



SEMICONDUCTOR

东芝

TECHNICAL DATA

2SK447
MG15D4GM1
MG15D4HM1
MG15D6EM1

T-39-27

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	2SK447 RATING	MODULE	UNIT
Drain-Source Voltage	V _{DSS}	250	250	V
Gate-Source Voltage	V _{GSS}	±20	±20	V
Drain Current	DC	±15	±15	A
	Peak	±30	±30	A
Drain Power Dissipation (Tc=25°C)	P _D	150	100	W
Channel Temperature	T _{ch}	150	150	°C
Storage Temperature Range	T _{stg}	-55~150	-40~125	°C
Isolation Voltage	V _{isol}	—	2500 (AC 1 Min.)	V
Screw Torque	—	—	30	Kg.cm

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Gate Leakage Current	I _{GSS}	V _{GS} =±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	t _r		—	300	600	ns
	Turn-on Time	t _{on}		—	350	700	ns
	Fall Time	t _f		—	200	400	ns
	Turn-off Time	t _{off}		V _{IN} : t _r , t _f < 5ns D.U ≤ 1% (Z _{OUT} = 50Ω)	—	600	1000
Reverse Recovery Time	t _{rr}	I _D =-15A, R _C =220Ω V _{GS} =-15V, di/dt=60A/µs	—	250	600	ns	

TOSHIBA CORPORATION

GT1A2

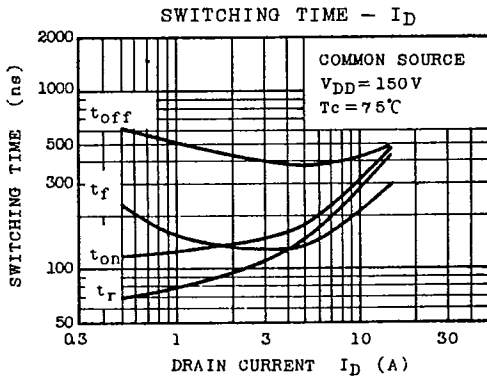
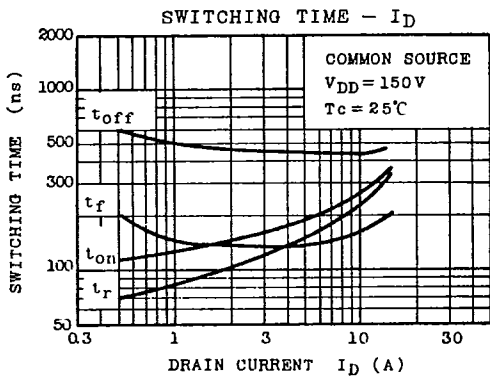
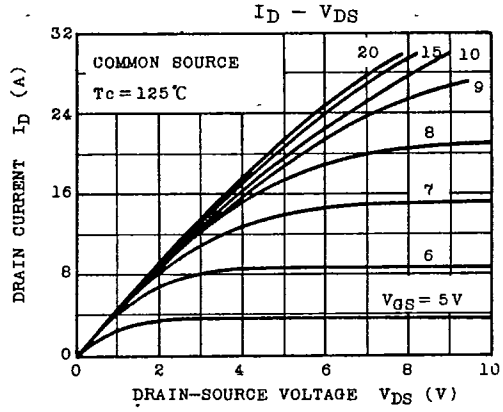
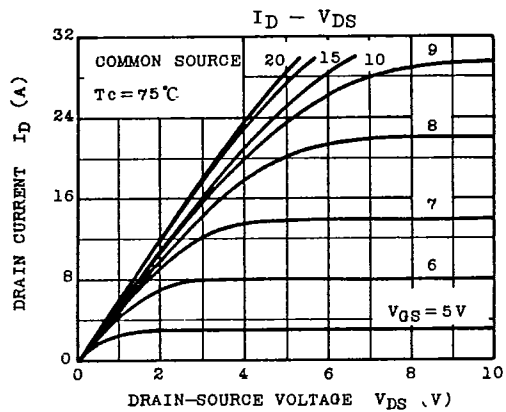
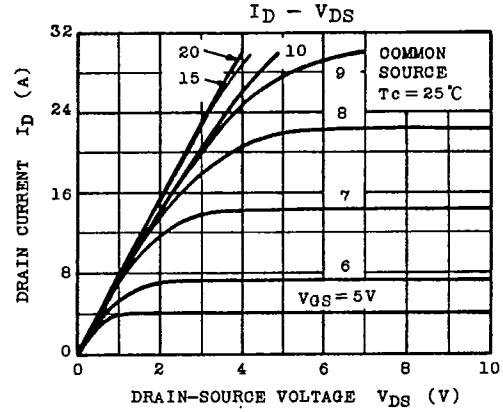
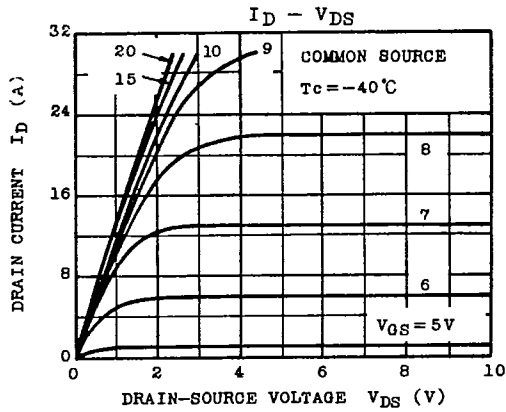


