

2SK2778

External dimensions 1 FM20

Absolute Maximum Ratings (Ta = 25°C)

Symbol	Ratings	Unit
V _{DSS}	100	V
V _{GSS}	±20	V
I _D	±12	A
I _D (pulse) *1	±48	A
P _D	30 (T _c = 25°C)	W
EAS *2	70	mJ
I _{AS}	12	A
T _{ch}	150	°C
T _{stg}	-55 to +150	°C

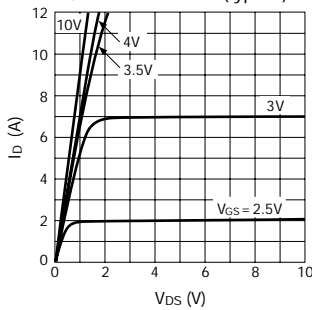
* 1: P_w ≤ 100μs, duty cycle ≤ 1%

* 2: V_{DD} = 25V, L = 730μH, I_L = 12A, unclamped, R_G = 50Ω, See Figure 1 on Page 5.

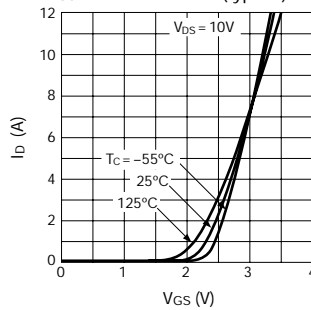
Electrical Characteristics (Ta = 25°C)

Symbol	Ratings			Unit	Conditions
	min	typ	max		
V _{(BR) DSS}	100			V	I _D = 100μA, V _{GS} = 0V
I _{GSS}			±100	nA	V _{GS} = ±20V
I _{DSS}			100	μA	V _{DS} = 100V, V _{GS} = 0V
V _{TH}	1.0		2.0	V	V _{DS} = 10V, I _D = 250μA
Re (yfs)	7	11		S	V _{DS} = 10V, I _D = 6A
R _{DS(on)}		105	175	mΩ	V _{GS} = 10V, I _D = 6A
		130	220	mΩ	V _{GS} = 4V, I _D = 6A
C _{iss}		740		pF	V _{DS} = 10V, f = 1.0MHz, V _{GS} = 0V
C _{oss}		240		pF	
C _{rss}		75		pF	
t _{d(on)}		15		ns	I _D = 6A, V _{DD} ≈ 50V, R _L = 8.3Ω, V _{GS} = 10V, See Figure 2 on Page 5.
t _r		55		ns	
t _{d(off)}		60		ns	
t _f		20		ns	
V _{SD}		1.0	1.5	V	I _{SD} = 12A, V _{GS} = 0V

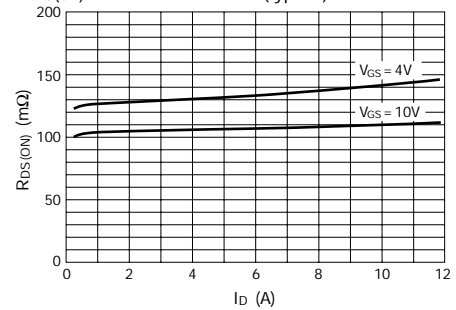
I_D - V_{DS} Characteristics (typical)



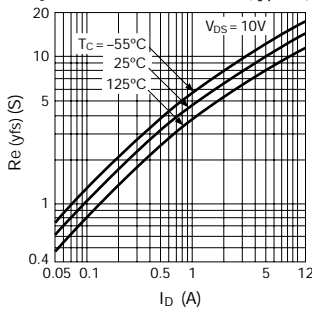
I_D - V_{GS} Characteristics (typical)



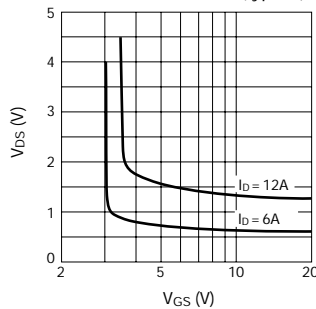
R_{DS(on)} - I_D Characteristics (typical)



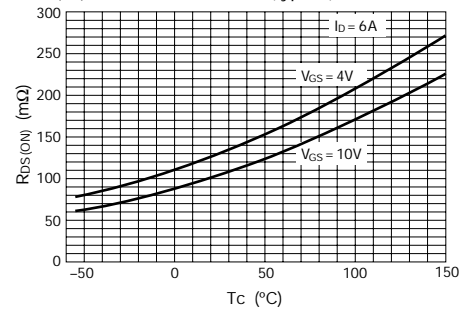
Re (yfs) - I_D Characteristics (typical)



