



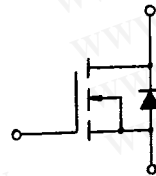
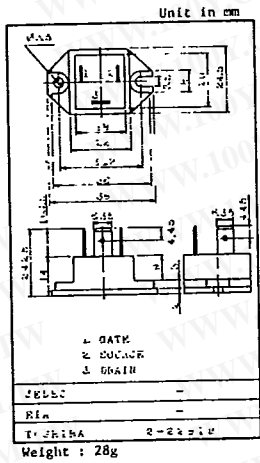
SEMICONDUCTOR
TECHNICAL DATA

MG15G1AM1
MG15G4GM1 (450V/15A)
MG15G6EM1

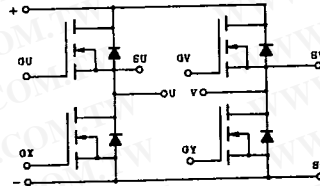
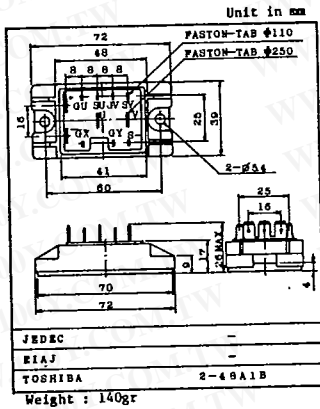
EQUIVALENT CIRCUIT

OUTLINE

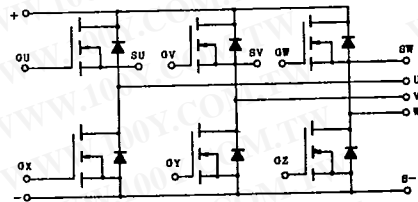
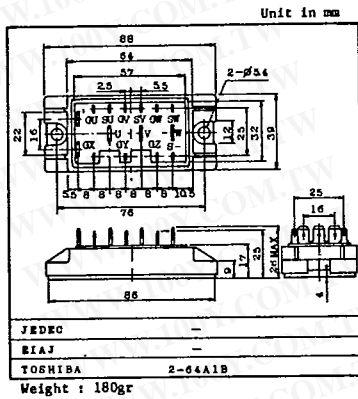
MG15G1AM1



MG15G4GM1



MG15G6EM1



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GT1A2A

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SEMICONDUCTOR

TECHNICAL DATA

MG15G1AM1

MG15G4GM1

MG15G6EM1

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		V _{DSS}	450	V
Gate-Source Voltage		V _{GSS}	±20	V
Drain Current	DC	I _D	±15	A
	Peak		±30	
Drain Power Dissipation (Tc=25°C)		P _D	125	W
Channel Temperature		T _{ch}	150	°C
Storage Temperature Range		T _{stg}	-40 ~ 125	°C
Isolation Voltage		V _{ISO1}	2500 (AC 1 Minute)	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} =450V, V _{GS} =0	-	-	1.0	mA
Drain-Source Breakdown Voltage		V(BR) _{DSS}	I _D =10mA, V _{GS} =0	450	-	-	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	-	-	0.4	Ω
Source Drain Forward Voltage		V _{SDF}	I _D =-15A, V _{GS} =0	-	-	1.8	V
Input Capacitance		C _{iss}	V _{DS} =10V, V _{GS} =0, f=1MHz	-	4500	-	pF
Switching Time	Rise Time	t _r		-	250	500	ns
	Turn-on Time	t _{on}		-	300	600	ns
	Fall Time	t _f		-	250	500	ns
	Turn-off Time	t _{off}		V _{IN} : t _r , t _f < 5ns D.C ≤ 1% (I _{OUT} = 50A)	-	1000	2000
Reverse Recovery Time		t _{rr}	I _D =-15A, R _G =220Ω V _{GS} =-15V, di/dt=60A/µs	-	300	600	ns