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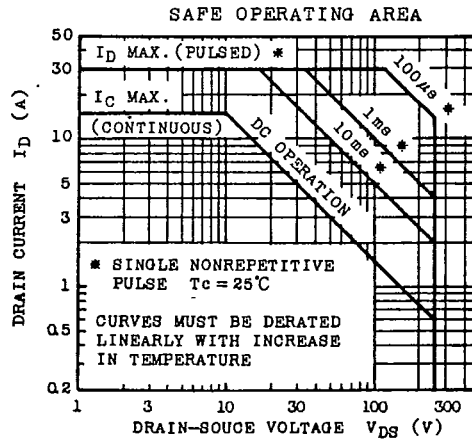
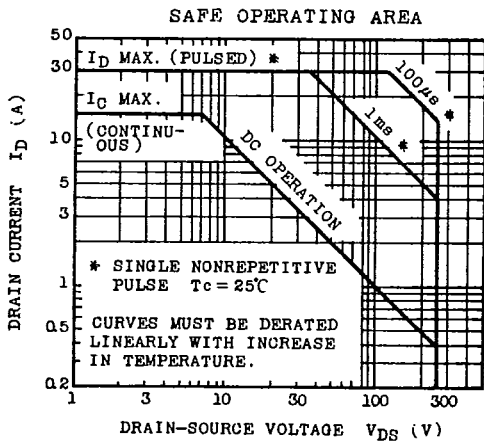
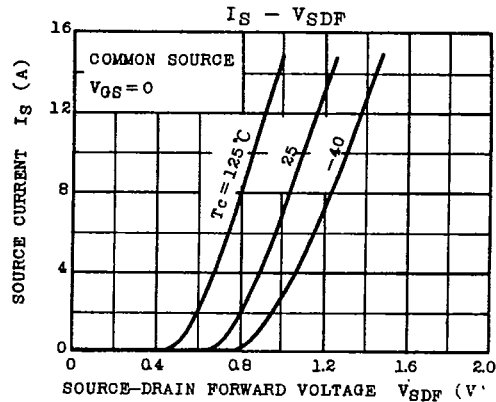
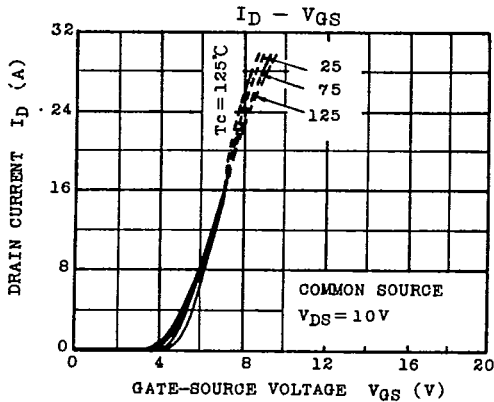
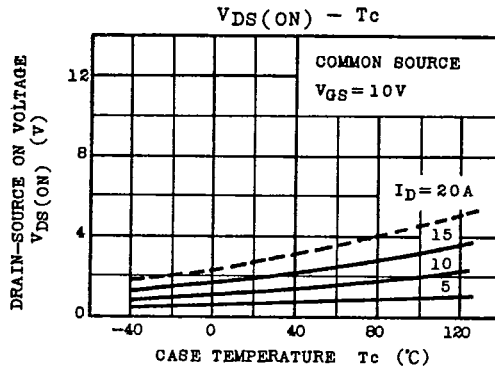
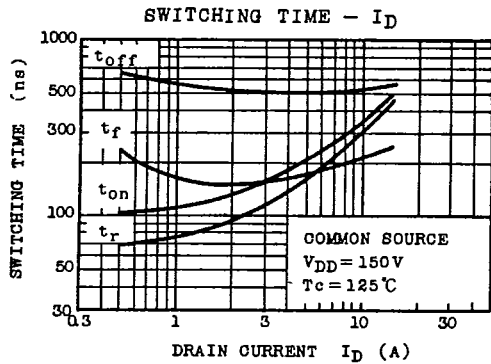


