

این دیتاشیت توسط توکل الکترونیک تهیه و ارائه شده است.
جهت مشاهده قیمت، موجودی و ثبت سفارش این قطعه به وبسایت توکل الکترونیک مراجعه فرمایید.



مشاهده قیمت و خرید

برای خرید و مشاهده سایر محصولات کلیک کنید



TOSHIBA {DISCRETE/OPTO}

99 DE 9097250 0016731 6

9097250 TOSHIBA (DISCRETE/OPTO)

99D 16731 DT-39-13

SEMICONDUCTOR
TECHNICAL DATA

TOSHIBA FIELD EFFECT TRANSISTOR

2 S K 6 4 4

SILICON N CHANNEL MOS TYPE

(π-MOS)

INDUSTRIAL APPLICATIONS

Unit in mm

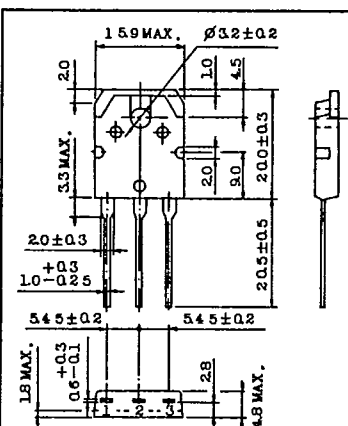
HIGH SPEED, HIGH CURRENT SWITCHING APPLICATIONS.
CHOPPER REGULATOR, DC-DC CONVERTER AND MOTOR
DRIVE APPLICATIONS.

FEATURES:

- Low Drain-Source ON Resistance : $R_{DS(ON)}=0.7\Omega$ (Typ.)
- High Forward Transfer Admittance : $|Y_{fs}|=6.0S$ (Typ.)
- Low Leakage Current : $I_{GSS}=\pm 100nA$ (Max.) @ $V_{GS}=\pm 20V$
 $I_{DSS}=250\mu A$ (Max.) @ $V_{DS}=500V$
- Enhancement-Mode : $V_{th}=2.0\sim 4.0V$ @ $V_{DS}=10V, I_D=1mA$

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		V_{DSX}	500	V
Drain-Gate Voltage ($R_{GS}=20k\Omega$)		V_{DGR}	500	V
Gate-Source Voltage		V_{GSS}	± 20	V
Drain Current	DC	I_D	10	A
	Pulse	I_{DP}	30	
Drain Power Dissipation ($T_c=25^\circ C$)		P_D	125	W
Channel Temperature		T_{ch}	150	$^\circ C$
Storage Temperature Range		T_{stg}	$-55\sim 150$	$^\circ C$



1. GATE
2. DRAIN (HEAT SINK)
3. SOURCE

JEDEC

EIAJ

TOSHIBA 2-16C1B

Weight : 4.6g

THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	MAX.	UNIT
Thermal Resistance, Junction to Case	$R_{th(j-c)}$	1.0	$^\circ C/W$
Thermal Resistance, Junction to Ambient	$R_{th(j-a)}$	50	$^\circ C/W$
Maximum Lead Temperature for Soldering Purposes (1.6mm from case for 10 seconds)	T_L	300	$^\circ C$

TOSHIBA CORPORATION

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- 100 -

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ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		IGSS	V _{GS} =±20V, V _{DS} =0V	-	-	±100	nA
Drain Cut-off Current		IDSS	V _{DS} =500V, V _{GS} =0V	-	-	300	μA
Drain-Source Breakdown Voltage		V _{(BR)DSS}	I _D =10mA, V _{GS} =0V	500	-	-	V
Gate Threshold Voltage		V _{th}	V _{DS} =10V, I _D =1mA	2.0	-	4.0	V
Forward Transfer Admittance		Y _{fs}	V _{DS} =10V, I _D =5A	3.0	6.0	-	S
Drain-Source ON Resistance		R _{DS(ON)}	I _D =5A, V _{GS} =10V	-	0.7	1.0	Ω
Drain-Source ON Voltage		V _{DS(ON)}	I _D =10A, V _{GS} =10V	-	8.5	12.5	V
Input Capacitance		Ciss	V _{DS} =10V, V _{GS} =0V, f=1MHz	-	1350	1800	pF
Reverse Transfer Capacitance		Crss		-	260	450	
Output Capacitance		Coss		-	560	750	
Switching Time	Rise Time	t _r		-	35	70	ns
	Turn-on Time	t _{on}		-	50	100	
	Fall Time	t _f		-	35	70	
	Turn-off Time	t _{off}		-	200	400	
Total Gate Charge (Gate-Source Plus Gate-Drain)		Qg	I _D =10A, V _{GS} =10V V _{DD} =400V	-	47	60	nC
Gate-Source Charge		Qgs		-	22	-	
Gate-Drain ("Miller") Charge		Qgd		-	25	-	

SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Continuous Drain Reverse Current	IDR	--	-	-	10	A
Pulse Drain Reverse Current	IDRP	--	-	-	30	A
Diode Forward Voltage	V _{DSF}	I _{DR} =10A, V _{GS} =0V	-	-	2.0	V
Reverse Recovery Time	t _{rr}	I _{DR} =10A	-	350	-	ns
Reverse Recovered Charge	Q _{rr}	dI _{DR} /dt=100A/μs	-	2.4	-	μC

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- 101 -

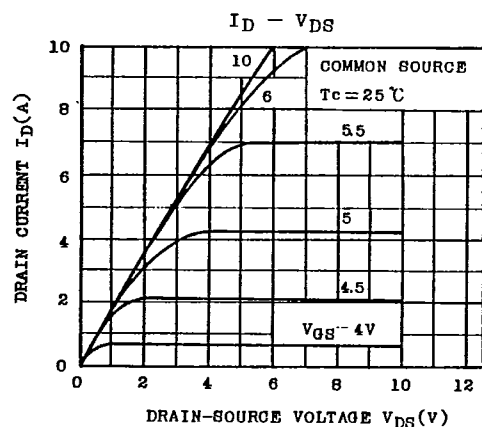
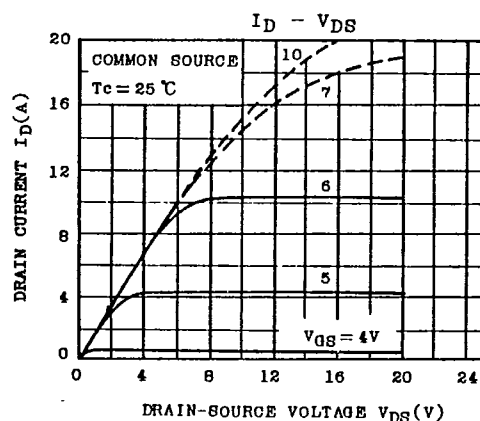
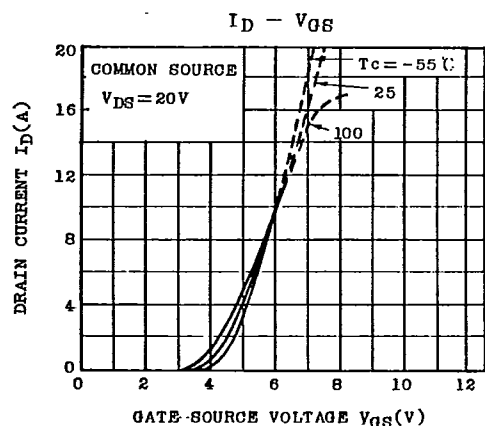
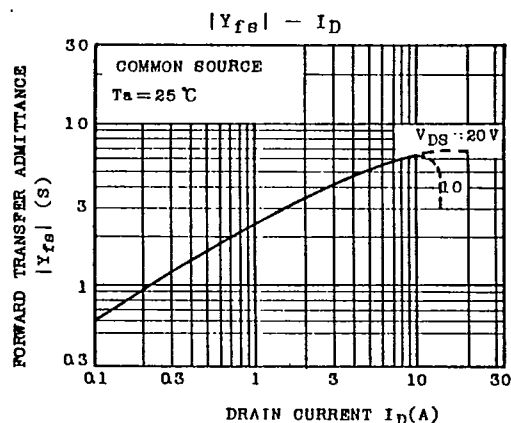
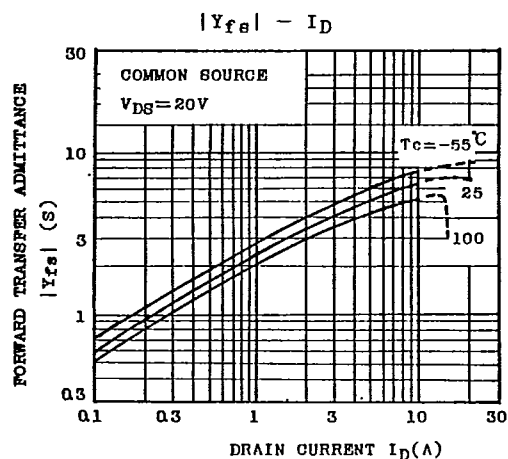
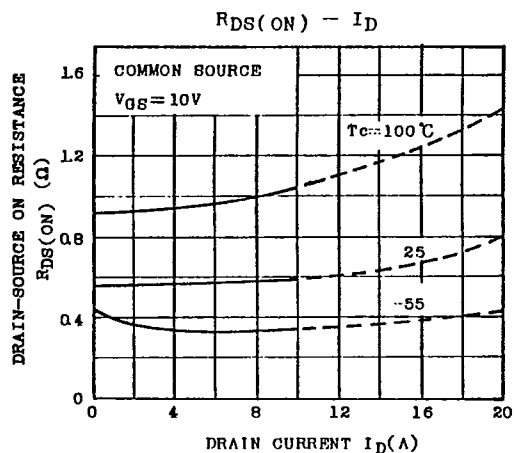
9097250 TOSHIBA (DISCRETE/OPTO)

