



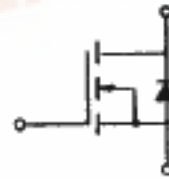
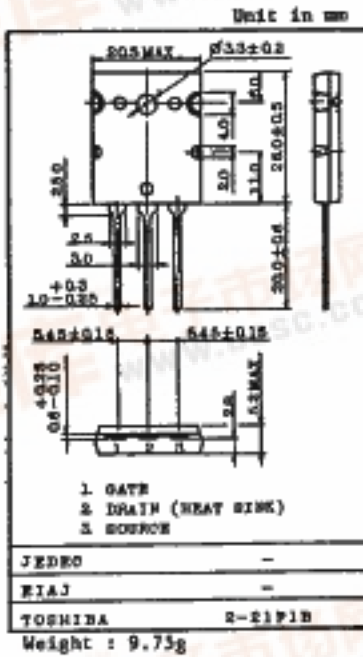
SEMICONDUCTOR TECHNICAL DATA

2SK578 *T-39-27*
MG15C4HM1 (150V/15A)

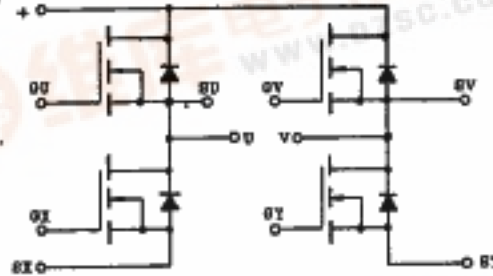
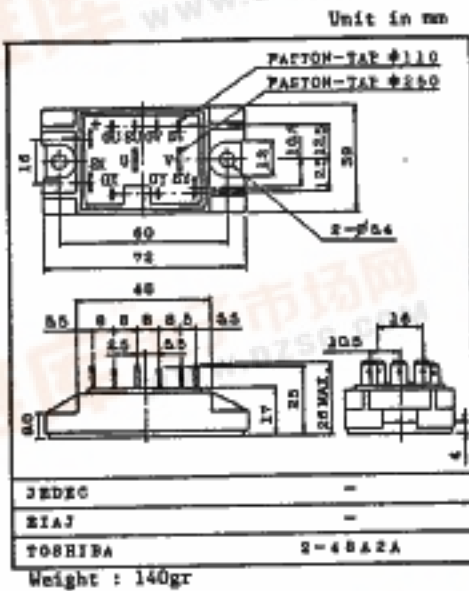
OUT LINE

EQUIVALEN CIRCUIT

2SK578



MG15C4HM1



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SEMICONDUCTOR
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MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	2SK578 RATING	MG15C4HM1	UNIT
Drain-Source Voltage		V _{DSS}	150	150	V
Gate-Source Voltage		V _{GSS}	±20	±20	V
Drain Current	DC	I _D	±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 _{SDF}	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

