

9097250 TOSHIBA (DISCRETE/OPTO)

99D 16692 D

T-39-11

TOSHIBA FIELD EFFECT TRANSISTOR

2SK527

SILICON N CHANNEL MOS TYPE
(π -MOS)

SEMICONDUCTOR

TECHNICAL DATA

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

FEATURES:

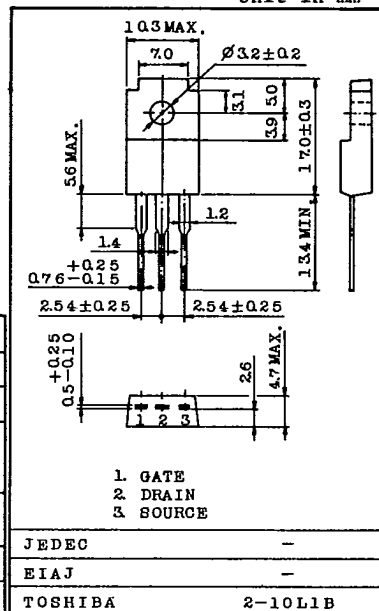
- Low Drain-Source ON Resistance : $R_{DS(ON)} = 0.1\Omega$ (Typ.)
- High Forward Transfer Admittance : $|Y_{fs}| = 4S$ (Typ.)
- Low Leakage Current : $I_{GSS} = \pm 100nA$ (Max.) @ $V_{GS} = \pm 20V$
 $I_{DSS} = 1mA$ (Max.) @ $V_{DS} = 60V$
- Enhancement-Mode : $V_{th} = 1.5 \sim 3.5V$ @ $I_D = 1mA$
- TO-220 Isolation Package Which Requires Neither
Insulating Bushing Nor Mica Insulator.

MAXIMUM RATINGS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DSX}	60	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current	DC	I_D	10
	Pulse	I_{DP}	15
Drain Power Dissipation ($T_c = 25^\circ C$)	P_D	40	W
Channel Temperature	T_{ch}	150	$^\circ C$
Storage Temperature Range	T_{stg}	$-55 \sim 150$	$^\circ C$

INDUSTRIAL APPLICATIONS

Unit in mm

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

Weight : 2.1g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0$	-	-	± 100	nA
Drain Cut-off Current	I_{DSS}	$V_{DS} = 60V, V_{GS} = 0$	-	-	1.0	mA
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 10mA, V_{GS} = 0$	60	-	-	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	4	-	S
Drain-Source ON Resistance	$R_{DS(ON)}$	$I_D = 5A, V_{GS} = 10V$	-	0.10	0.14	Ω
Drain-Source ON Voltage	$V_{DS(ON)}$	$I_D = 10A, V_{GS} = 10V$	-	1.0	1.5	V
Input Capacitance	C_{iss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	-	850	1100	pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	-	370	600	pF
Output Capacitance	C_{oss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	-	800	1100	pF
Switching Time	Rise Time	t_r	-	100	200	ns
	Turn-on Time	t_{on}	-	120	240	ns
	Fall Time	t_f	-	85	170	ns
	Turn-off Time	t_{off}	-	160	320	ns

