



SEMICONDUCTOR

TECHNICAL DATA

2SK578

MG15C4HM1

T.39.27

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	2SK578	RA1NG	MG15C4HM1	UNIT
Drain-Source Voltage	V _{DS}	150		150	V
Gate-Source Voltage	V _{GS}	±20		±20	V
Drain Current	DC	±15		±15	A
	Peak	±30		±30	A
Drain Power Dissipation (Tc=25°C)	P _D	120		65	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} =150V, V _{GS} =0	-	-	1.0	mA	
Drain-Source Breakdown Voltage	V(BR)DSS	I _D =10mA, V _{GS} =0	150	-	-	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	-	0.15	0.22	Ω	
Source Drain Forward Voltage	V _{SPF}	I _S =15A, V _{GS} =0	-	1.3	1.8	V	
Input Capacitance	C _{iss}	V _{DS} =10V, V _{GS} =0, f=1MHz	-	1300	-	pF	
Switching Time	Rise Time	t _r		-	400	800	ns
	Turn-on Time	t _{on}		-	500	1000	ns
	Fall Time	t _f		-	100	200	ns
	Turn-off Time	t _{off}		-	300	600	ns
Reverse Recovery Time	t _{rr}	I _D =-15A, R _C =220Ω V _{GS} =-15V, di/dt=60A/μs	-	200	400	ns	

TOSHIBA CORPORATION

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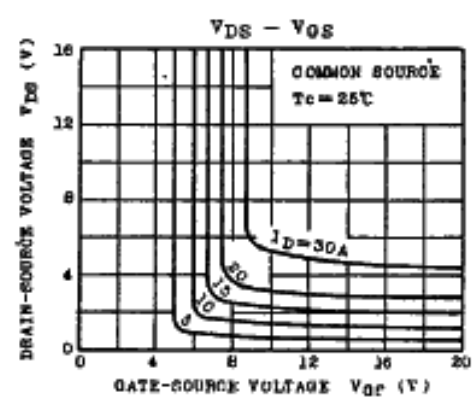
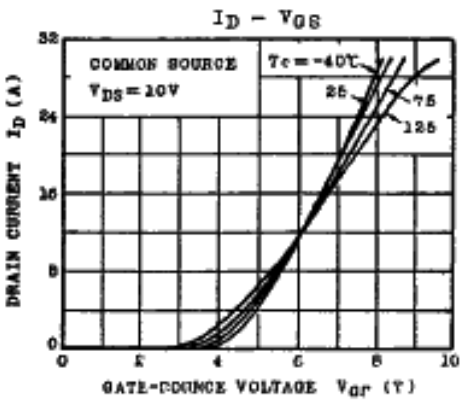
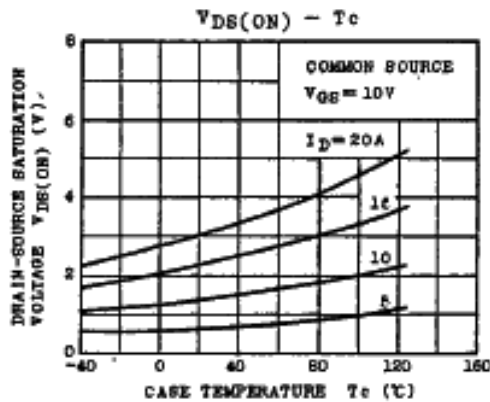
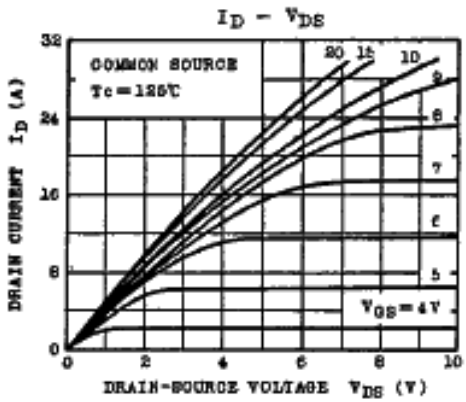
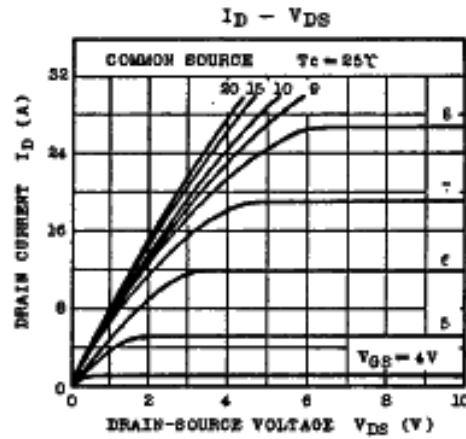
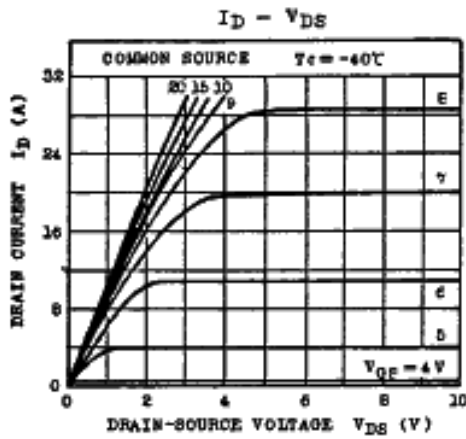