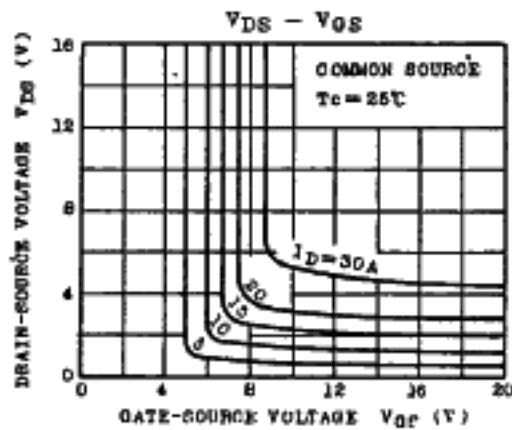
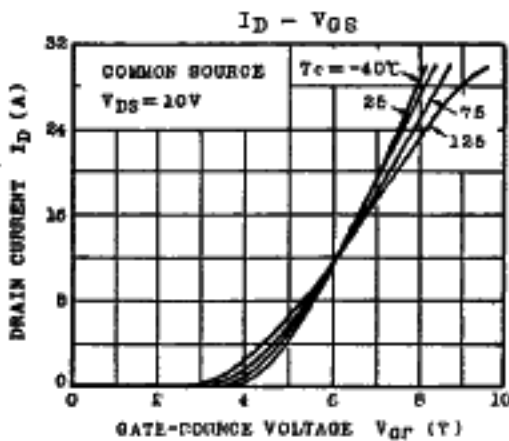
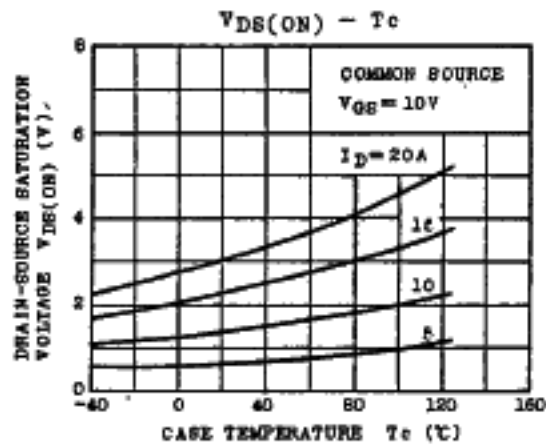
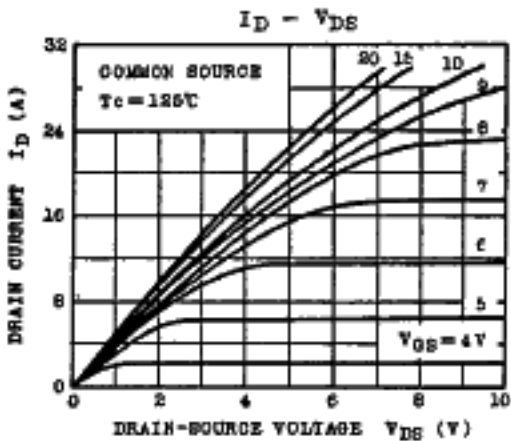
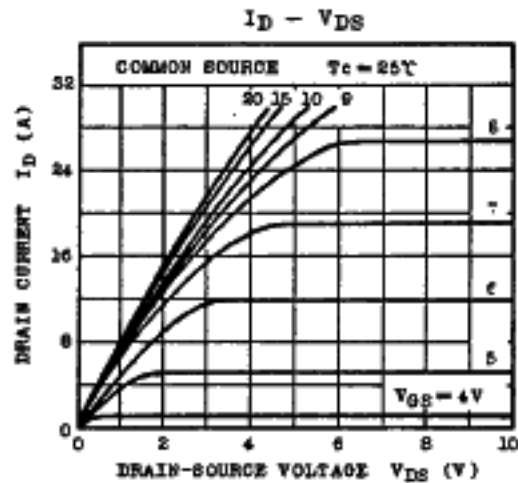
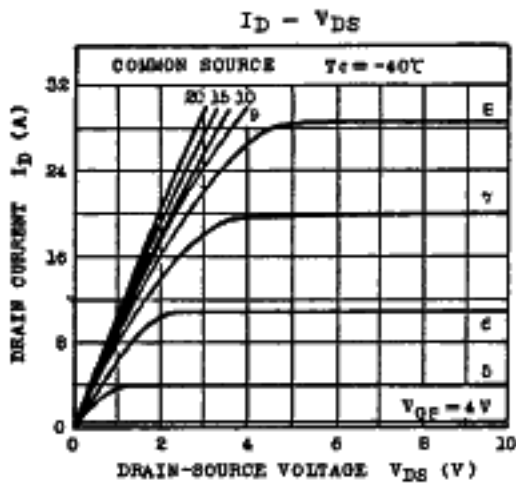