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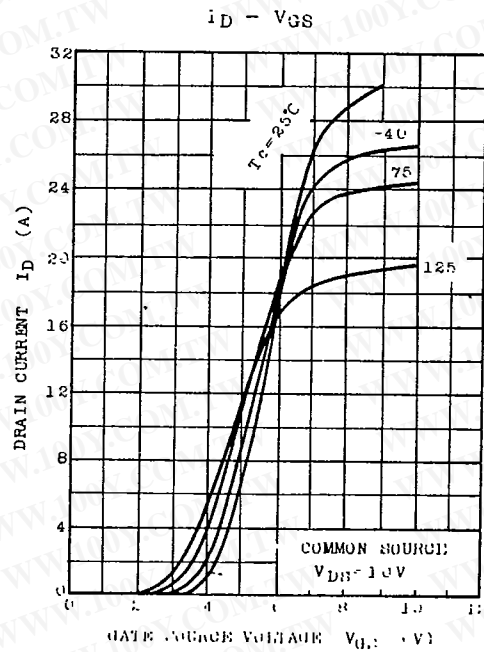
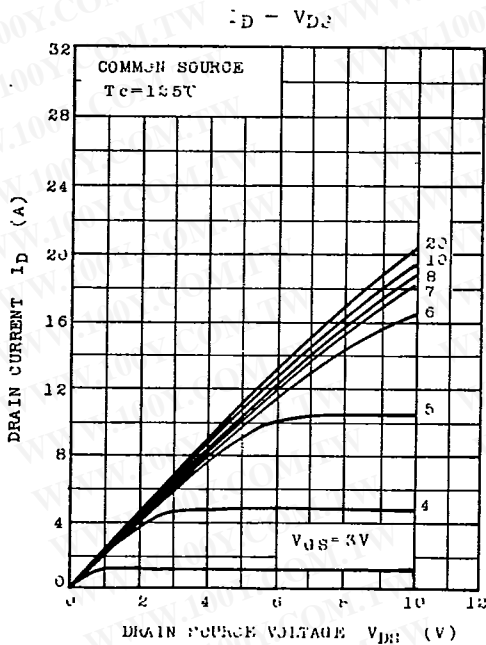
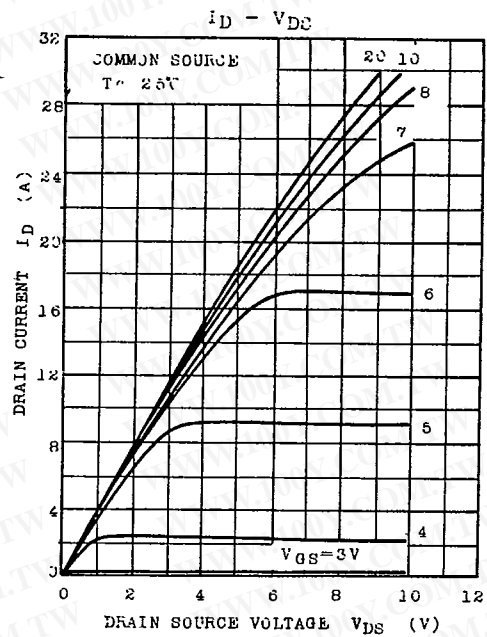
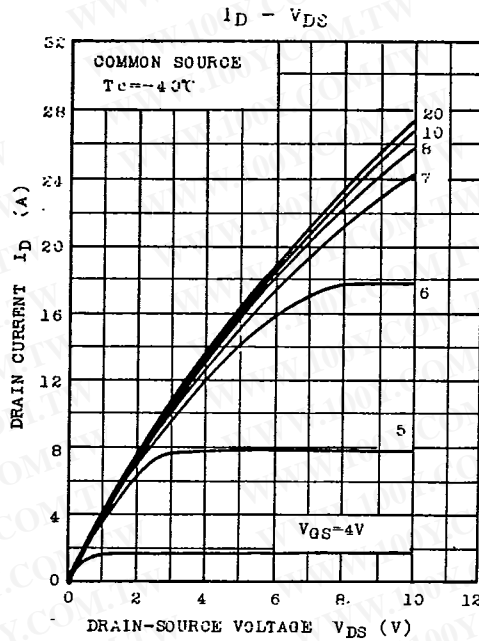
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SEMICONDUCTOR
TECHNICAL DATA

