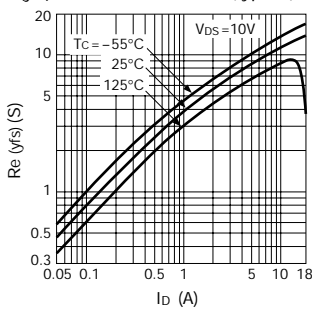
I_D - V_{GS} Characteristics (typical)



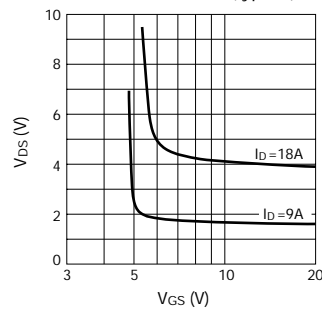
R_{DS(on)} - I_D Characteristics (typical)



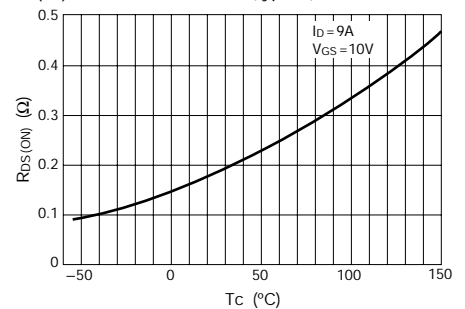
Re (yfs) - I_D Characteristics (typical)



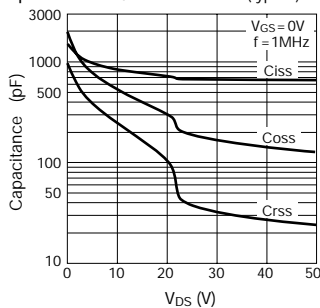
V_{DS} - V_{GS} Characteristics (typical)



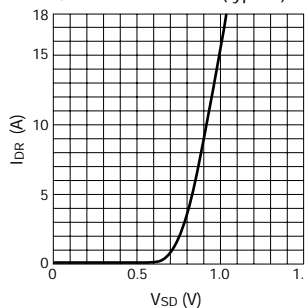
R_{DS(on)} - T_c Characteristics (typical)



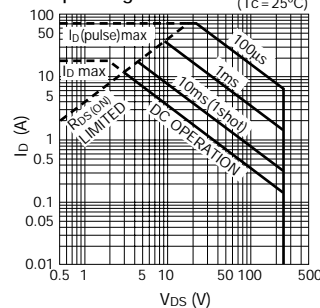
Capacitance - V_{DS} Characteristics (typical)



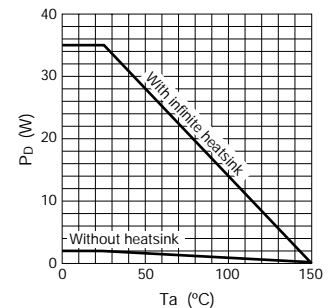
I_{DR} - V_{SD} Characteristics (typical)



Safe Operating Area (Tc = 25°C)



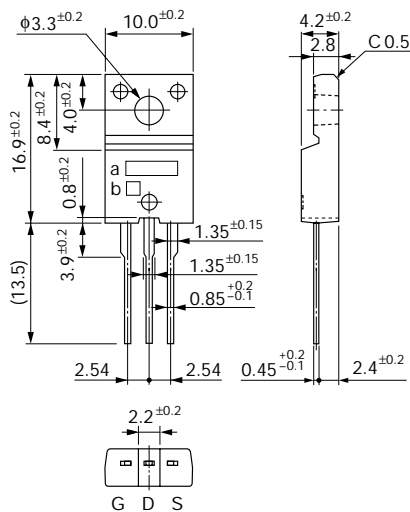
P_D - T_a Characteristics



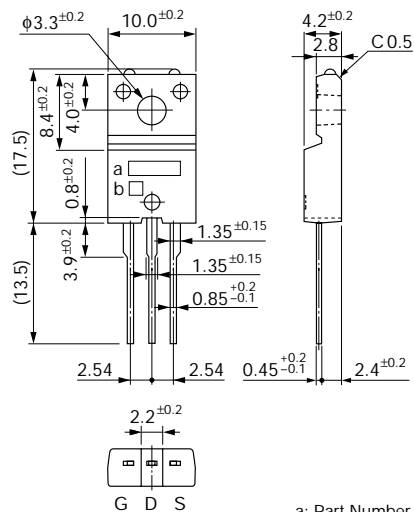
External dimensions (Unit: mm)

① FM20 (TO-220F)

General product



UL approved product

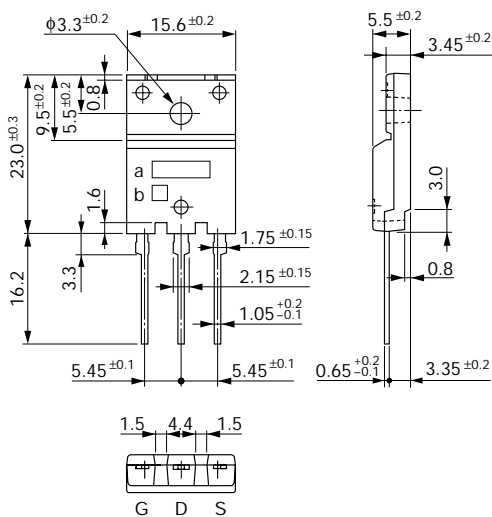


a: Part Number
b: Lot Number

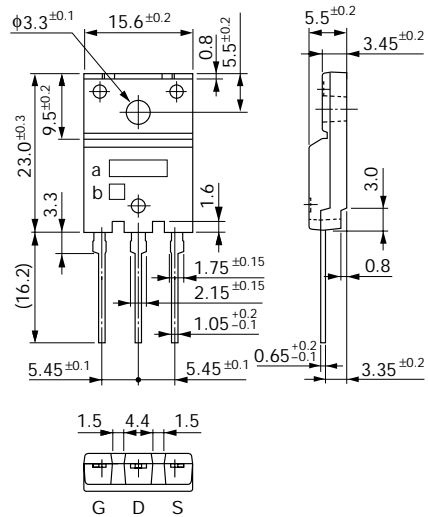
Weight: Approx 2.0g

② FM100 (TO-3PF)

General product



UL approved product



a: Part Number
b: Lot Number

Weight: Approx 6.5g