

9097250 TOSHIBA (DISCRETE/OPTO)

99D 16650 D T-39-13



SEMICONDUCTOR

TECHNICAL DATA

TOSHIBA FIELD EFFECT TRANSISTOR

2SK356

SILICON N CHANNEL MOS TYPE
(π -MOS)

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

FEATURES:

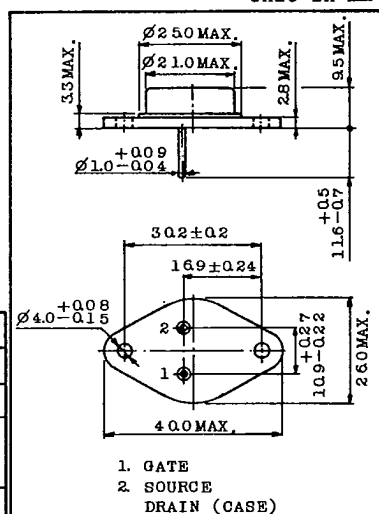
- Low Drain-Source ON Resistance : $R_{DS(ON)} = 0.2\Omega$ (Typ.)
- High Forward Transfer Admittance : $|Y_{fs}| = 6S$ (Typ.)
- Low Leakage Current : $I_{GSS} = \pm 100nA$ (Max.) @ $V_{GS} = \pm 20V$
 $I_{DSS} = 1mA$ (Max.) @ $V_{DS} = 250V$
- Enhancement-Mode : $V_{th} = 1.5 \sim 3.5V$ @ $I_D = 1mA$

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DSX}	250	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current	DC I_D	12	A
	Pulse I_{DP}	30	
Drain Power Dissipation ($T_c = 25^\circ C$)	P_D	120	W
Channel Temperature	T_{ch}	150	$^\circ C$
Storage Temperature Range	T_{stg}	$-65 \sim 150$	$^\circ C$

INDUSTRIAL APPLICATIONS

Unit in mm

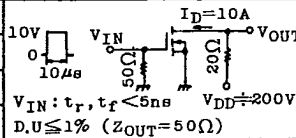


JEDEC	TO-204MA/T0-3
EIAJ	TC-3, TB-3
TOSHIBA	2-21E1B

Weight : 15.8g

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

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}	$V_{DS} = 250V, V_{GS} = 0$	-	-	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} $	$V_{DS} = 10V, I_D = 10A$	3	6	-	S
Drain-Source ON Resistance	$R_{DS(ON)}$	$I_D = 10A, V_{GS} = 10V$	-	0.2	0.25	Ω
Drain-Source ON Voltage	$V_{DS(ON)}$	$I_D = 10A, V_{GS} = 10V$	-	2.0	2.5	V
Input Capacitance	C_{iss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	-	1600	2000	pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	-	220	320	pF
Output Capacitance	C_{oss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	-	570	700	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}	-	320	640	ns