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MODULE

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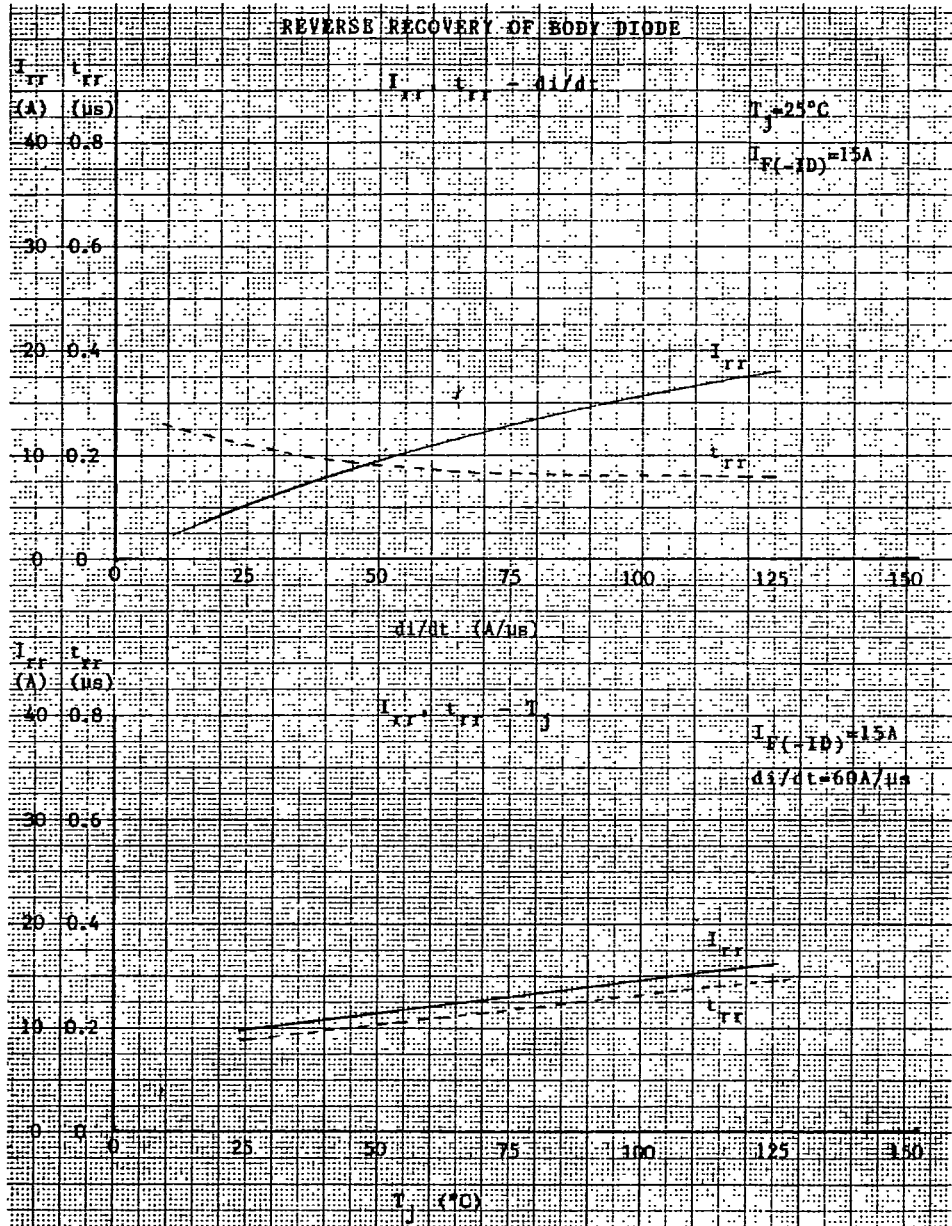
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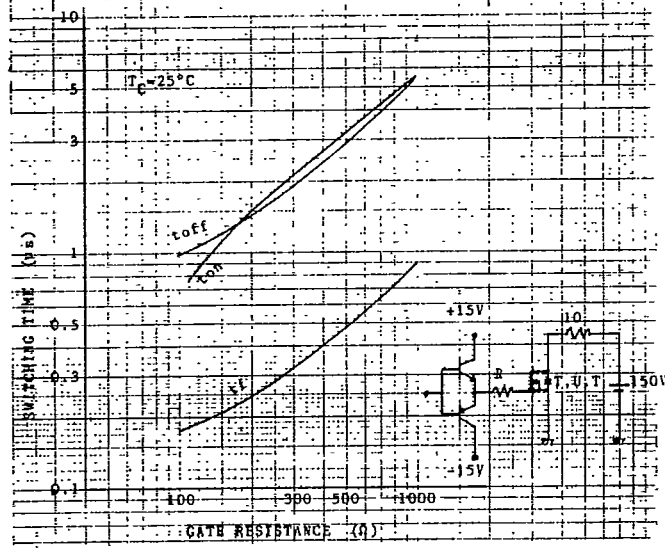


