

T.39.27

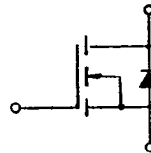
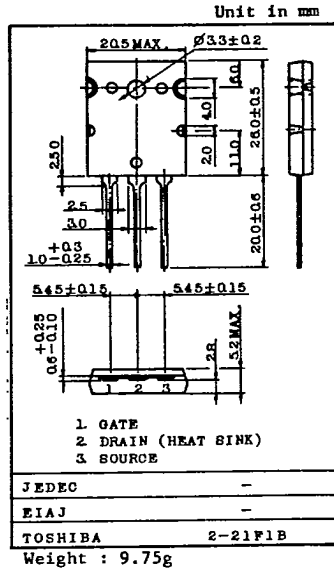


**SEMICONDUCTOR**  
**TECHNICAL DATA**

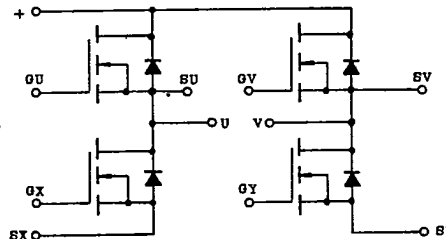
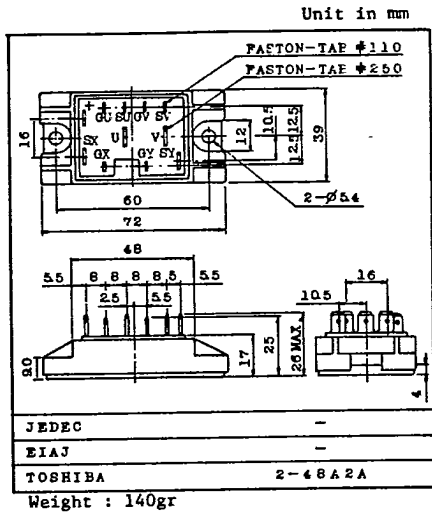
OUT LINE

EQUIVALEN CIRCUIT

2SK578



MG15C4HM1



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MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	2SK578	RAING	MG15C4HM1	UNIT
Drain-Source Voltage		V <sub>DS</sub>	150		150	V
Gate-Source Voltage		V <sub>GSS</sub>	±20		±20	V
Drain Current	DC	I <sub>D</sub>	±15		±15	A
	Peak		±30		±30	A
Drain Power Dissipation (Tc=25°C)		P <sub>D</sub>	120		65	W
Channel Temperature		T <sub>ch</sub>	150		150	°C
Storage Temperature Range		T <sub>stg</sub>	-55~150		-40~125	°C
Isolation Voltage		V <sub>isol</sub>	—		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 <sub>GSS</sub>	V <sub>GS</sub> =±20V, V <sub>DS</sub> =0	-	-	±100	nA
Drain Cut-off Current		I <sub>DSS</sub>	V <sub>DS</sub> =150V, V <sub>GS</sub> =0	-	-	1.0	mA
Drain-Source Breakdown Voltage		V(BR)DSS	I <sub>D</sub> =10mA, V <sub>GS</sub> =0	150	-	-	V
Gate Threshold Voltage		V <sub>th</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =1mA	1.5	-	3.5	V
Forward Transfer Admittance		Y <sub>fs</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =15A	4.0	7.0	-	S
Drain-Source ON Resistance		R <sub>DS(ON)</sub>	I <sub>D</sub> =15A, V <sub>GS</sub> =10V	-	0.15	0.22	Ω
Source Drain Forward Voltage		V <sub>SDF</sub>	I <sub>S</sub> =15A, V <sub>GS</sub> =0	-	1.3	1.8	V
Input Capacitance		C <sub>iss</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =0, f=1MHz	-	1300	-	pF
Switching Time	Rise Time	t <sub>r</sub>		-	400	800	ns
	Turn-on Time	t <sub>on</sub>		-	500	1000	ns
	Fall Time	t <sub>f</sub>		-	100	200	ns
	Turn-off Time	t <sub>off</sub>		V <sub>IN</sub> : t <sub>r</sub> , t <sub>f</sub> < 5ns D.U ≤ 1% (Z <sub>OUT</sub> =50Ω)	-	300	600
Reverse Recovery Time		t <sub>rr</sub>	I <sub>D</sub> =-15A, R <sub>G</sub> =220Ω V <sub>GS</sub> =-15V, di/dt=60A/µs	-	200	400	ns

