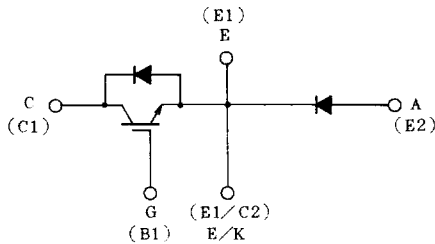


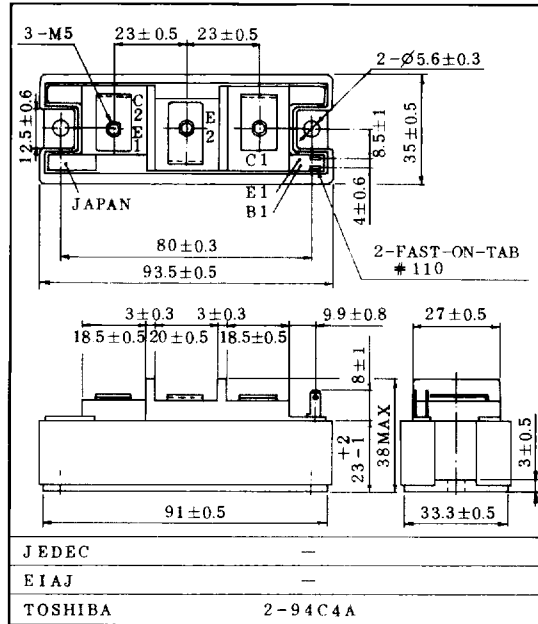
HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

- . High Input Impedance
- . High Speed : $t_f=1.0\mu s(\text{Max.})$
 $t_{rr}=0.5\mu s(\text{Max.})$
- . Low Saturation Voltage: $V_{CE(sat)}=5.0V(\text{Max.})$
- . Enhancement-Mode
- . The Electrodes are Isolated from Case.

EQUIVALENT CIRCUIT



Unit in mm



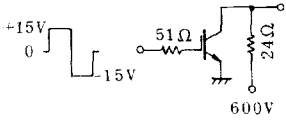
Weight : 205g

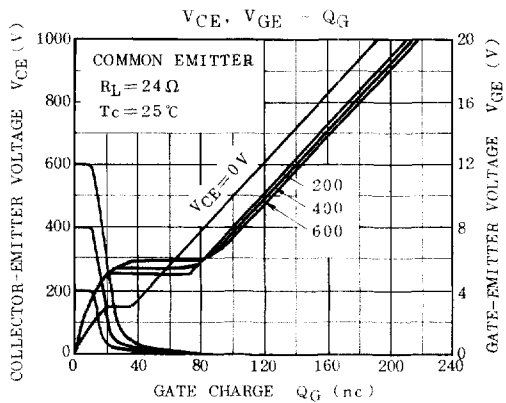
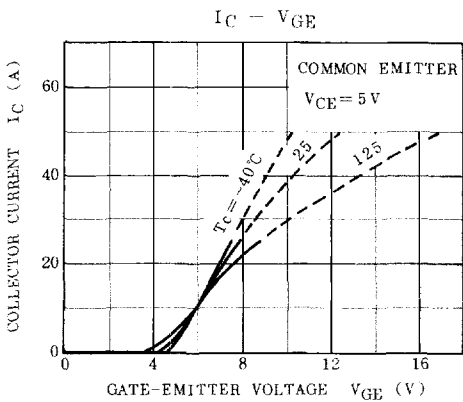
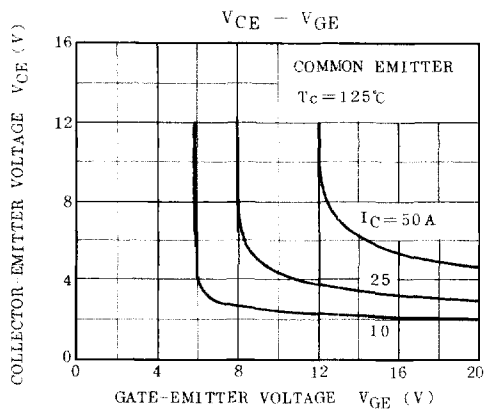
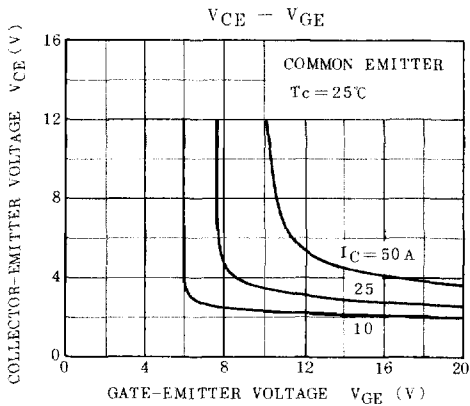
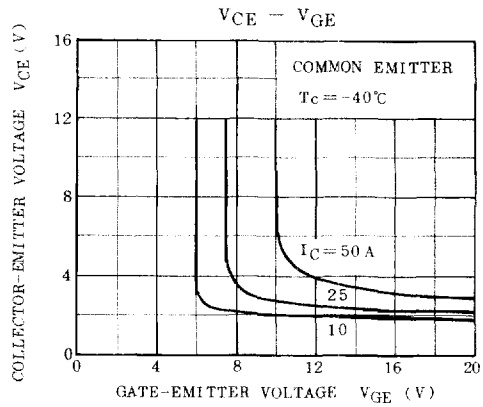
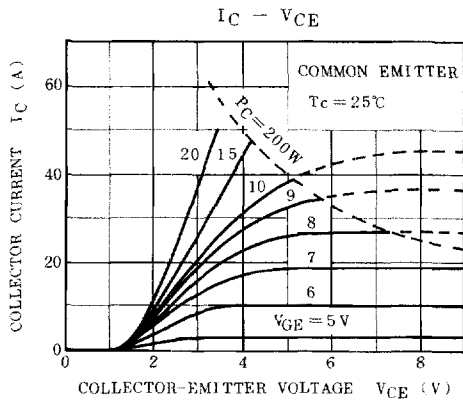
MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V_{CES}	1000	V
Gate-Emitter Voltage	V_{GES}	± 20	V
Collector Current	DC	I_C	A
	1ms	I_{CP}	
Forward Current	DC	I_F	A
	1ms	I_{FM}	
Collector Power Dissipation	P_C	200	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-40~125	$^\circ C$
Isolation Voltage	V_{isol}	2500 (AC 1 Minute)	V
Screw Torque (Terminal/Mounting)	-	30/30	kg·cm

