

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 (Tc = 25°C)	W
E_{AS} *2	120	mJ
I_{AS}	18	A
Tch	150	°C
Tstg	-55 to +150	°C

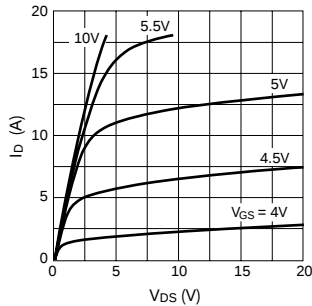
*1: $P_w \leq 100\mu s$, duty cycle $\leq 1\%$

*2: $V_{DD} = 25V$, $L = 670\mu H$, $I_L = 18A$, unclamped, $R_G = 50\Omega$, See Figure 1 on Page 5.

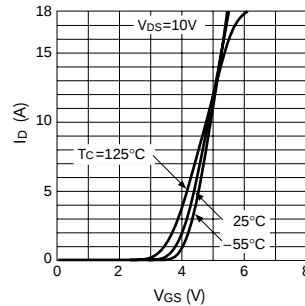
Electrical Characteristics (Ta = 25°C)

Symbol	Ratings			Unit	Conditions
	min	typ	max		
$V_{(BR)DSS}$	250			V	$I_D = 100\mu A$, $V_{GS} = 0V$
I_{GSS}			± 100	nA	$V_{GS} = \pm 20V$
I_{DSS}			100	μA	$V_{DS} = 250V$, $V_{GS} = 0V$
V_{TH}	2.0		4.0	V	$V_{DS} = 10V$, $I_D = 1mA$
$R_{e(yfs)}$	7	11		S	$V_{DS} = 10V$, $I_D = 9A$
$R_{DS(on)}$		200	250	m Ω	$V_{GS} = 10V$, $I_D = 9A$
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	$I_D = 9A$, $V_{DD} \div 100V$, $R_L = 11.1\Omega$, $V_{GS} = 10V$, See Figure 2 on Page 5.
t_r		50		ns	
$t_d(off)$		65		ns	
t_f		80		ns	$I_{SD} = 18A$, $V_{GS} = 0V$
V_{SD}		1.0	1.5	V	
t_{rr}		700		ns	

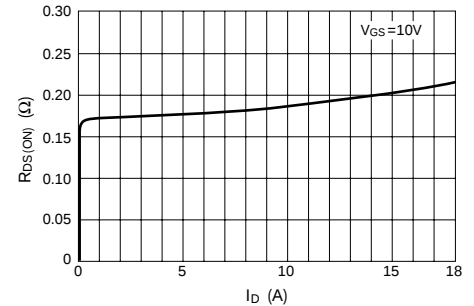
$I_D - V_{DS}$ Characteristics (typical)



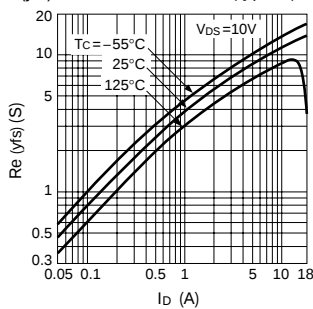
$I_D - V_{GS}$ Characteristics (typical)



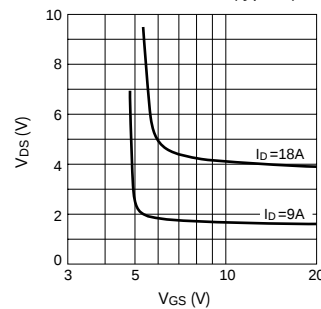
$R_{DS(on)} - I_D$ Characteristics (typical)



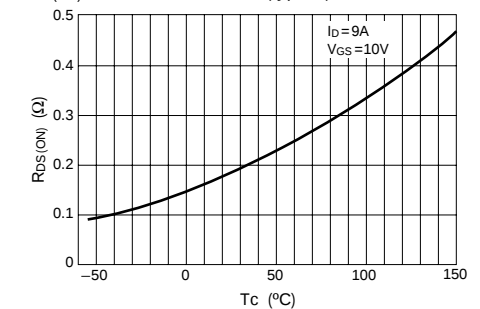
$R_{e(yfs)} - I_D$ Characteristics (typical)



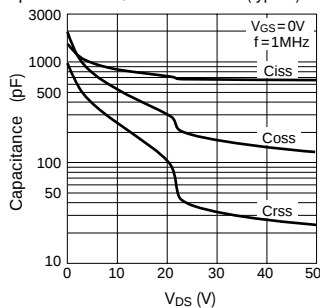
$V_{DS} - V_{GS}$ Characteristics (typical)