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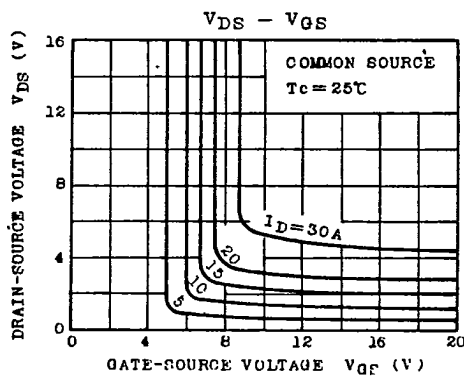
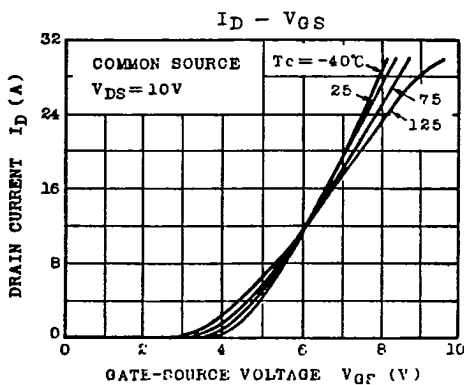
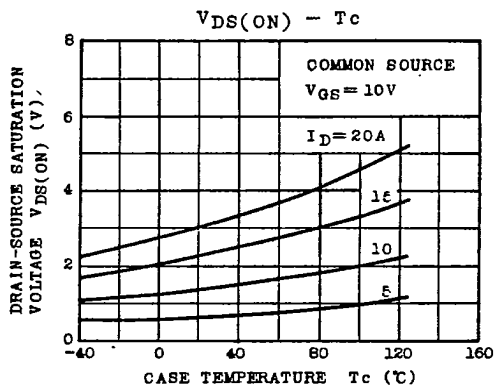
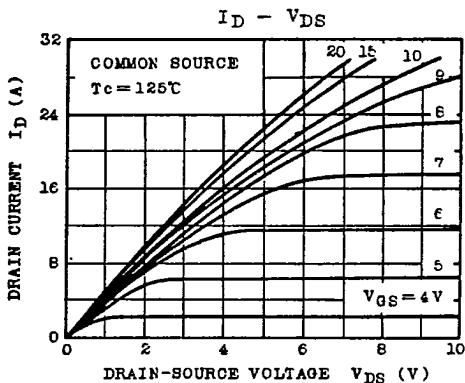
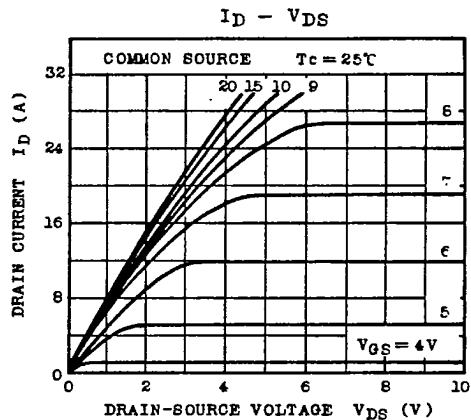
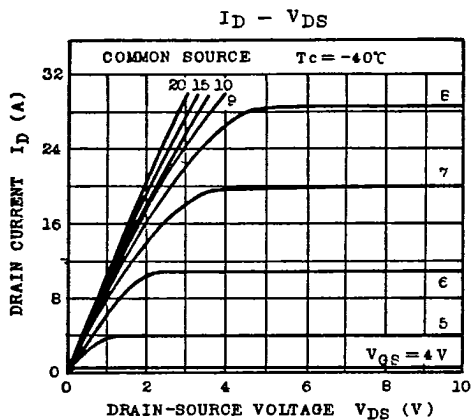