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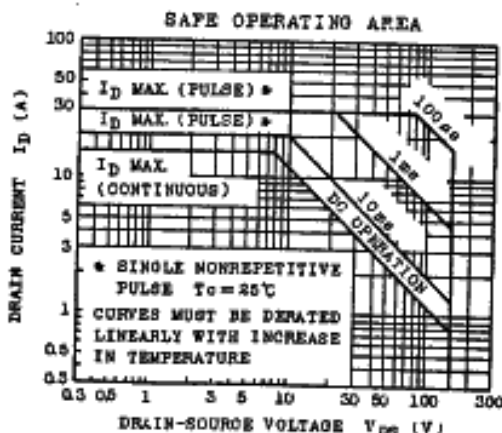
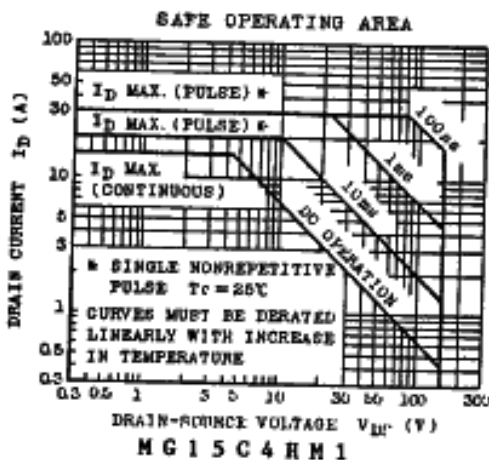
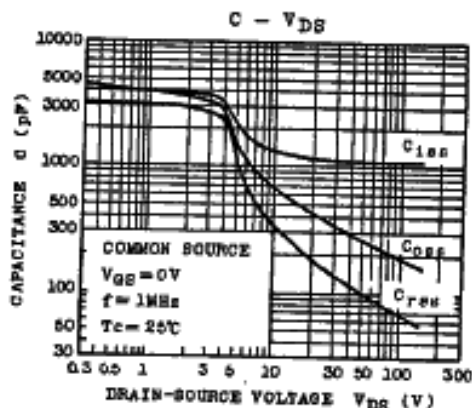
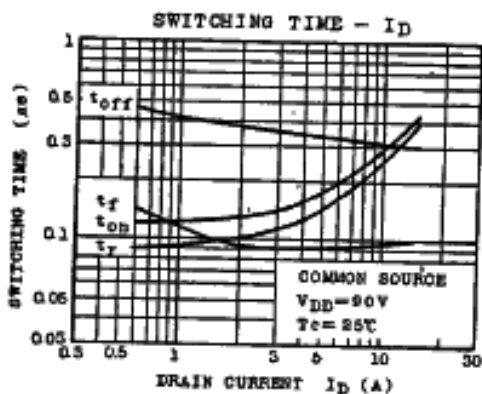
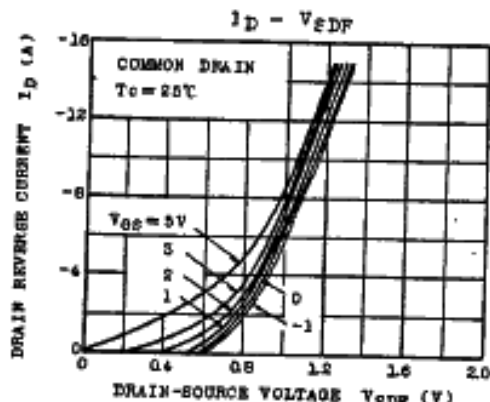
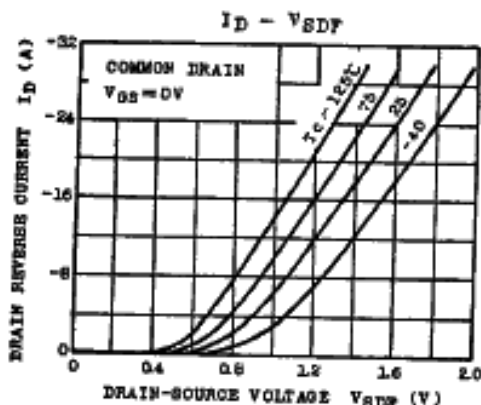