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MG15G4GM1
MG15G6EM1



TOSHIBA CORPORATION

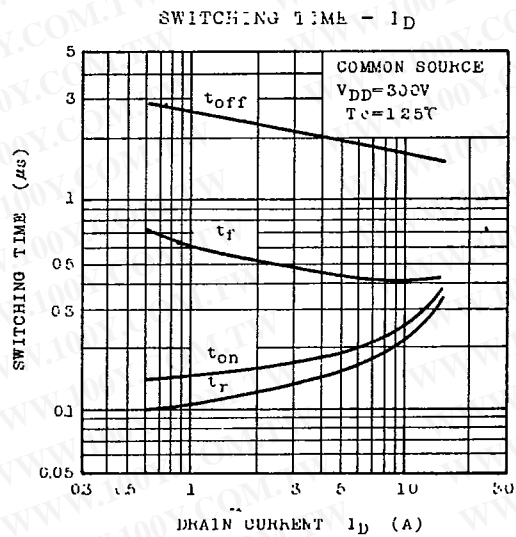
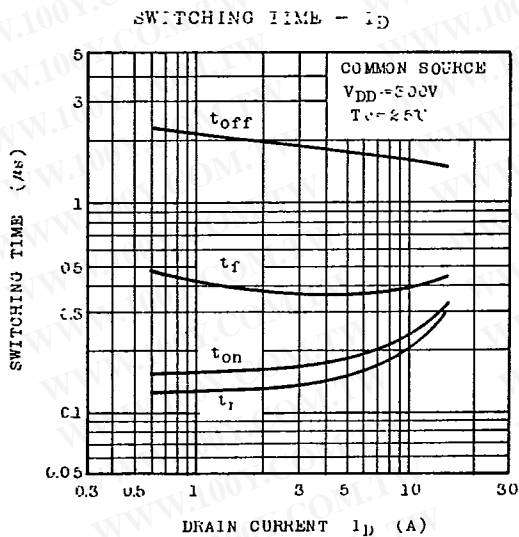
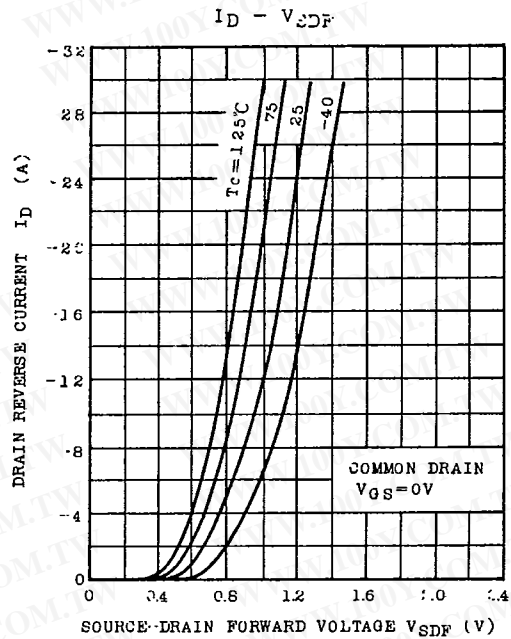
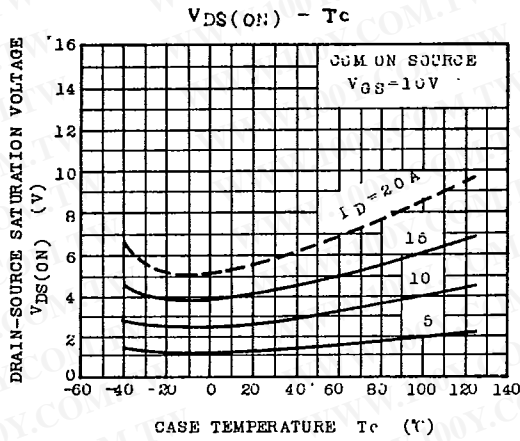
GT1A2A