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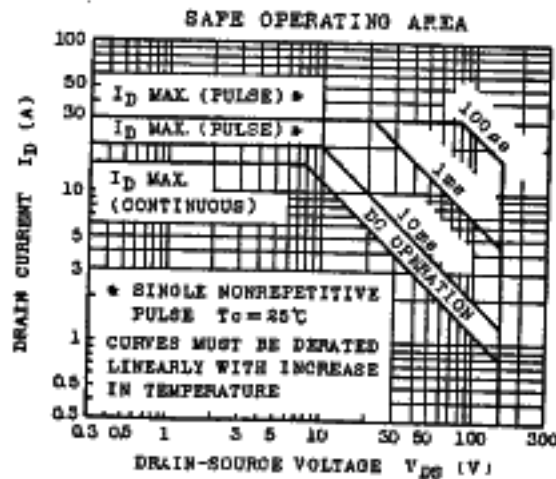
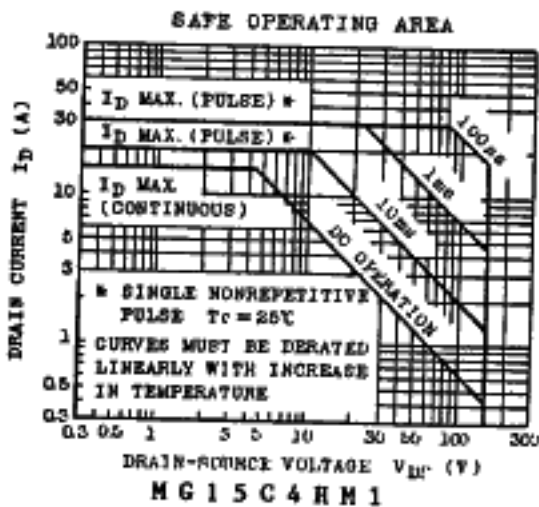
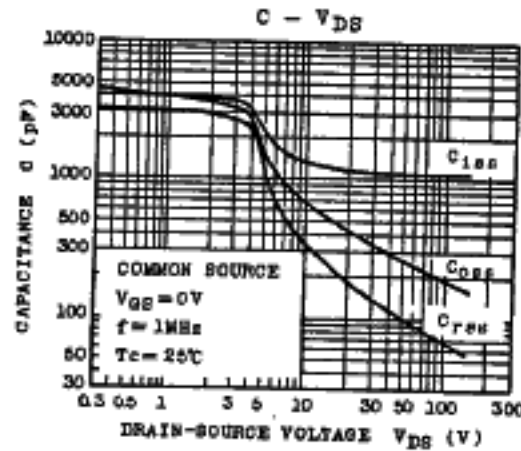
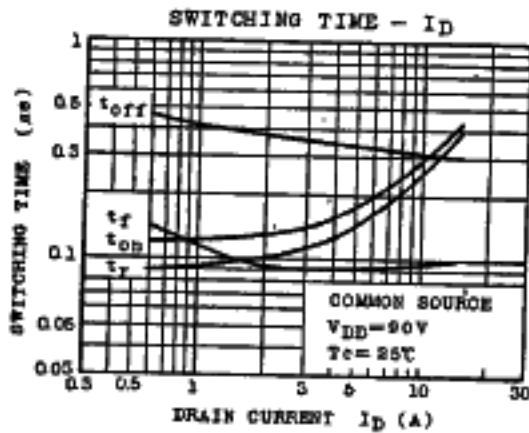
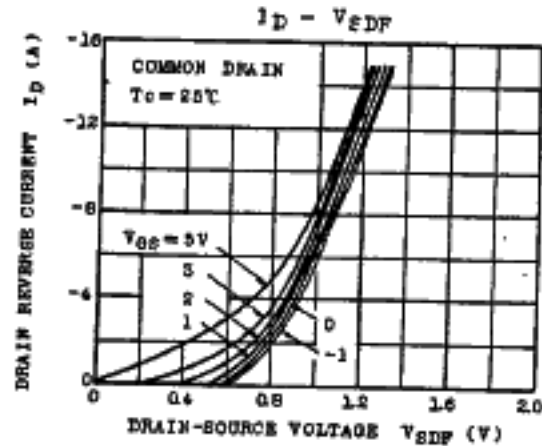
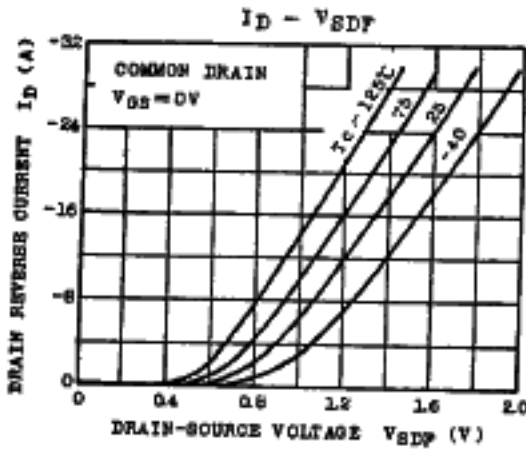