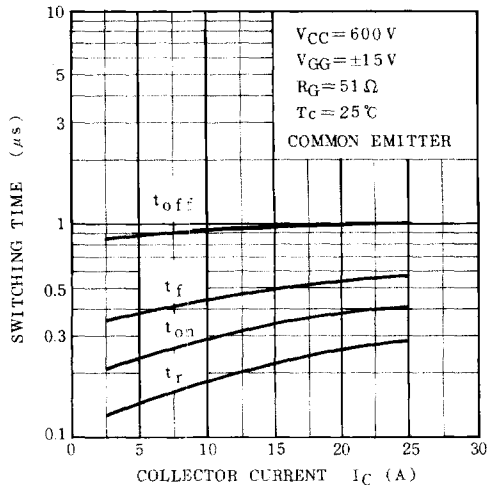
MG25N1JS1

ELECTRICAL CHARACTERISTICS (Ta=25°C)

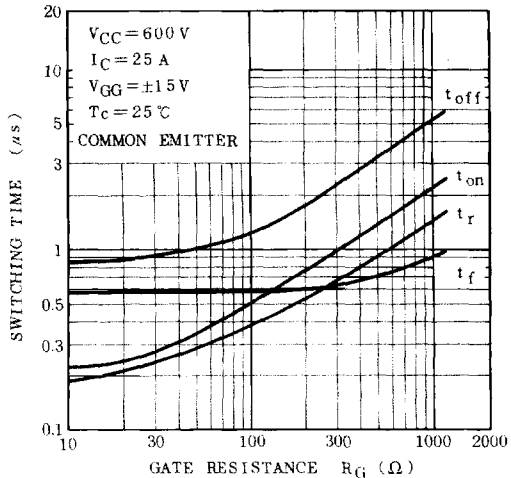
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	IGES	VGE=±20V, VCE=0	-	-	±500	nA
Collector Cut-off Current	ICES	VCE=1000V, VGE=0	-	-	1.0	mA
Collector-Emitter Breakdown Voltage	V(BR)CES	IC=2mA, VGE=0	1000	-	-	V
Gate-Emitter Cut-off Voltage	VGE(OFF)	IC=25mA, VCE=5V	3.0	-	6.0	V
Collector-Emitter Saturation Voltage	VCE(sat)	IC=25A, VGE=15V	-	3.0	5.0	V
Input Capacitance	Cies	VCE=10V, VGE=0, f=1MHz	-	3000	-	pF
Switching Time	Rise Time		-	0.3	1.0	μs
	Turn-on Time		-	0.4	1.0	
	Fall Time		-	0.6	1.0	
	Turn-off Time		-	1.0	2.0	
Forward Voltage	VF	IF=25A, VGE=0	-	1.5	2.5	V
Reverse Recovery Time	t _{rr}	IF=25A, VGE=-10V di/dt=100A/μs	-	0.2	0.5	μs
Thermal Resistance	Rth(j-c)	Transistor	-	-	0.625	°C/W
		Diode	-	-	1.0	



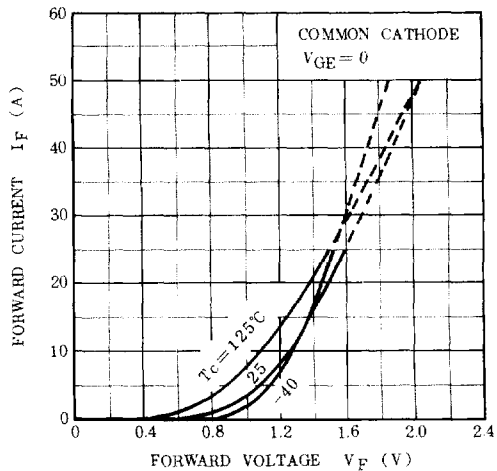
SWITCHING TIME - I_C



SWITCHING TIME - R_G



$I_F - V_F$



$I_F - t_{rr}, I_{rr}$