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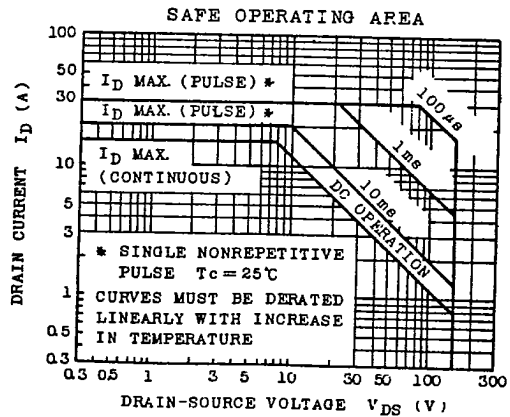
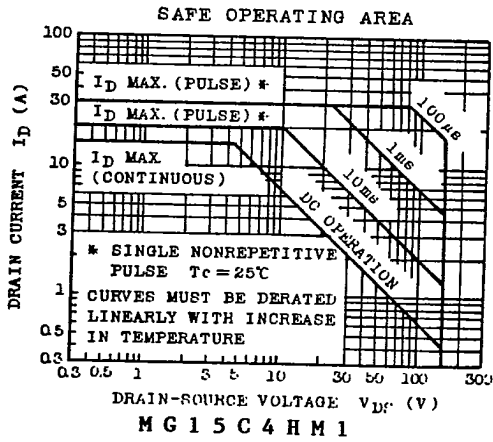
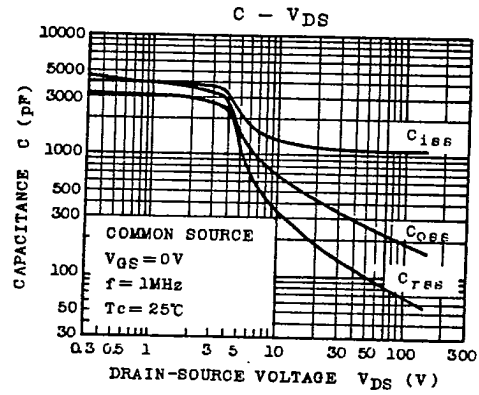
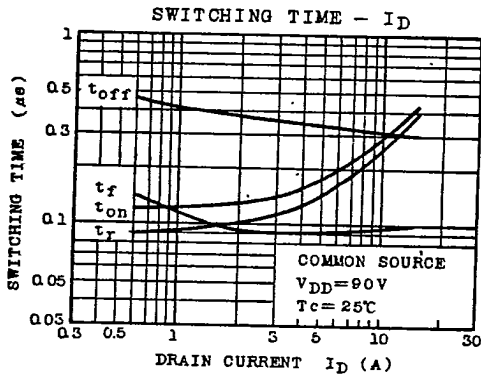
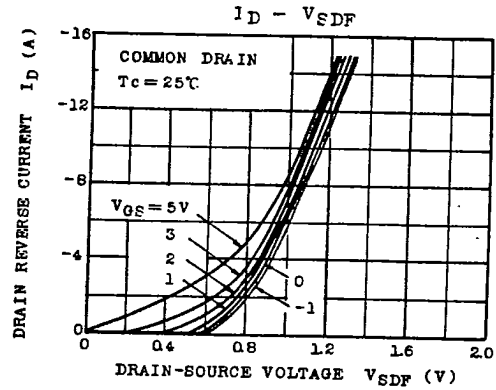
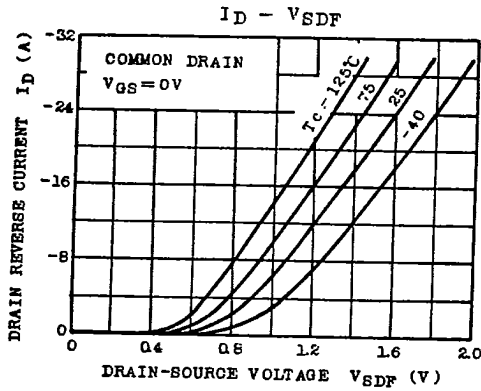
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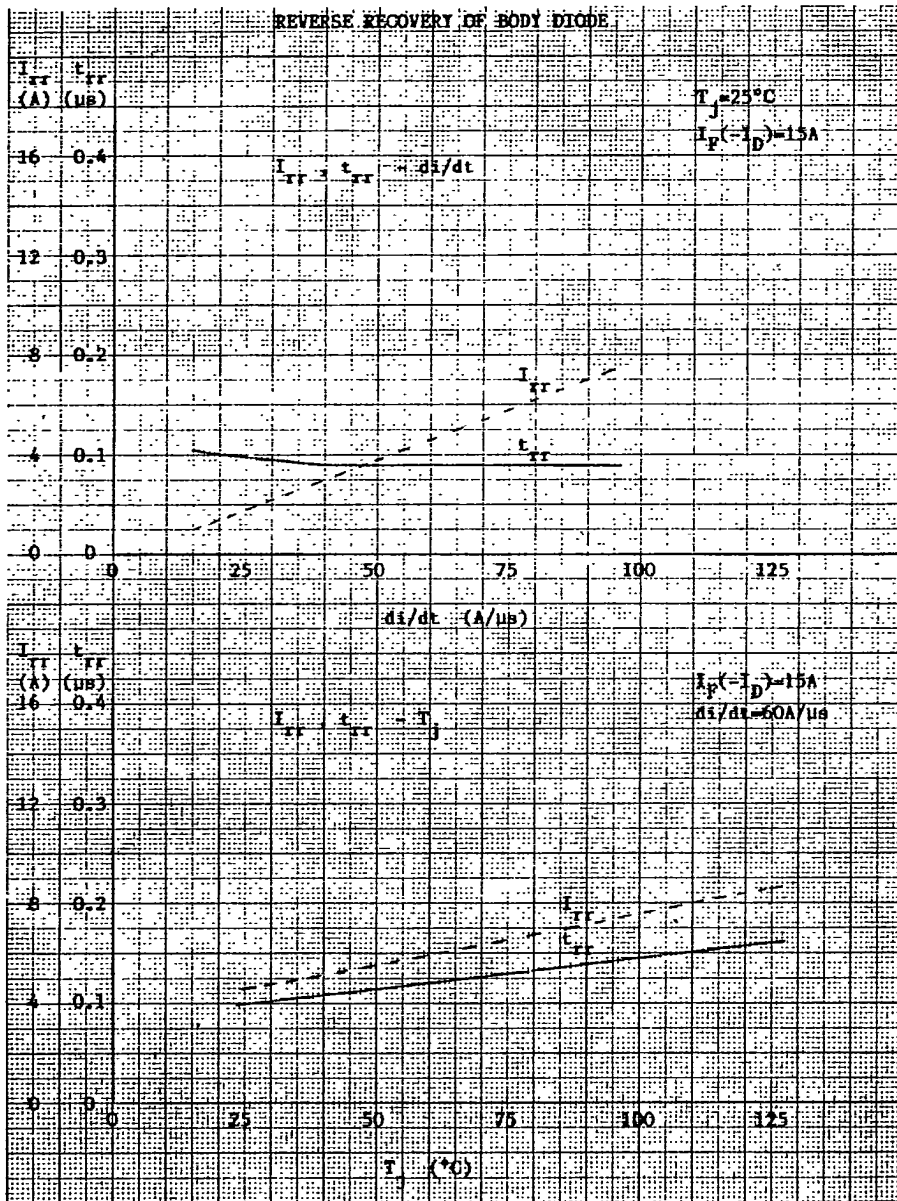
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**SEMICONDUCTOR**  
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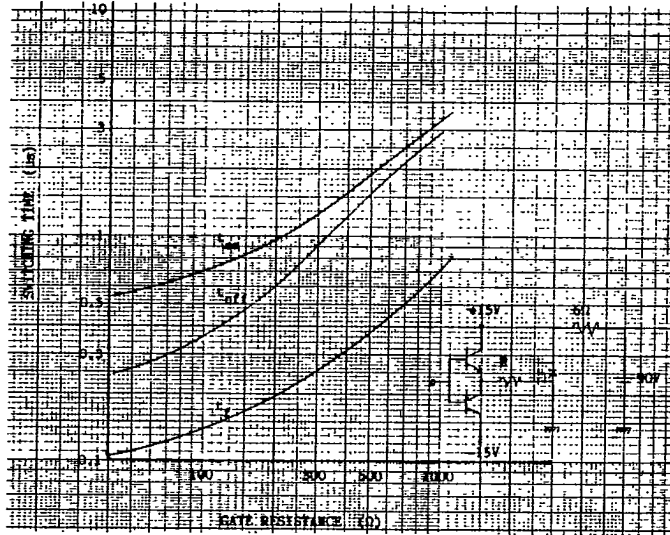


