

Absolute Maximum Ratings (Ta = 25°C)

Symbol	Ratings	Unit
V _{DSS}	600	V
V _{GSS}	±30	V
I _D	±2	A
I _D (pulse) *1	±8	A
P _D	30 (Tc = 25°C)	W
E _{AS} *2	10	mJ
I _{AS}	2	A
T _{ch}	150	°C
T _{stg}	-55 to +150	°C

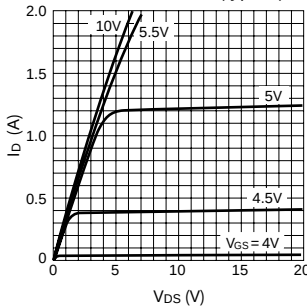
*1: Pw ≤ 100μs, duty cycle ≤ 1%

*2: V_{DD} = 30V, L = 5mH, I_L = 2.0A, unclamped, R_G = 50Ω, See Figure 1 on Page 5.

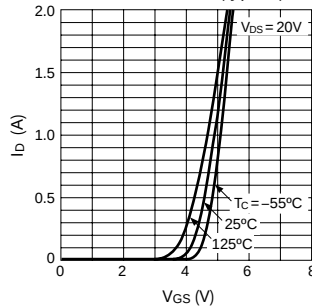
Electrical Characteristics (Ta = 25°C)

Symbol	Ratings			Unit	Conditions
	min	typ	max		
V _{(BR) DSS}	600			V	I _D = 100μA, V _{GS} = 0V
I _{GSS}			±100	nA	V _{GS} = ±30V
I _{DSS}			100	μA	V _{DS} = 600V, V _{GS} = 0V
V _{TH}	2.0	3.0	4.0	V	V _{DS} = 10V, I _D = 250μA
Re (yfs)	1.2	1.7		S	V _{DS} = 20V, I _D = 1A
R _{DS} (on)		3.0	3.8	Ω	V _{GS} = 10V, I _D = 1A
C _{iss}		290		pF	V _{DS} = 10V, f = 1.0MHz, V _{GS} = 0V
C _{oss}		70		pF	
C _{rss}		30		pF	
t _d (on)		16		ns	I _D = 1A, V _{DD} ≐ 250V, R _L = 250Ω, V _{GS} = 10V, See Figure 2 on Page 5.
t _r		30		ns	
t _d (off)		45		ns	
t _f		145		ns	
V _{SD}		0.9	1.4	V	I _{SD} = 2.0A, V _{GS} = 0V

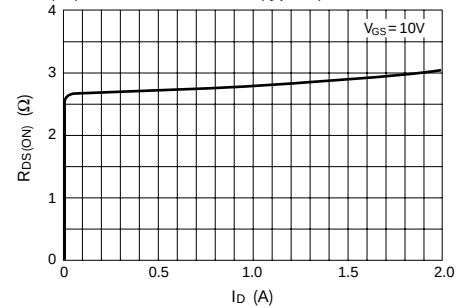
I_D – V_{DS} Characteristics (typical)



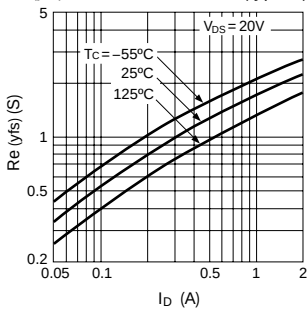
I_D – V_{GS} Characteristics (typical)



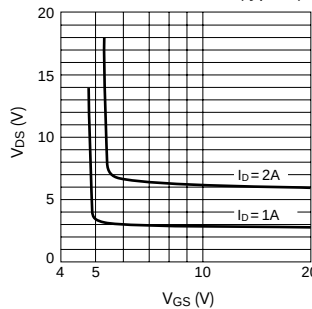
R_{DS(ON)} – I_D Characteristics (typical)



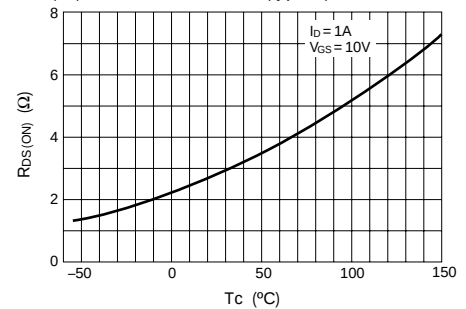
Re (yfs) – I_D Characteristics (typical)



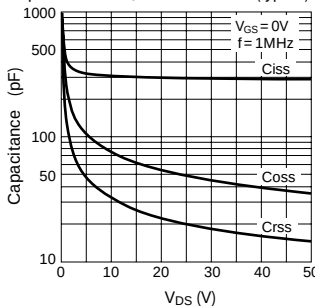
V_{DS} – V_{GS} Characteristics (typical)



