



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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2SK3199

External dimensions 1 FM20

Absolute Maximum Ratings (Ta = 25°C)

Symbol	Ratings	Unit
V _{DSS}	500	V
V _{GSS}	±30	V
I _D	±5	A
I _D (pulse) *1	±20	A
P _D	30 (T _c = 25°C)	W
E _{AS} *2	35	mJ
I _{AS}	5	A
T _{ch}	150	°C
T _{stg}	-55 to +150	°C

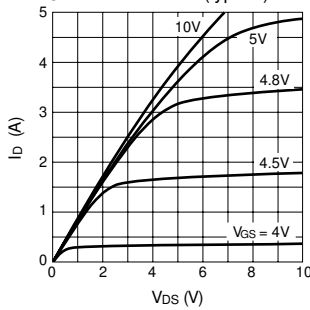
*1: P_w ≤ 100μs, duty cycle ≤ 1%

*2: V_{DD} = 30V, L = 2.6mH, I_L = 5A, unclamped, R_G = 50Ω, See Figure 1 on Page 5.

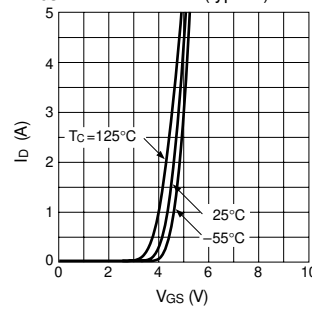
Electrical Characteristics (Ta = 25°C)

Symbol	Ratings			Unit	Conditions
	min	typ	max		
V _{(BR)DSS}	500			V	I _D = 100μA, V _{GS} = 0V
I _{GSS}			±100	nA	V _{GS} = ±30V
I _{DSS}			100	μA	V _{DS} = 500V, V _{GS} = 0V
V _{TH}	2.0	3.0	4.0	V	V _{DS} = 10V, I _D = 1mA
Re _(yfs)	3.5	5.2		S	V _{DS} = 20V, I _D = 2.5A
R _{DS(on)}		1.2	1.5	Ω	V _{GS} = 10V, I _D = 2.5A
C _{iss}		650		pF	V _{DS} = 10V, f = 1.0MHz, V _{GS} = 0V
C _{oss}		250		pF	
C _{rss}		110		pF	
t _{d(on)}		18		ns	I _D = 2.5A, V _{DD} ≐ 250V, R _L = 100Ω, V _{GS} = 10V, See Figure 2 on Page 5.
t _r		30		ns	
t _{d(off)}		60		ns	
t _f		65		ns	
V _{SD}		0.9	1.5	V	I _{SD} = 5A, V _{GS} = 0V
t _{rr}		2		μs	I _{SD} = ±100mA, V _{GS} = 0V

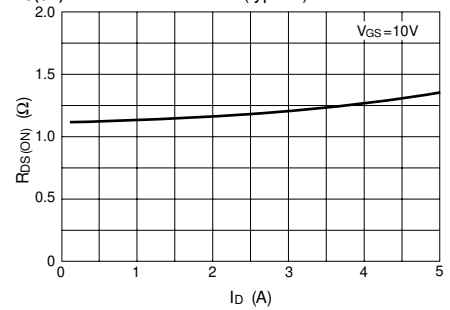
I_D - V_{DS} Characteristics (typical)



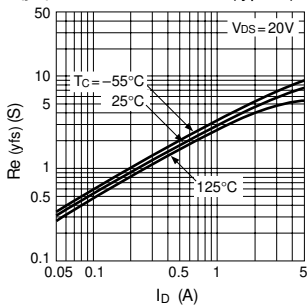
I_D - V_{GS} Characteristics (typical)



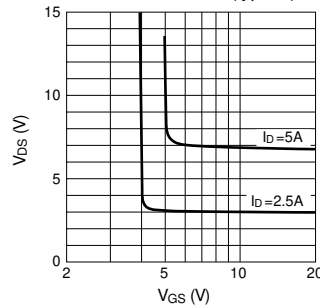
R_{DS(on)} - I_D Characteristics (typical)



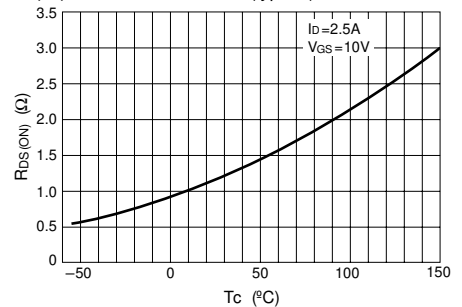
Re (yfs) - I_D Characteristics (typical)



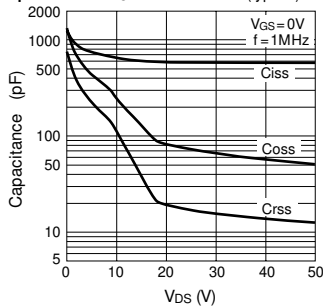
V_{DS} - V_{GS} Characteristics (typical)