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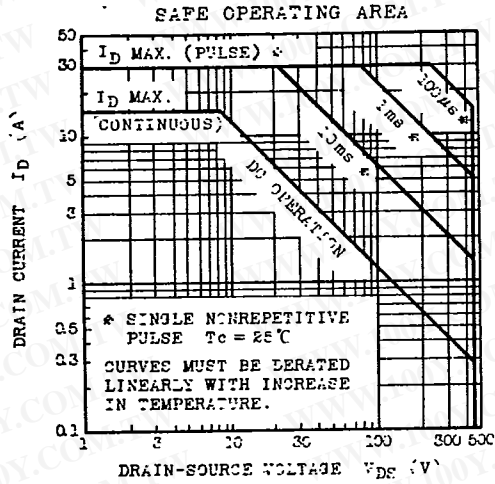
9097250 TOSHIBA (DISCRETE/OPTO)

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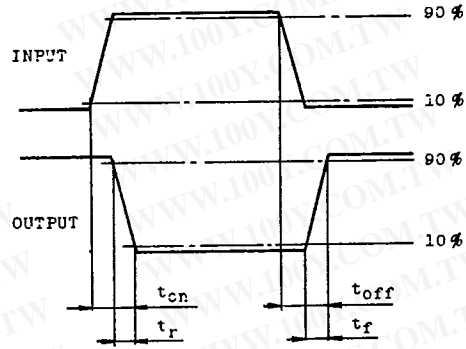


SEMICONDUCTOR
TECHNICAL DATA

MG15G1AM1
MG15G4GM1
MG15G6EM1



SWITCHING TIME TEST (WAVEFORM)



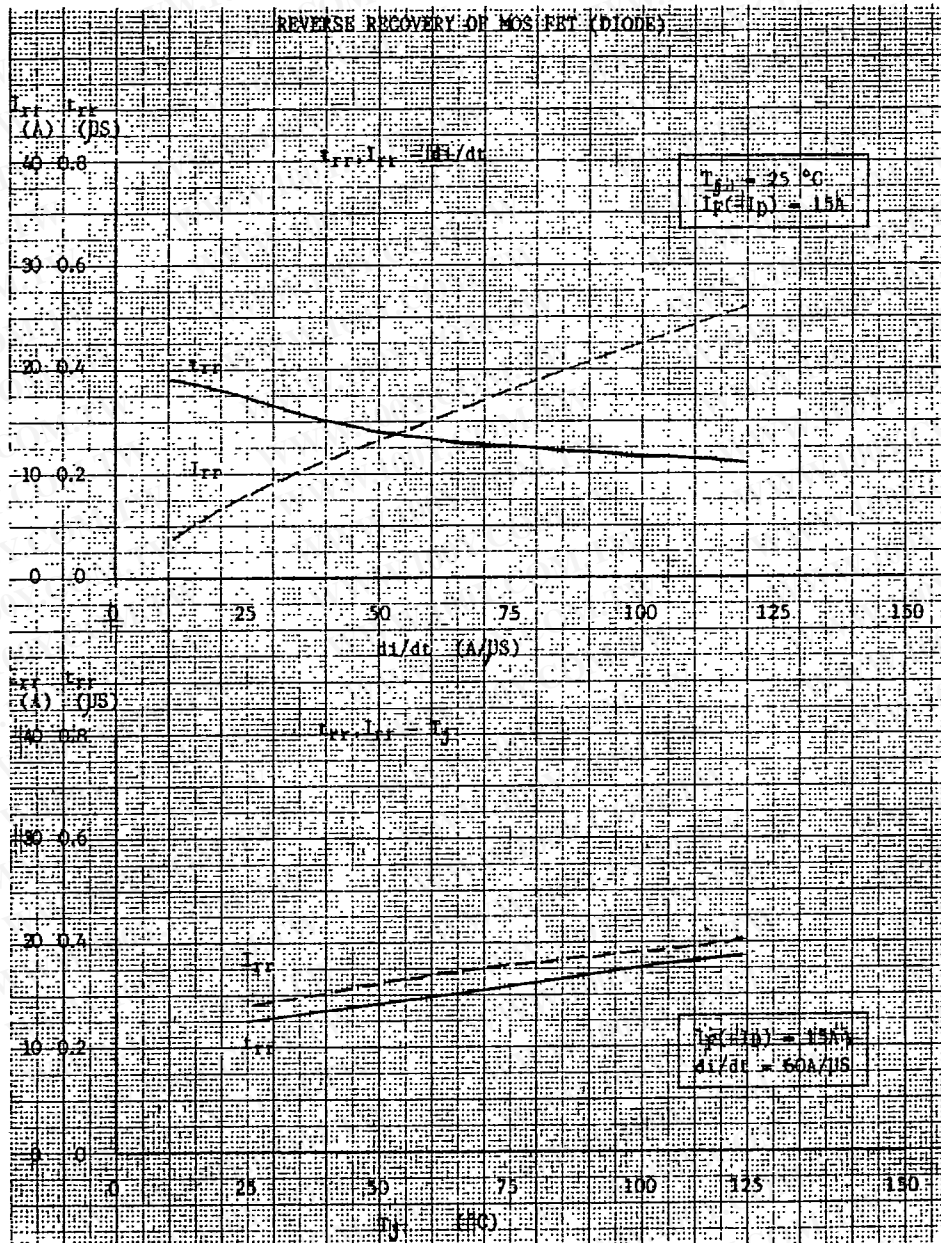
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SEMICONDUCTOR
TECHNICAL DATA