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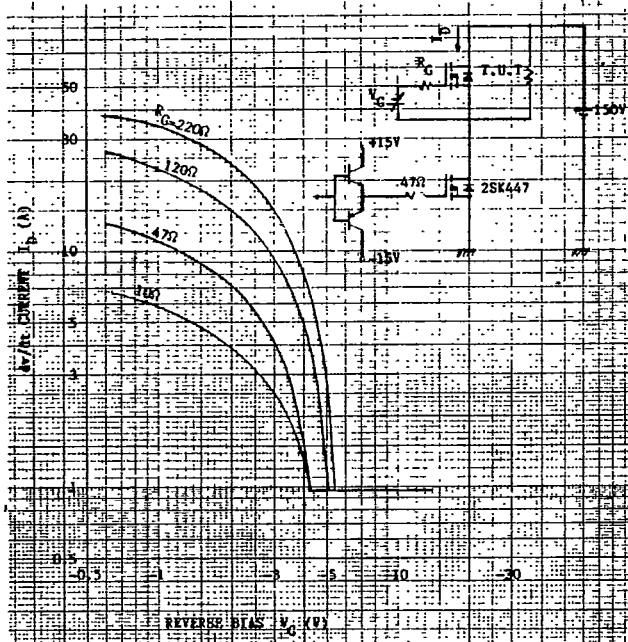
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GATE RESISTANCE DEPENDENCE OF SWITCHING TIME



REVERSE BIAS DEPENDENCE OF dv/dt CURRENT



TOSHIBA CORPORATION