

9097250 TOSHIBA (DISCRETE/OPTO)

99D 16683 D

T-39-19

TOSHIBA FIELD EFFECT TRANSISTOR

2SK447

SILICON N CHANNEL MOS TYPE

(π-MOS)



SEMICONDUCTOR

TECHNICAL DATA

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

FEATURES:

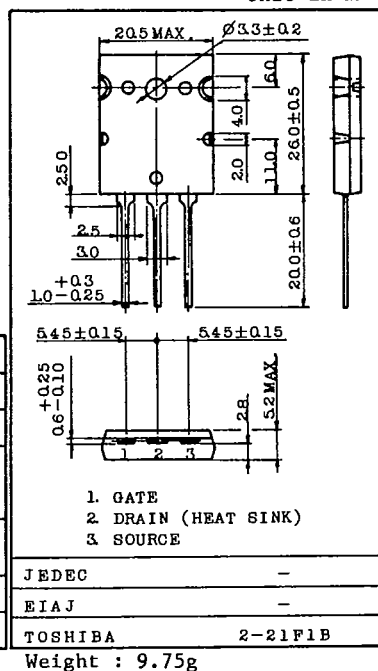
- Low Drain-Source ON Resistance
: $R_{DS(ON)} = 0.24\Omega$ (Max.) ($I_D = 15A$)
- With Built-in Free Wheeling Diode
- Enhancement-Mode

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DS}	250	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current	DC	± 15	A
	Peak	± 30	
Drain Power Dissipation ($T_c = 25^\circ C$)	P_D	150	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 ($T_a = 25^\circ C$)

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} $	$V_{DS} = 10V, I_D = 15A$	4.0	7.0	-	S
Drain-Source ON Resistance	$R_{DS(ON)}$	$I_D = 15A, V_{GS} = 10V$	-	-	0.24	Ω
Source Drain Forward Voltage	V_{SDF}	$I_S = 15A, V_{GS} = 0$	-	-	1.8	V
Input Capacitance	C_{iss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	-	2000	-	pF
Switching Time	Rise Time	$I_D = 15A$ $V_{IN}: t_r, t_f < 5ns$ $V_{DD} = 150V$ $D.U. \leq 1\%$ ($Z_{OUT} = 50\Omega$) $I_D = -15A, R_G = 220\Omega$ $V_{GS} = -15V, di/dt = 60A/\mu s$	-	300	600	ns
	Turn-on Time		-	350	700	ns
	Fall Time		-	200	400	ns
	Turn-off Time		-	600	-	ns
Reverse Recovery	t_{rr}		-	250	600	ns

TOSHIBA CORPORATION

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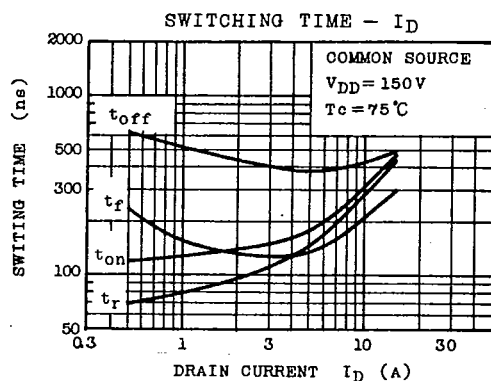
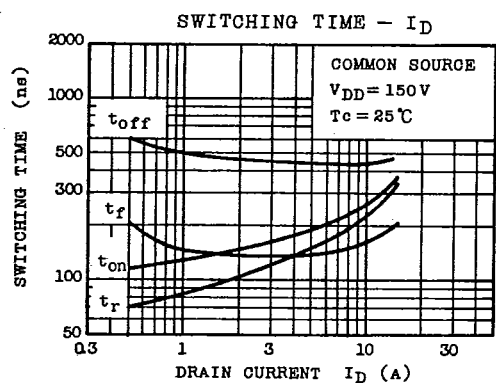
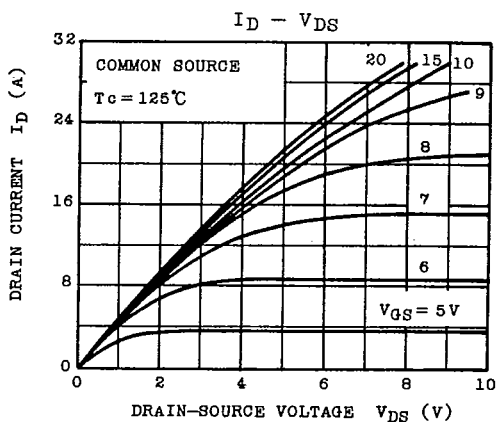
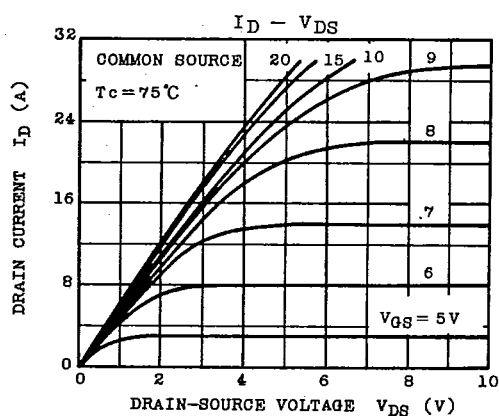
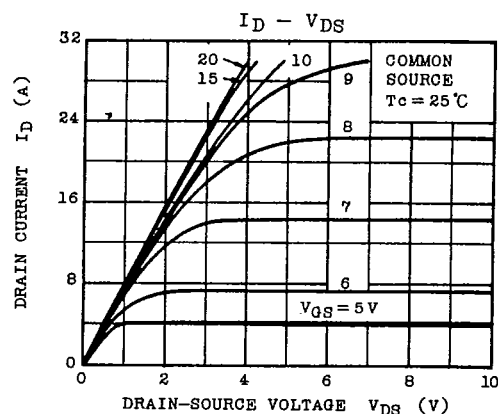
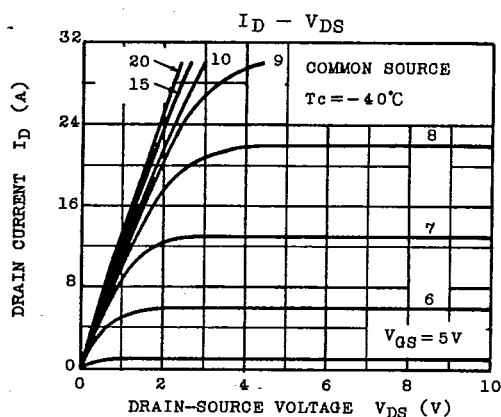
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GT1A2