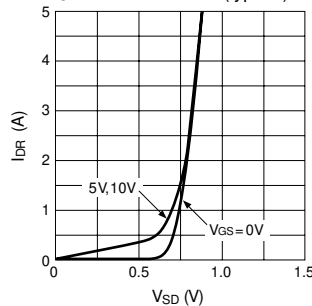
R_{DS(on)} - T_c Characteristics (typical)



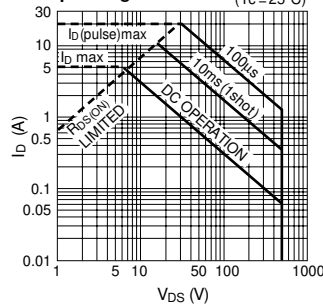
Capacitance - V_{DS} Characteristics (typical)



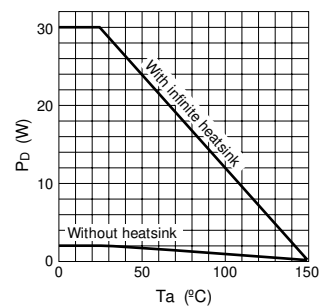
I_{DR} - V_{SD} Characteristics (typical)



Safe Operating Area (T_c = 25°C)



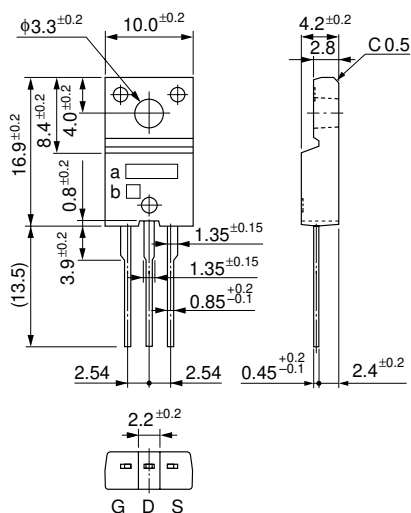
P_D - T_a Characteristics



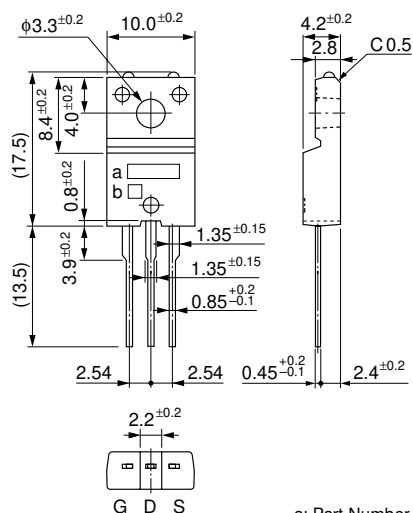
External dimensions (Unit: mm)

① FM20 (TO-220F)

General product



UL approved product

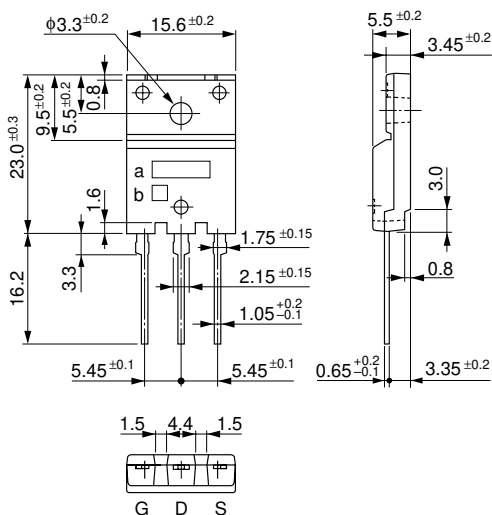


a: Part Number
b: Lot Number

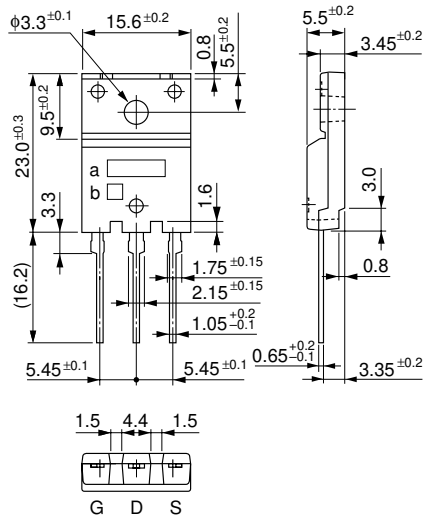
Weight: Approx 2.0g

② FM100 (TO-3PF)

General product



UL approved product



a: Part Number
b: Lot Number

Weight: Approx 6.5g