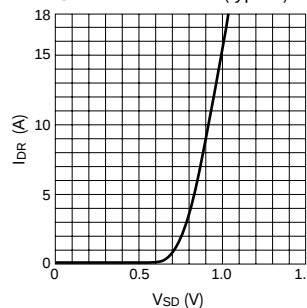
$R_{DS(on)} - T_c$ Characteristics (typical)



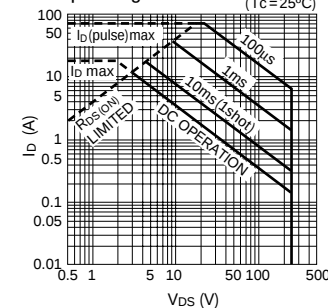
Capacitance - V_{DS} Characteristics (typical)



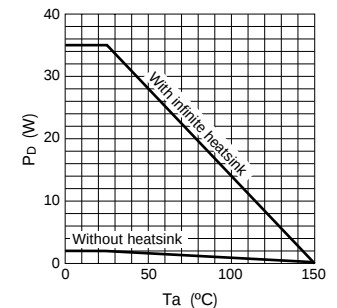
$I_{DR} - V_{SD}$ Characteristics (typical)



Safe Operating Area (Tc = 25°C)



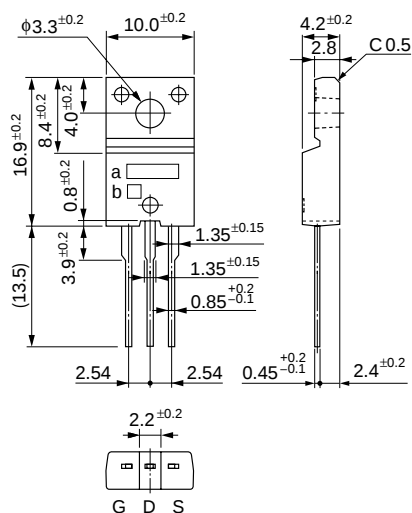
$P_D - T_a$ Characteristics



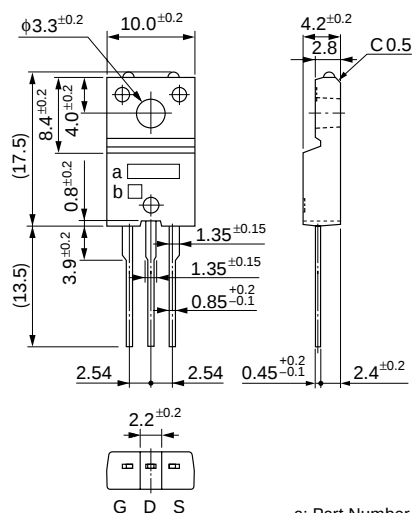
External dimensions (Unit: mm)

① FM20 (TO-220F)

General product



UL approved product

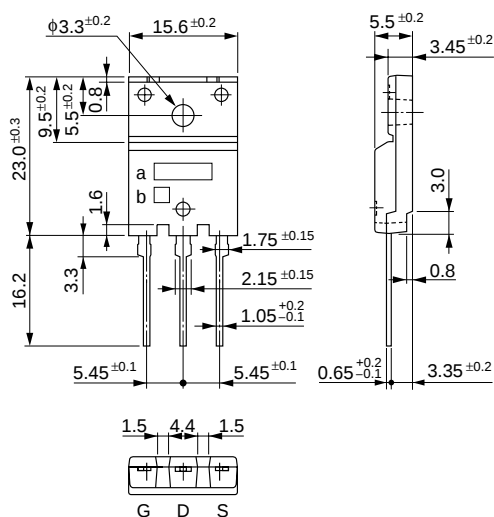


a: Part Number
b: Lot Number

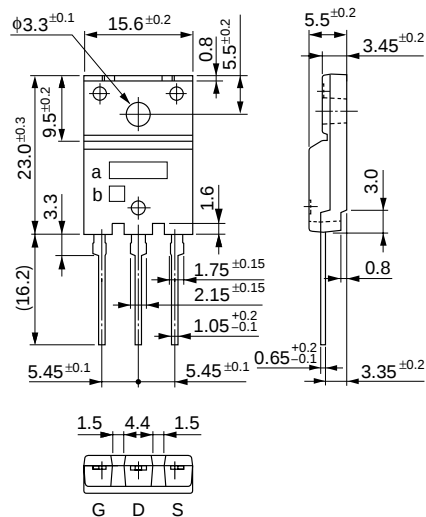
Weight: Approx 2.0g

② FM100 (TO-3PF)

General product



UL approved product



a: Part Number
b: Lot Number

Weight: Approx 6.5g