# SEMICONDUCTOR TECHNICAL DATA

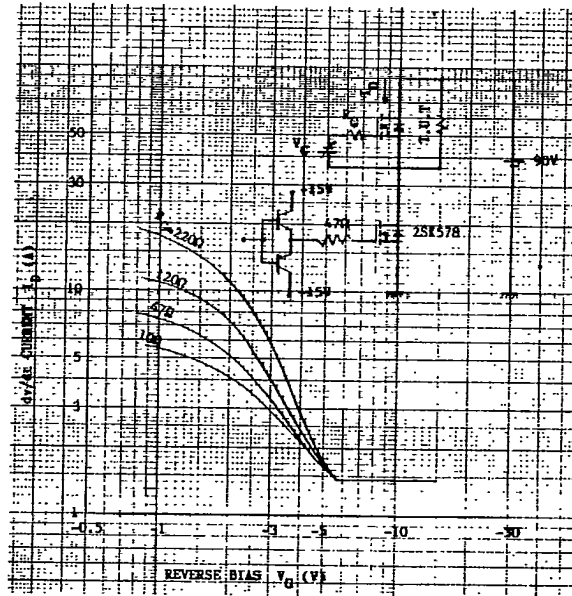
2SK578  
MGI5C4HMI

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### GATE RESISTANCE DEPENDENCE OF SWITCHING TIME



### REVERSE BIAS DEPENDENCE OF $dv/dt$ CURRENT



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