SEMICONDUCTOR
TECHNICAL DATA

TOSHIBA FIELD EFFECT TRANSISTOR

2SK526

SILICON N CHANNEL MOS TYPE

(π-MOS)

INDUSTRIAL APPLICATIONS

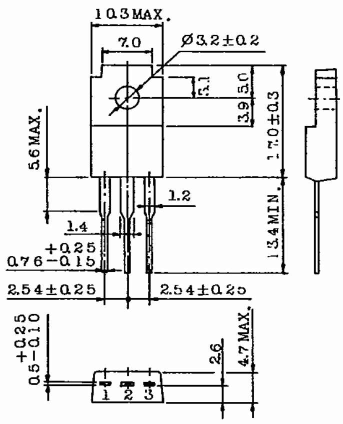
HIGH SPEED, HIGH VOLTAGE SWITCHING APPLICATIONS.

DC-DC CONVERTER, MOTOR AND SOLENOID DRIVE APPLICATIONS.

FEATURES:

- Low Drain-Source ON Resistance : $R_{DS(ON)}$=0.4Ω (Typ.)
- High Forward Transfer Admittance: $|Y_{fs}|$=4S (Typ.)
- High Drain Current : I_{DP}=15A (Max.)
- Low Leakage Current: I_{GSS}=±100nA (Max.) @V_{GS}=±20V
  I_{DSS}=1mA (Max.) @V_{DS}=250V
- Enhancement-Mode : V_{th}=1.5～3.5V @I_D=1mA

Unit in mm



1. GATE
2. DRAIN
3. SOURCE

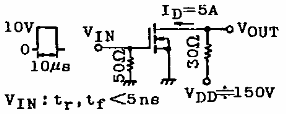
JEDEC	−
EIAJ	−
TOSHIBA	2−10L1B

Weight : 2.1g

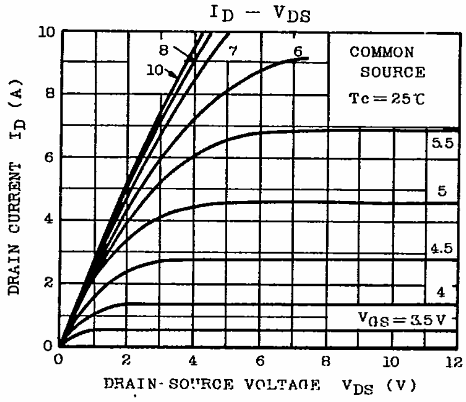
MAXIMUM RATINGS (Ta=25°C)

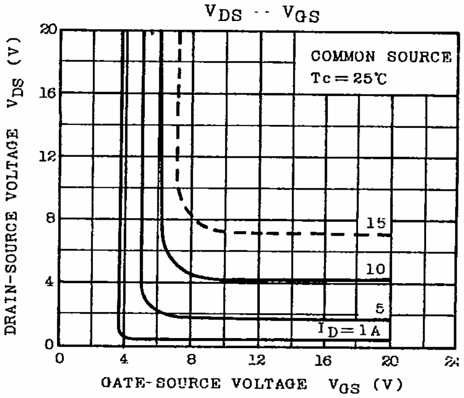
CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		V_{DSX}	250	V
Gate-Source Voltage		V_{GSS}	±20	V
Drain Current	DC	I_D	10	A
	Pulse	I_{DP}	15	
Drain Power Dissipation	Ta=25°C	P_D	2.0	W
	Tc=25°C		40	
Channel Temperature		T_{ch}	150	°C
Storage Temperature Range		T_{stg}	−55 ~150	°C

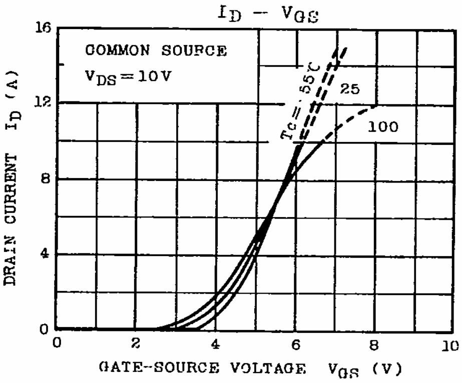
ELECTRICAL CHARACTERISTICS (Ta=25°C)

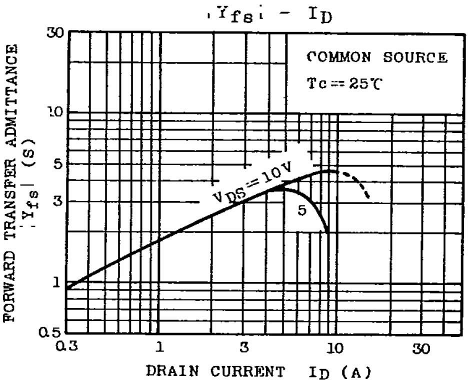
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I_{GSS}	V_{GS}=±20V, V_{DS}=0	−	−	±100	nA
Drain Cut-off Current		I_{DSS}	V_{DS}=250V, V_{GS}=0	−	−	1.0	mA
Drain-Source Breakdown Voltage		$V_{(BR)DSS}$	I_D=10mA, V_{GS}=0	250	−	−	V
Gate Threshold Voltage		V_{th}	V_{DS}=10V, I_D=1mA	1.5	−	3.5	V
Forward Transfer Admittance		$\|Y_{fs}\|$	V_{DS}=10V, I_D=5A	2.0	4.0	−	S
Drain-Source ON Resistance		$R_{DS(ON)}$	I_D=5A, V_{GS}=10V	−	0.4	0.6	Ω
Drain-Source ON Voltage		$V_{DS(ON)}$	I_D=10A, V_{GS}=10V	−	4.5	7	V
Input Capacitance		C_{iss}	V_{DS}=10V, V_{GS}=0, f=1MHz	−	660	900	pF
Reverse Transfer Capacitance		C_{rss}	V_{DS}=10V, V_{GS}=0, f=1MHz	−	80	150	pF
Output Capacitance		C_{oss}	V_{DS}=10V, V_{GS}=0, f=1MHz	−	260	400	pF
Switching Time	Rise Time	t_r	 V_{IN} : t_r, t_f <5ns D.U≦1% (Z_{OUT}=50Ω)	−	50	100	ns
	Turn-on Time	t_{on}		−	70	140	
	Fall Time	t_f		−	60	120	
	Turn-off Time	t_{off}		−	160	320	