99D 16733 DT-39-13

TOSHIBA SEMICONDUCTOR

TECHNICAL DATA

2SK644



EGA-2SK644-3

TOSHIBA CORPORATION

9097250 TOSHIBA (DISCRETE/OPTO)

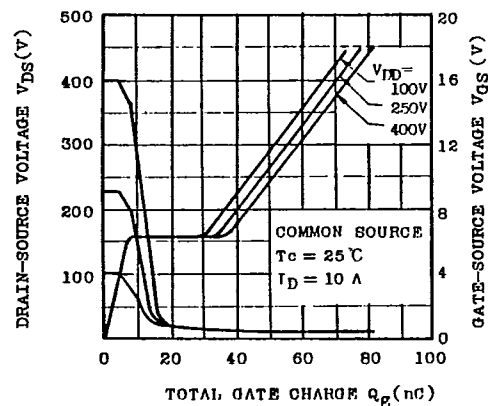
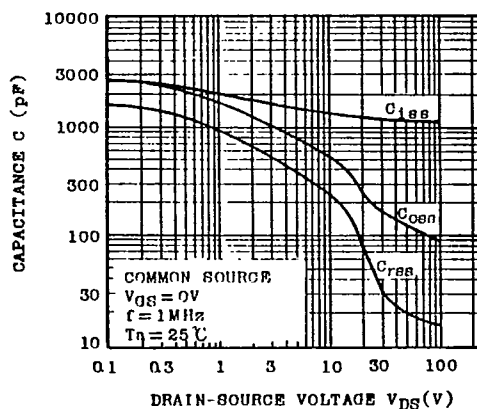
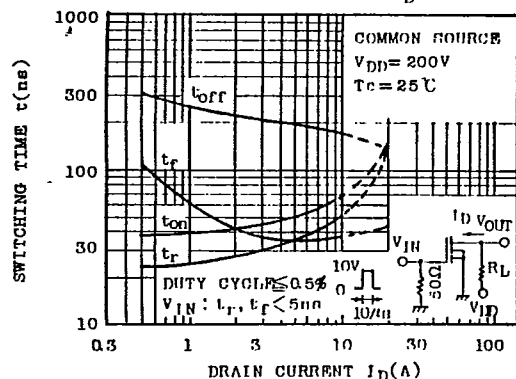
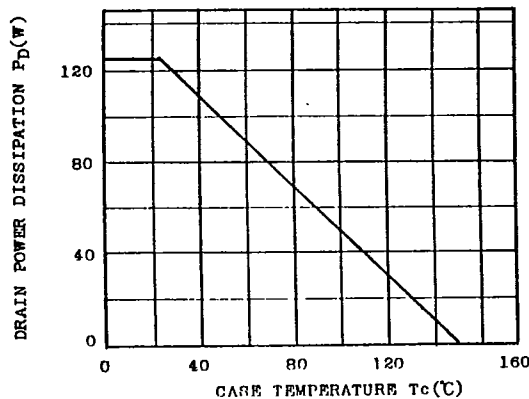
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DT-39-13

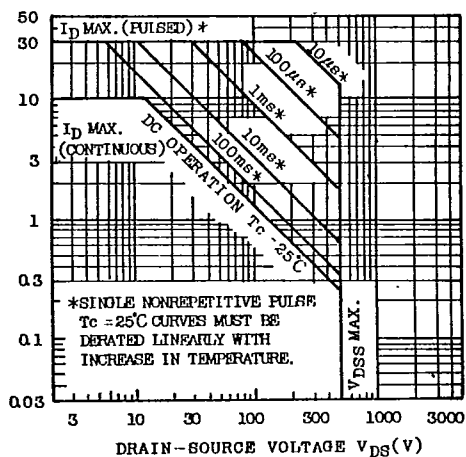
TOSHIBA SEMICONDUCTOR

TECHNICAL DATA

2SK644

DYNAMIC INPUT/OUTPUT
CHARACTERISTICSCAPACITANCE- V_{DS} SWITCHING TIME- I_D  $P_D - T_c$ 

SAFE OPERATING AREA



EGA-2SK644-4

TOSHIBA CORPORATION