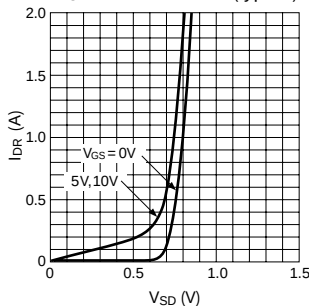
R_{DS(ON)} – T_C Characteristics (typical)



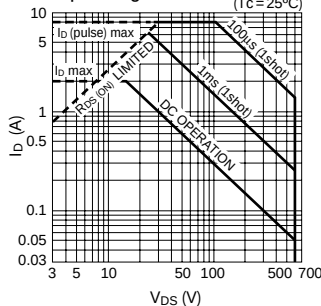
Capacitance – V_{DS} Characteristics (typical)



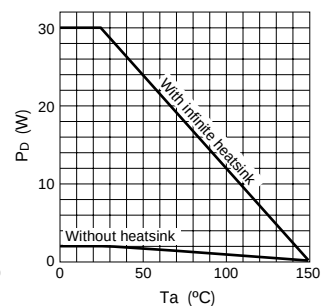
I_{DR} – V_{SD} Characteristics (typical)



Safe Operating Area



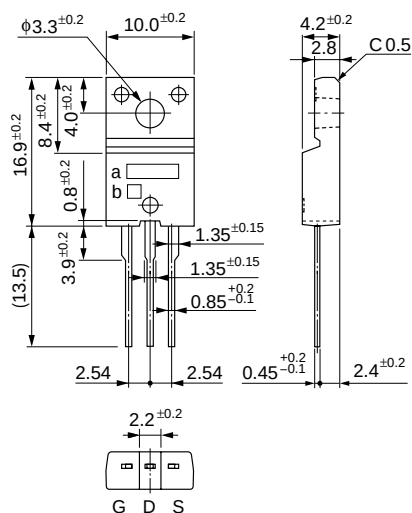
P_D – T_a Characteristics



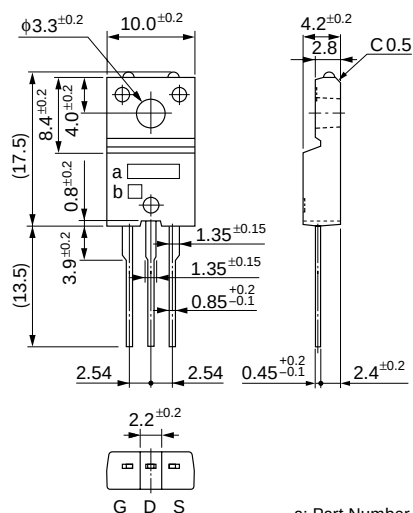
External dimensions (Unit: mm)

① FM20 (TO-220F)

General product



UL approved product

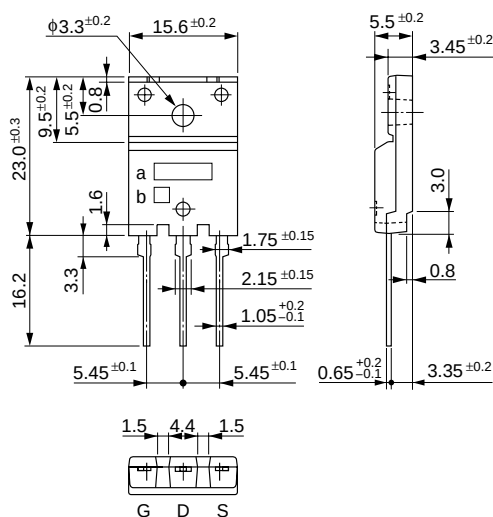


a: Part Number
b: Lot Number

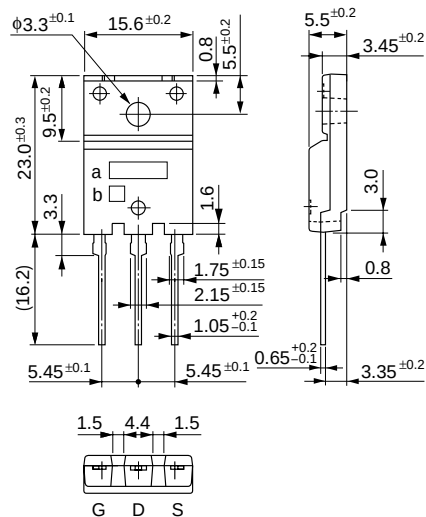
Weight: Approx 2.0g

② FM100 (TO-3PF)

General product



UL approved product



a: Part Number
b: Lot Number

Weight: Approx 6.5g