TOSHIBA CORPORATION

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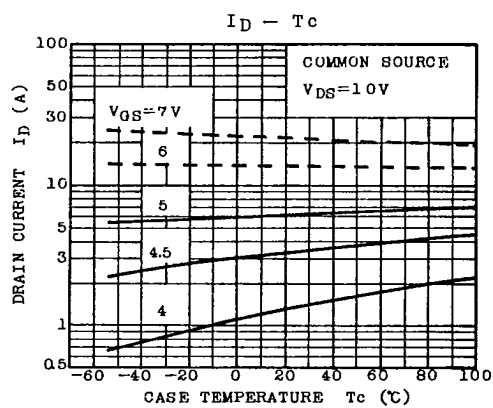
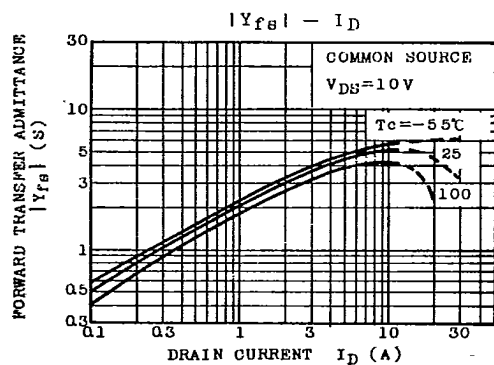
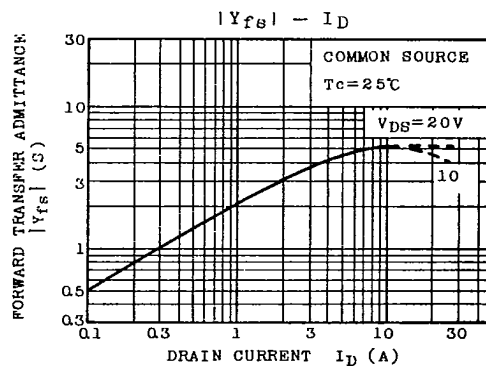
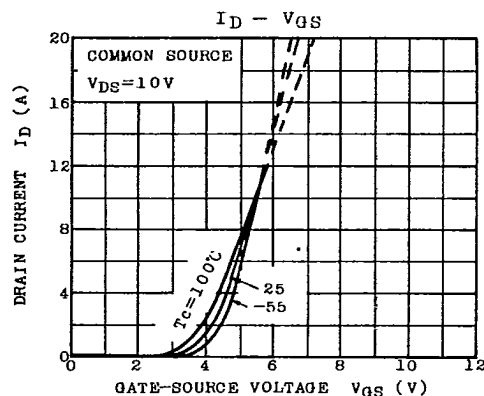
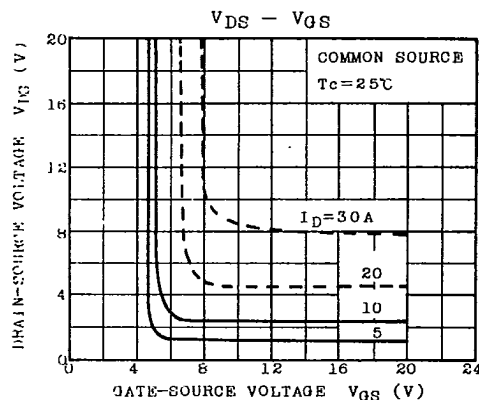
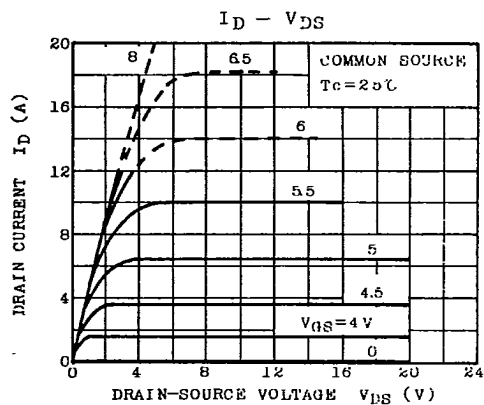
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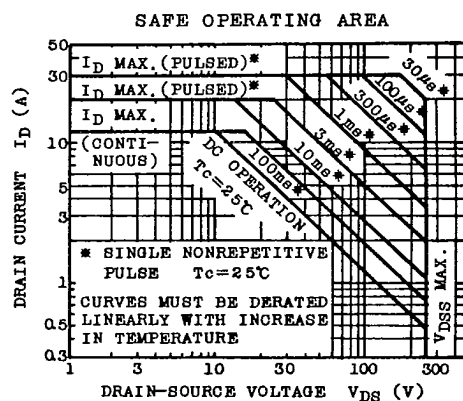
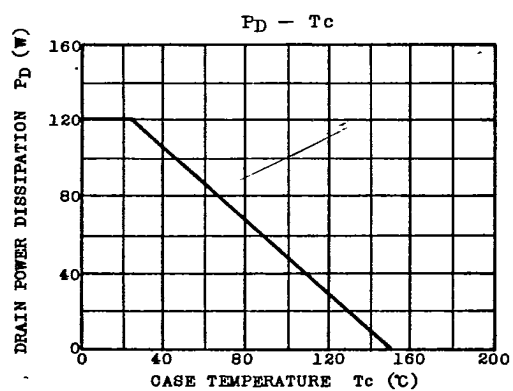
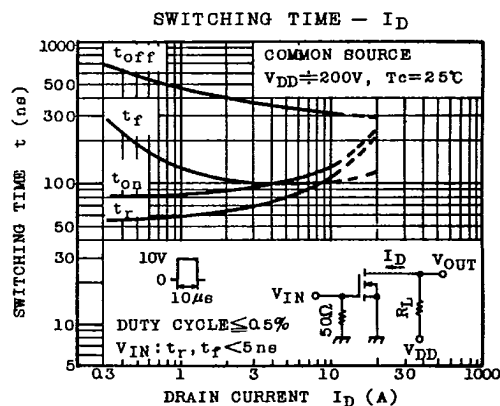
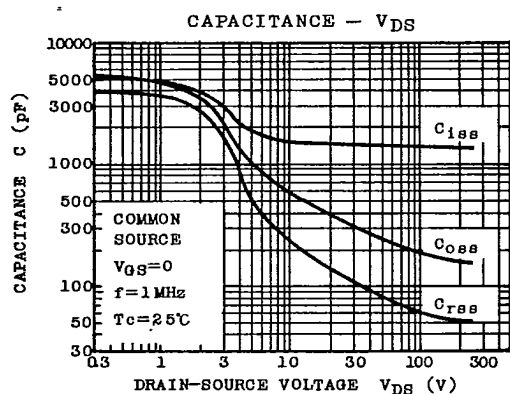
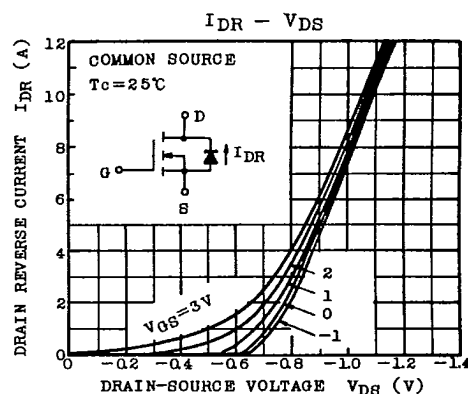
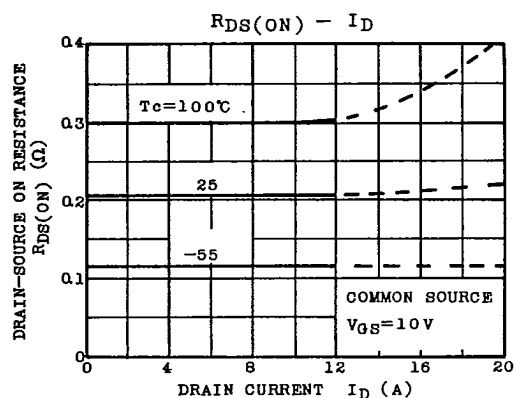
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