SILICON N CHANNEL MOS TYPE (π-MOS)

2SK385

HIGH SPEED, HIGH VOLTAGE SWITCHING APPLICATIONS.

SWITCHING REGULATOR, DC-DC CONVERTER AND MOTOR DRIVE APPLICATIONS.

INDUSTRIAL APPLICATIONS

FEATURES:

. High Breakdown Voltage : $V_{(BR)DSS}$=400V

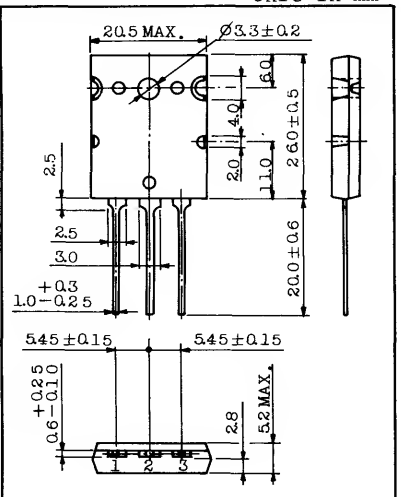
. High Forward Transfer Admittance : $|Y_{fs}|$ =5S (Typ.)

. Low Leakage Current : I_{GSS}=±100nA(Max.) @ V_{GS}=±20V

I_{DSS}=1mA(Max.) @ V_{DS}=400V

. Enhancement-Mode : V_{th}=1.5~3.5V @ I_D=1mA

Unit in mm



1. GATE
2. DRAIN (HEAT SINK)
3. SOURCE

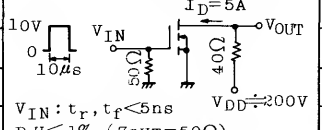
JEDEC	—
EIAJ	—
TOSHIBA	2-21F1B

Weight : 9.7g

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		V_{DSX}	400	V
Gate-Source Voltage		V_{GSS}	±20	V
Drain Current	DC	I_D	10	A
	Pulse	I_{DP}	15	
Drain Power Dissipation (Tc=25°C)		P_D	120	W
Channel Temperature		T_{ch}	150	°C
Storage Temperature Range		T_{stg}	-55~150	°C

ELECTRICAL CHARACTERISTICS Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakgae Current		I_{GSS}	V_{GS}=±20V, V_{DS}=0	-	-	±100	nA
Drain Cut-off Current		I_{DSS}	V_{DS}=400V, V_{GS}=0	-	-	1.0	mA
Drain-Source Breakdown Voltage		$V_{(BR)DSS}$	I_D=10mA, V_{GS}=0	400	-	-	V
Gate Threshold Voltage		V_{th}	V_{DS}=10V, I_D=1mA	1.5	-	3.5	V
Forward Transfer Admittance		$\|Y_{fs}\|$	V_{DS}=10V, I_D=5A	3.0	5.0	-	S
Drain-Source ON Resistance		$R_{DS(ON)}$	I_D=5A, V_{GS}=10V	-	0.45	0.6	Ω
Drain-Source ON Voltage		$V_{DS(ON)}$	I_D=10A, V_{GS}=10V	-	5	7	V
Input Capacitance		C_{iss}	V_{DS}=10V, V_{GS}=0, f=1MHz	-	1500	2000	pF
Reverse Transfer Capacitance		C_{rss}	V_{DS}=10V, V_{GS}=0, f=1MHz	-	150	300	pF
Output Capacitance		C_{oss}	V_{DS}=10V, V_{GS}=0, f=1MHz	-	400	600	pF
Switching Time	Rise Time	t_r		-	50	100	ns
	Turn-on Time	t_{on}		-	80	150	ns
	Fall Time	t_f		-	80	150	ns
	Turn-off Time	t_{off}		-	350	700	ns