

9097250 TOSHIBA (DISCRETE/OPTO)

99D 16723

DT-39-13



SEMICONDUCTOR

TECHNICAL DATA

TOSHIBA FIELD EFFECT TRANSISTOR

2SK573

SILICON N CHANNEL MOS TYPE

(π-MOS)

TENTATIVE

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

FEATURES:

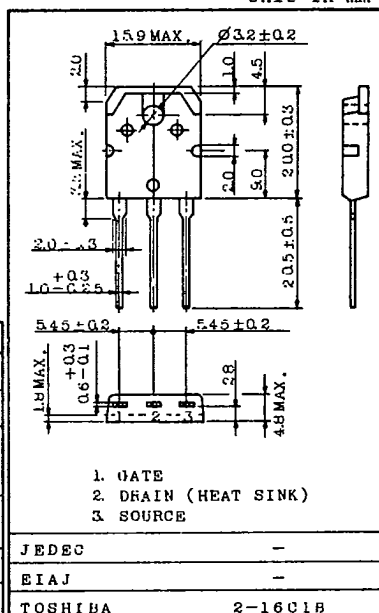
- Low Drain-Source ON Resistance : $R_{DS(ON)} = 0.24\Omega$ (Typ.)
- High Forward Transfer Admittance : $|Y_{fs}| = 6.5S$ (Typ.)
- Low Leakage Current : $I_{GSS} = \pm 100nA$ (Max.) @ $V_{GS} = \pm 20V$
 $I_{DSS} = 300\mu A$ (Max.) @ $V_{DS} = 250V$
- Enhancement-Mode : $V_{th} = 1.5 \sim 3.5V$ @ $I_D = 1mA$

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	15	A
	Pulse	I_{DP}	25	
Drain Power Dissipation ($T_c = 25^\circ C$)		P_D	100	W
Channel Temperature		T_{ch}	150	$^\circ C$
Storage Temperature Range		T_{stg}	$-55 \sim 150$	$^\circ C$

INDUSTRIAL APPLICATIONS

Unit in mm



Weight : 4.6g

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}	$V_{DS} = 250V, V_{GS} = 0$	-	-	300	μA
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} $	$V_{DS} = 10V, I_D = 10A$	3.5	6.5	-	S
Drain-Source ON Resistance		$R_{DS(ON)}$	$I_D = 10A, V_{GS} = 10V$	-	0.24	0.32	Ω
Drain-Source ON Voltage		$V_{DS(ON)}$	$I_D = 15A, V_{GS} = 10V$	-	3.7	4.9	V
Input Capacitance		C_{iss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	-	1100	1500	pF
Reverse Transfer Capacitance		C_{rss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	-	240	350	pF
Output Capacitance		C_{oss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	-	500	700	pF
Switching Time	Rise Time	t_r		-	110	220	ns
	Turn-on Time	t_{on}		-	130	260	ns
	Fall Time	t_f		-	90	180	ns
	Turn-off Time	t_{off}		-	320	640	ns

$V_{IN}: t_r, t_f < 5ns$ $V_{DD} = 200V$
 $D, U \leq 1\%$ ($Z_{OUT} = 50\Omega$)

TOSHIBA CORPORATION

GT1A2

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