T-39-13

SEMICONDUCTOR

TECHNICAL DATA

TOSHIBA FIELD EFFECT TRANSISTOR

2SK572

SILICON N CHANNEL MOS TYPE (π-MOS)

TENTATIVE

HIGH SPEED, HIGH VOLTAGE SWITCHING APPLICATIONS.

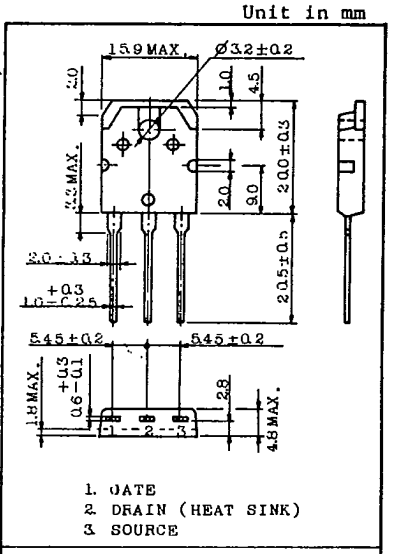
SWITCHING REGULATOR, DC-DC CONVERTER AND MOTOR DRIVE APPLICATIONS.

INDUSTRIAL APPLICATIONS

FEATURES:

- Low Drain-Source ON Resistance : $R_{DS(ON)}$=0.12Ω(Typ.)
- High Forward Transfer Admittance : $|Y_{fs}|$ =6.5S(Typ.)
- Low Leakage Current : I_{GSS}=±100nA(Max.) @ V_{GS}=±20V
  I_{DSS}=300μA(Max.) @ V_{DS}=150V
- Enhancement-Mode : V_{th}=1.5~3.5V @ I_D=1mA

Unit in mm



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

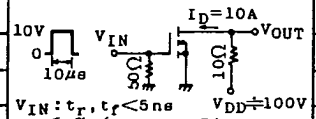
JEDEC	—
EIAJ	—
TOSHIBA	2-16C1B

Weight : 4.6g

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		V_{DSX}	150	V
Gate-Source Voltage		V_{GSS}	±20	V
Drain Current	DC	I_D	15	A
	Pulse	I_{DP}	30	
Drain Power Dissipation (Tc=25°C)		P_D	100	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 Leakage Current		I_{GSS}	V_{GS}=±20V, V_{DS}=0	-	-	±100	nA
Drain Cut-off Current		I_{DSS}	V_{DS}=150V, V_{GS}=0	-	-	300	μA
Drain-Source Breakdown Voltage		$V_{(BR)DSS}$	I_D=10mA, V_{GS}=0	150	-	-	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=10A	3.5	6.5	-	S
Drain-Source ON Resistance		$R_{DS(ON)}$	I_D=10A, V_{GS}=10V	-	0.12	0.18	Ω
Drain-Source ON Voltage		$V_{DS(ON)}$	I_D=15A, V_{GS}=10V	-	1.8	2.8	V
Input Capacitance		C_{iss}	V_{DS}=10V, V_{GS}=0, f=1MHz	-	1100	1500	pF
Reverse Transfer Capacitance		C_{rss}	V_{DS}=10V, V_{GS}=0, f=1MHz	-	310	430	pF
Output Capacitance		C_{oss}	V_{DS}=10V, V_{GS}=0, f=1MHz	-	630	850	pF
Switching Time	Rise Time	t_r		-	110	220	ns
	Turn-on Time	t_{on}		-	130	260	ns
	Fall Time	t_f		-	100	200	ns
	Turn-off Time	t_{off}		-	300	600	ns