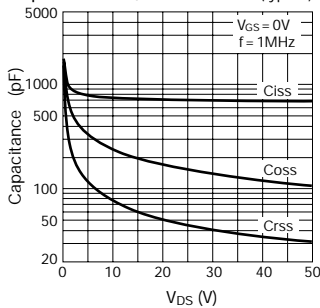
V_{DS} - V_{GS} Characteristics (typical)



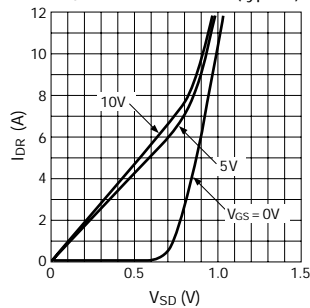
R_{DS(on)} - T_c Characteristics (typical)



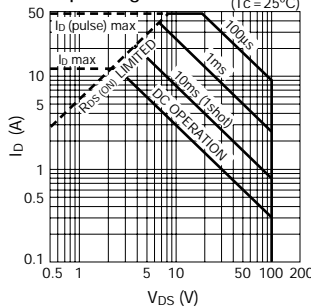
Capacitance - V_{DS} Characteristics (typical)



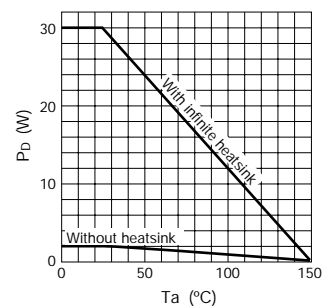
I_{DR} - V_{SD} Characteristics (typical)



Safe Operating Area (Tc = 25°C)



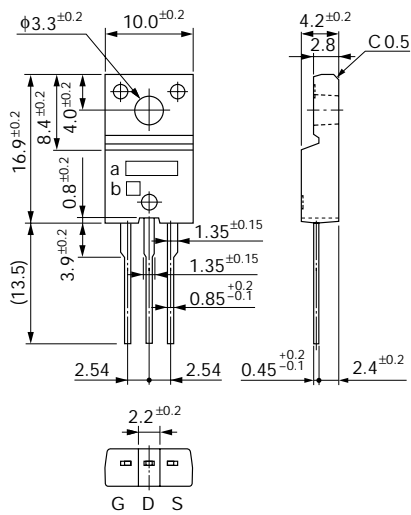
P_D - T_a Characteristics



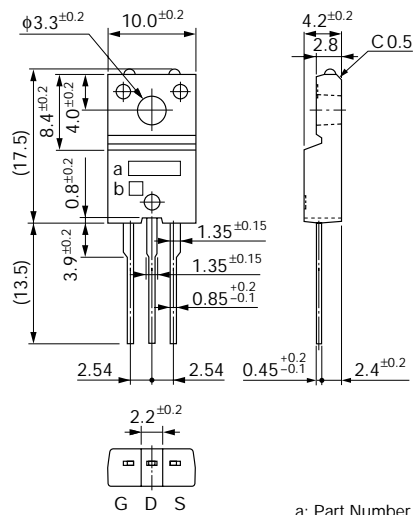
External dimensions (Unit: mm)

① FM20 (TO-220F)

General product



UL approved product

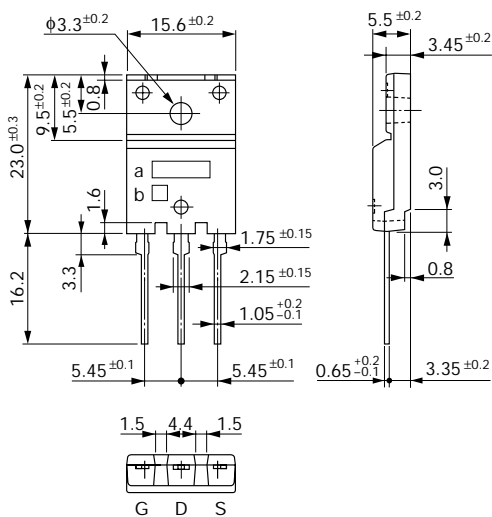


a: Part Number
b: Lot Number

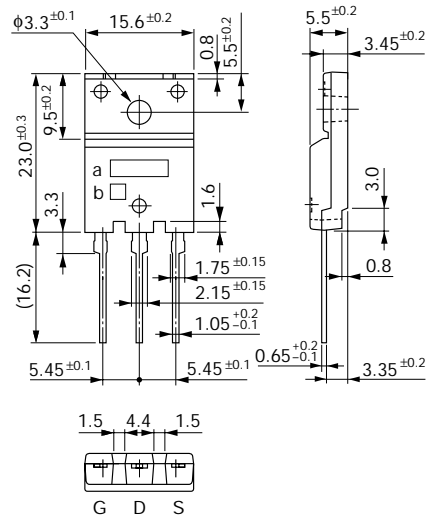
Weight: Approx 2.0g

② FM100 (TO-3PF)

General product



UL approved product



a: Part Number
b: Lot Number

Weight: Approx 6.5g