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

TOSHIBA CORPORATION

9097250 TOSHIBA (DISCRETE/OPTO)

99D 16693

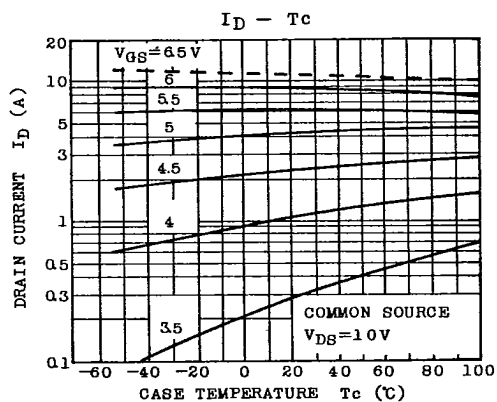
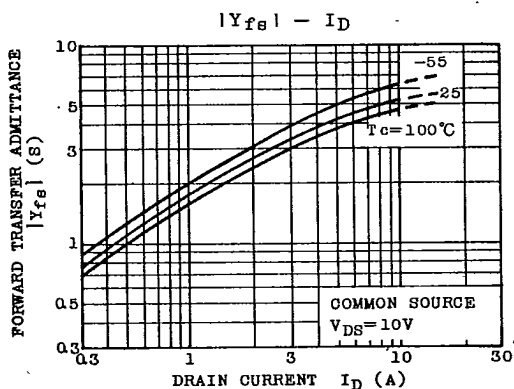
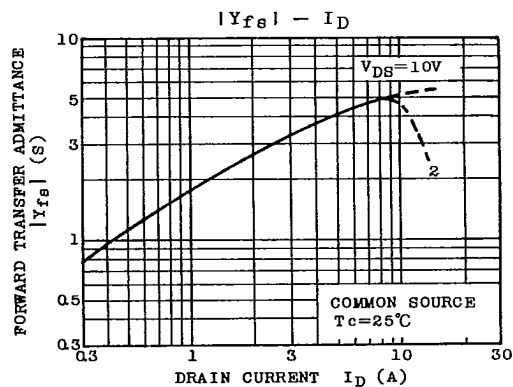
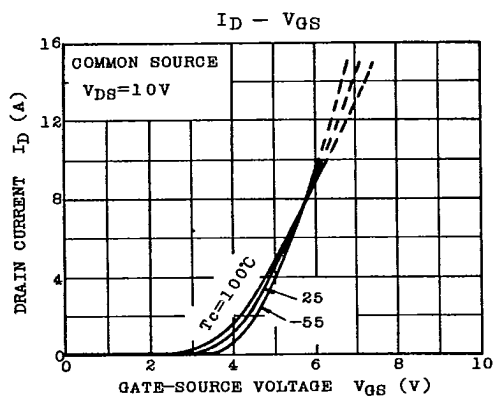
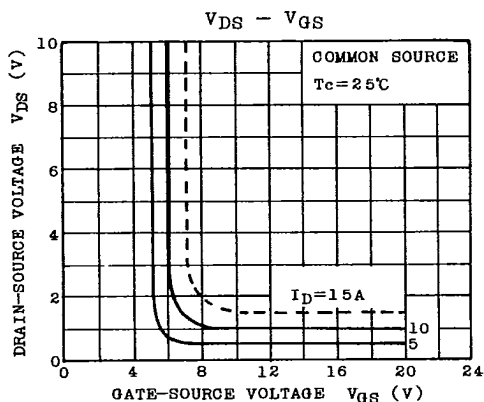
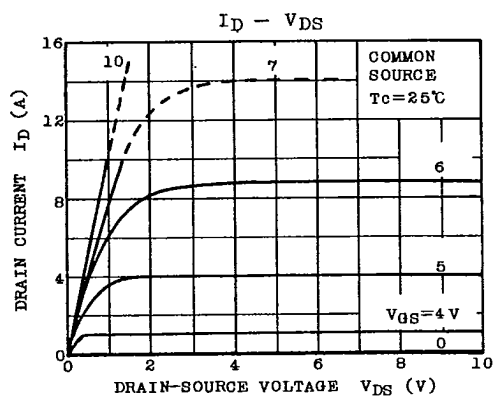
DT-39-1/