MG15G1AM1
MG15G4GM1
MG15G6EM1



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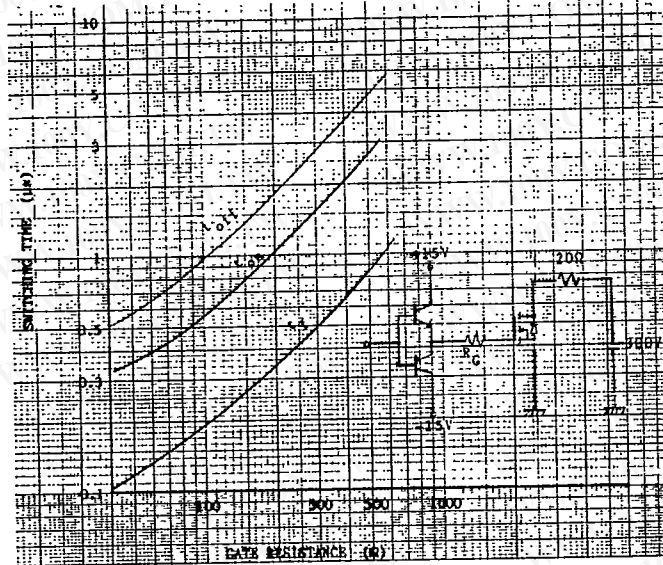
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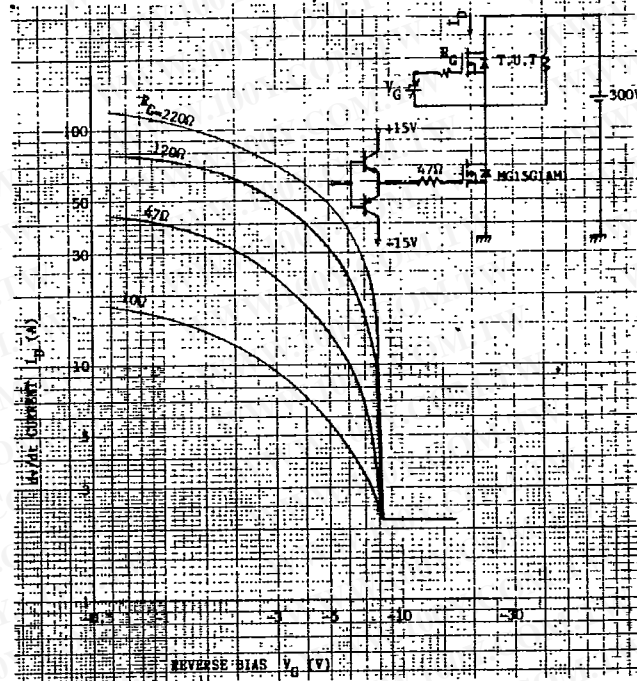
SEMICONDUCTOR
TECHNICAL DATA

MGI5G1AM I
MGI5G4GM I
MGI5G6EM I

GATE RESISTANCE — SWITCHING TIME



REVERSE BIAS — dv/dt CURRENT



TOSHIBA CORPORATION

GT1A2A

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