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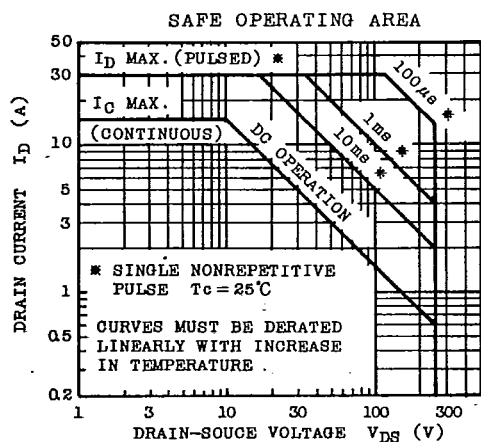
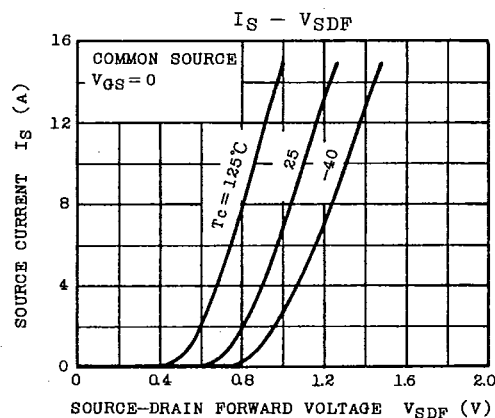
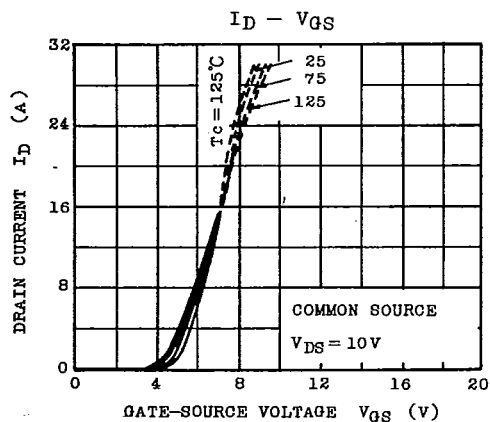
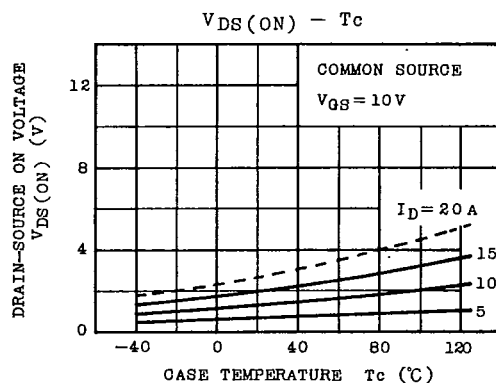
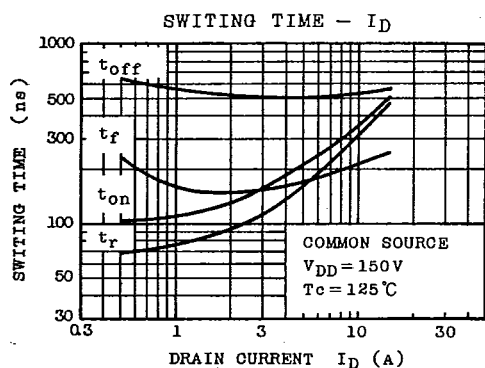
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