

9097250 TOSHIBA (DISCRETE/OPTO)

99D 16680 D

T-39-09



SEMICONDUCTOR

TECHNICAL DATA

TOSHIBA FIELD EFFECT TRANSISTOR

2SK442

SILICON N CHANNEL MOS TYPE

HIGH SPEED SWITCHING APPLICATION.

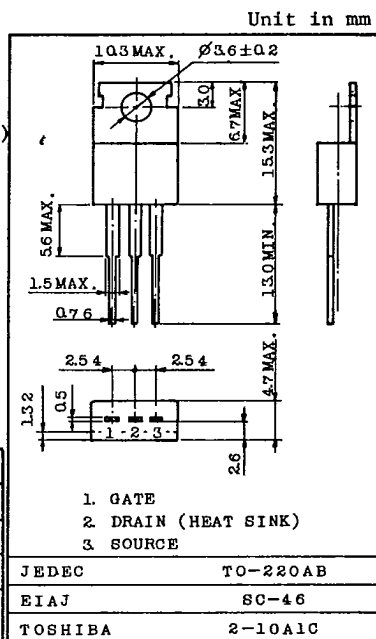
DC-DC CONVERTER APPLICATION.

FEATURES:

- Low Drain-Source Saturation Voltage : $V_{DS(ON)}=1.4V(Typ.)$
- High Forward Transfer Admittance : $|Y_{fs}|=1.9S(Typ.)$
- Complementary to 2SJ123.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DSS}	70	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current	I_D	10	A
Drain Power Dissipation ($T_c=25^{\circ}C$)	P_D	30	W
Channel Temperature	T_{ch}	150	$^{\circ}C$
Storage Temperature Range	T_{stg}	$-55 \sim 150$	$^{\circ}C$



Weight : 1.9g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GSS}	$V_{DS}=0, V_{GS}=\pm 20V$	-	-	± 1.0	μA
Drain Cut-off Current	I_{DSS}	$V_{DS}=70V, V_{GS}=0$	-	-	1.0	mA
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA, V_{GS}=0$	70	-	-	V
Gate-Source Cut-off Voltage	$V_{GS(OFF)}$	$V_{DS}=5V, I_D=1mA$	1.0	-	3.0	V
Drain-Source Saturation Voltage	$V_{DS(ON)}$	$I_D=7A, V_{GS}=15V$	-	1.4	2.8	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS}=5V, I_D=2A$	1.0	1.9	-	S
Input Capacitance	C_{iss}	$V_{DS}=10V, V_{GS}=0, f=1MHz$	-	330	-	pF
Output Capacitance	C_{oss}	$V_{DS}=10V, V_{GS}=0, f=1MHz$	-	300	-	pF
Reverse Transfer Capacitance	C_{rs}	$V_{DS}=10V, V_{GS}=0, f=1MHz$	-	130	-	pF