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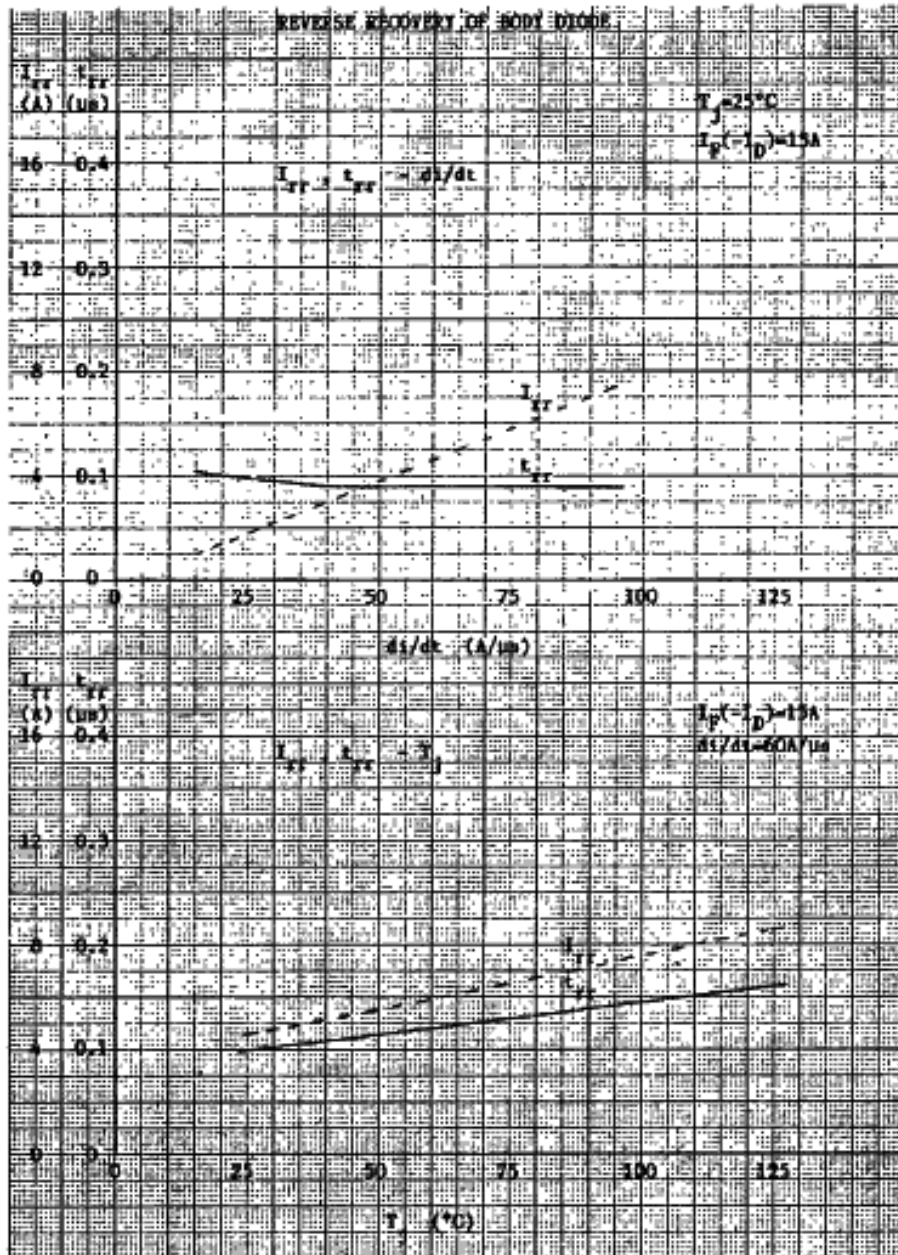
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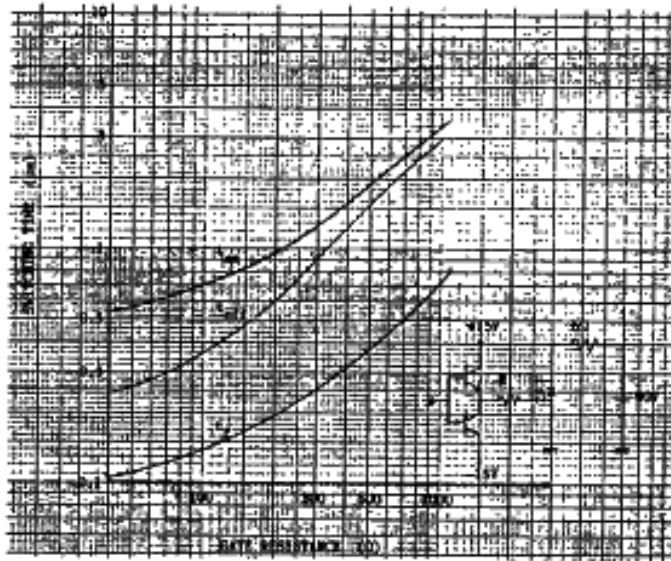