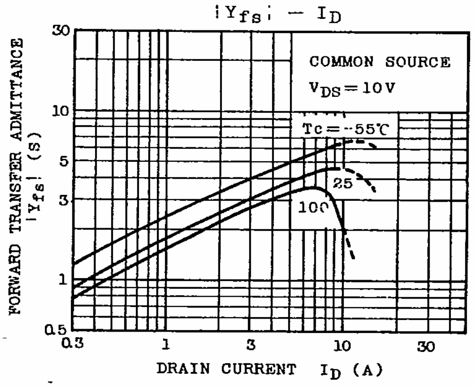
THIS TRANSISTOR IS THE ELECTROSTATIC SENSITIVE DEVICE. PLEASE HANDLE WITH CAUTION.

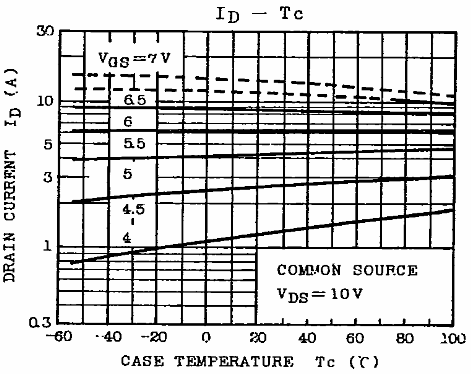

$I_D - V_{DS}$


$V_{DS} - V_{GS}$

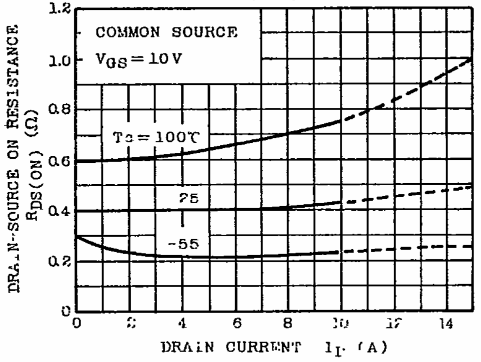

$I_D - V_{GS}$


$|Y_{fs}| - I_D$

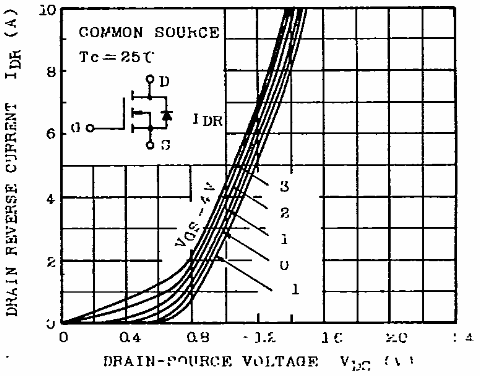

$|Y_{fs}| - I_D$


$I_D - Tc$

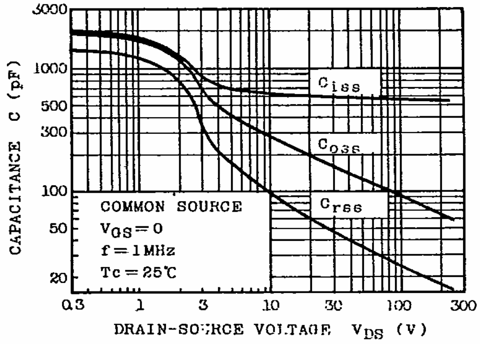
RDS(ON) — ID



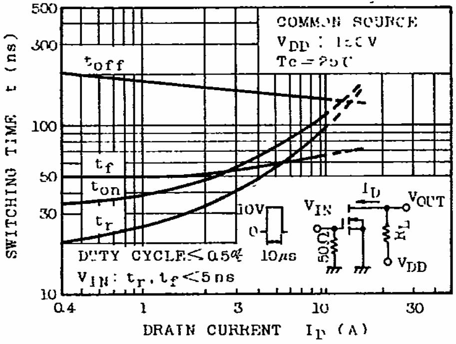
I_{DR} — V_{DS}



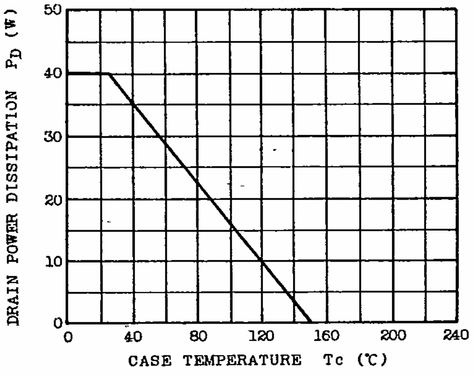
CAPACITANCE - V_{DS}



SWITCHING TIME — I_D



P_D — Tc



SAFE OPERATING AREA