TOSHIBA CORPORATION

GT1A2

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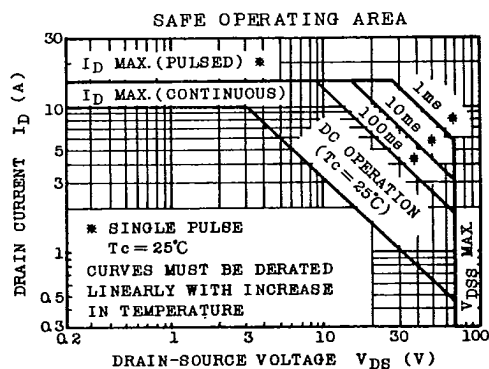
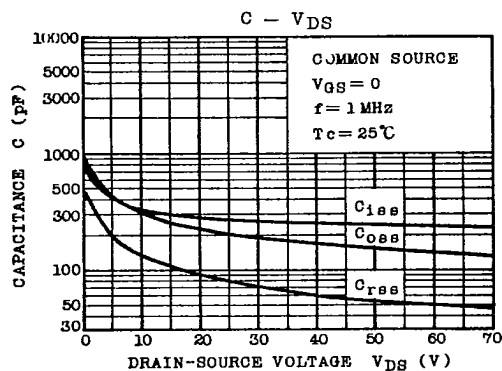
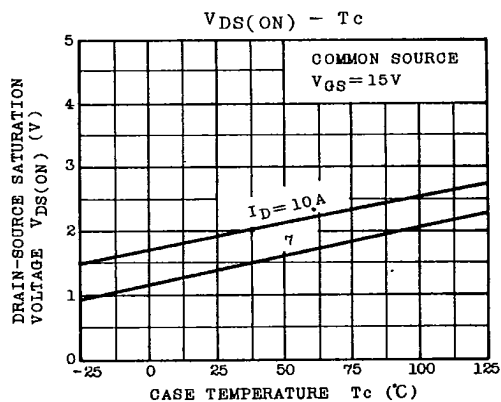
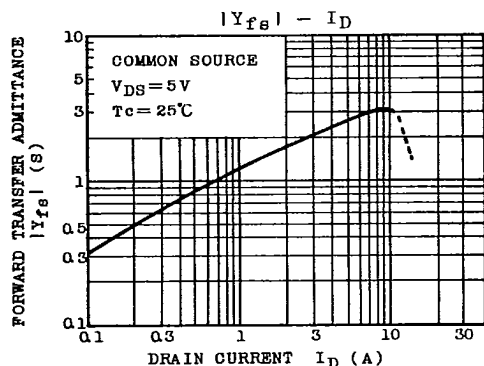
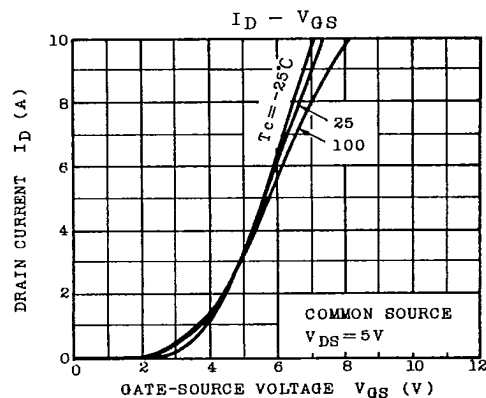
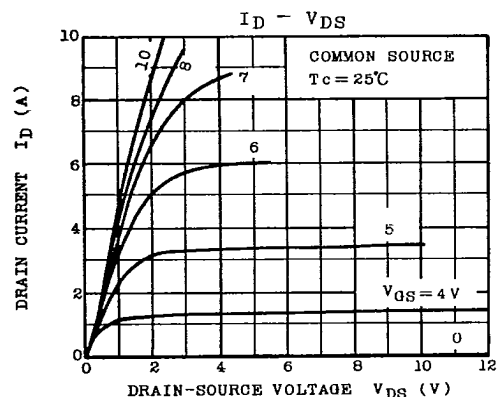
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TOSHIBA CORPORATION

GT1A2

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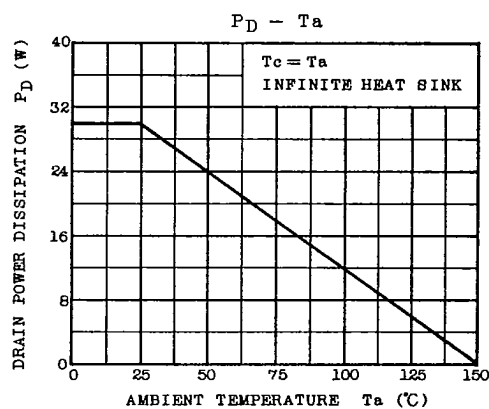
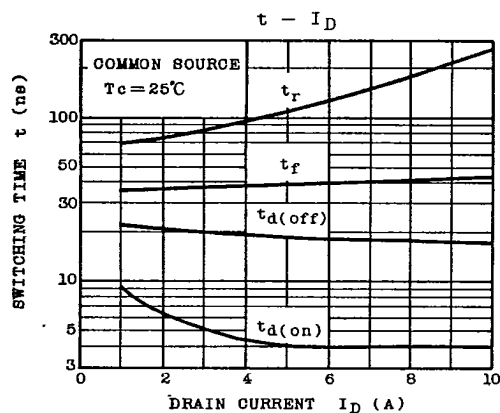
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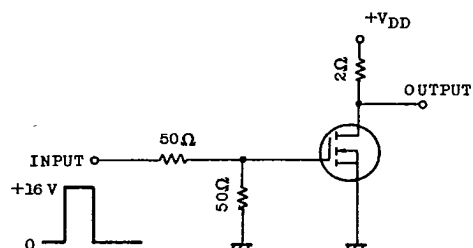
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SWITCHING TIME TEST CIRCUIT



RESPONSE WAVE FORM