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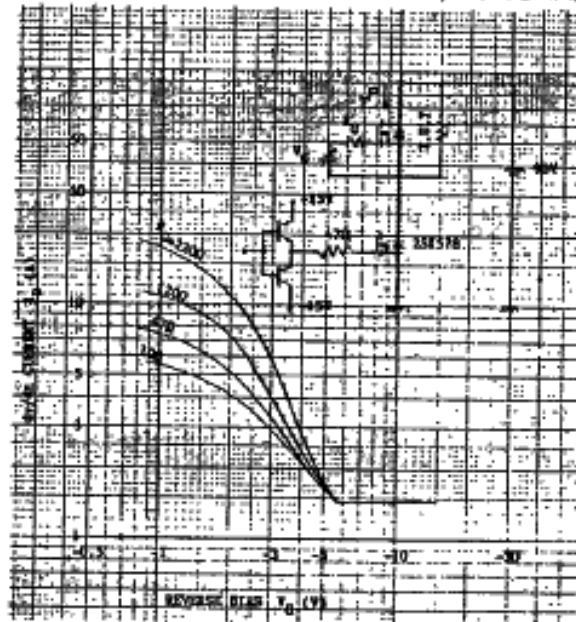
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GATE RESISTANCE DEPENDENCE OF SWITCHING TIME



REVERSE BIAS DEPENDENCE OF dy/dt CURRENT



TOSHIBA CORPORATION