SEMICONDUCTOR

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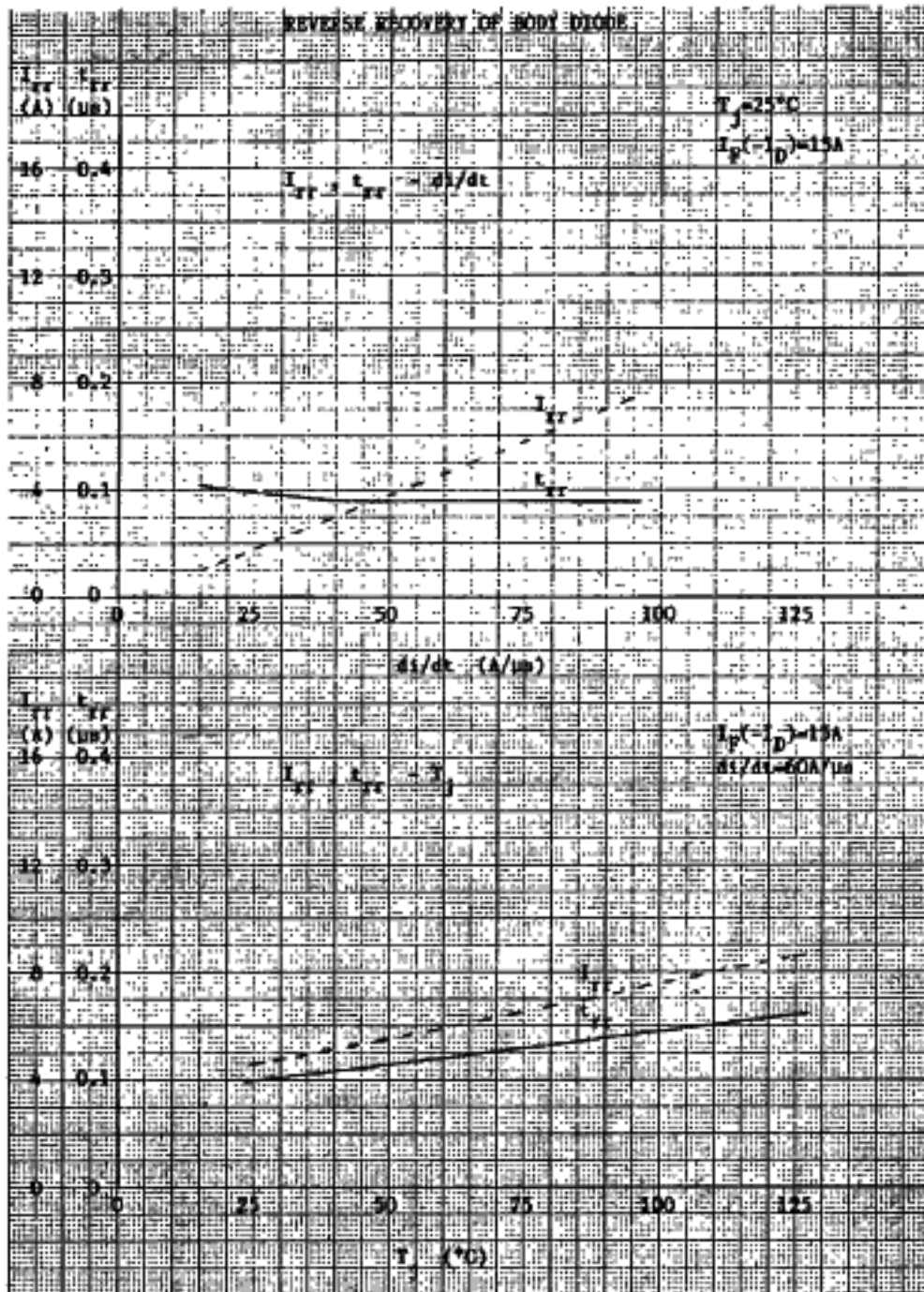
GT1A2A