SEMICONDUCTOR

TECHNICAL DATA

2SK527



TOSHIBA CORPORATION

9097250 TOSHIBA (DISCRETE/OPTO)

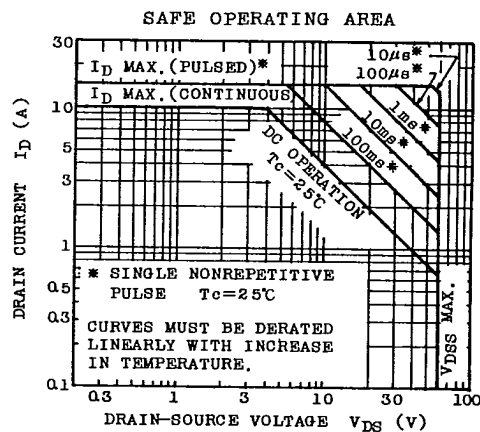
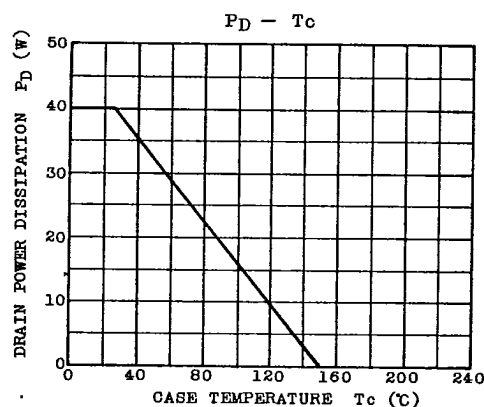
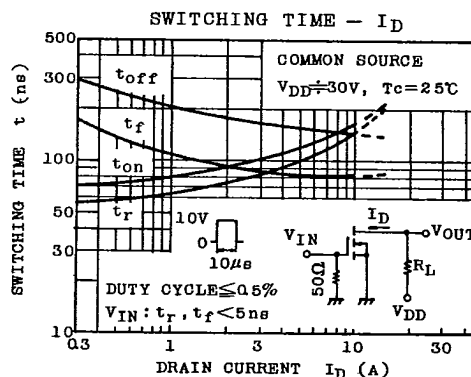
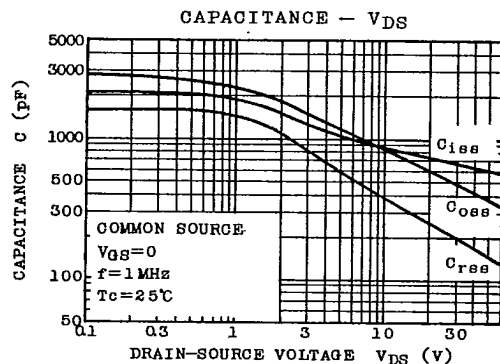
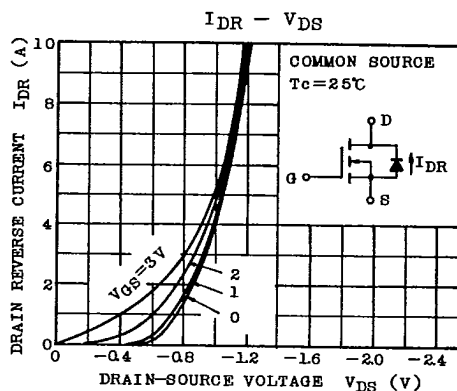
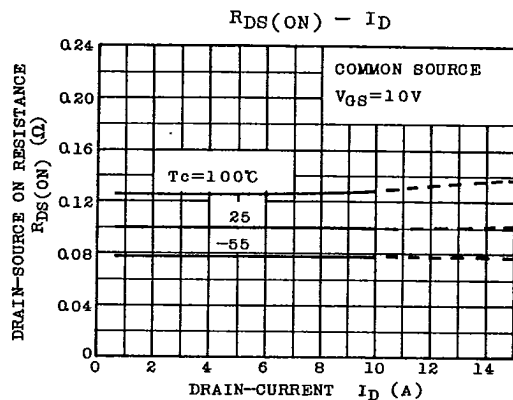
99D 16694 DT-39-1)



SEMICONDUCTOR

TECHNICAL DATA

2SK527



TOSHIBA CORPORATION