SEMICONDUCTOR
TECHNICAL DATA

2SK578
MG15C4HMI

T.39-27



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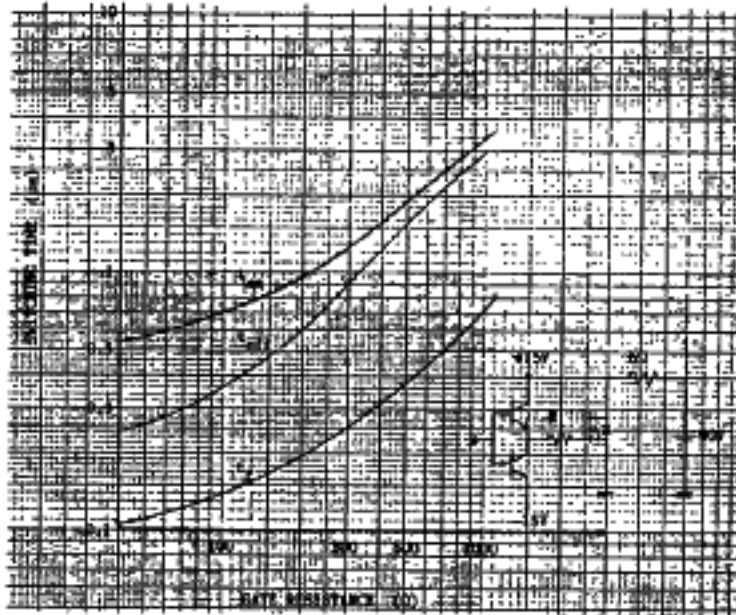


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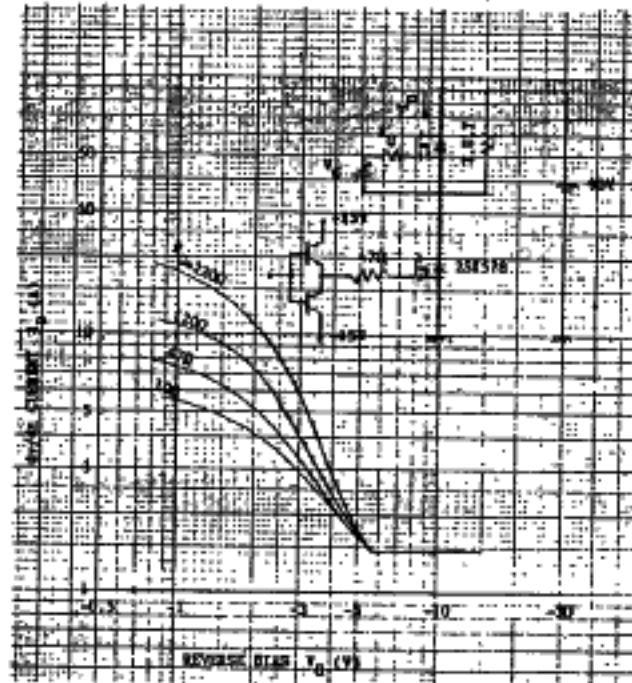
2SK578
MG15C4HMI

T-39-27

GATE RESISTANCE DEPENDENCE OF SWITCHING TIME



REVERSE BIAS DEPENDENCE OF dv/dt CURRENT



TOSHIBA CORPORATION

GT1A2A