

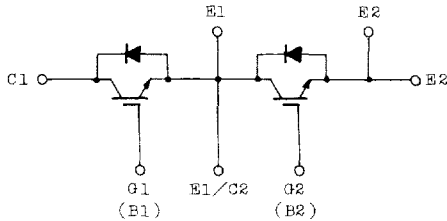
# MG15N2YS1

GTR MODULL  
SILICON N CHANNEL IGBT

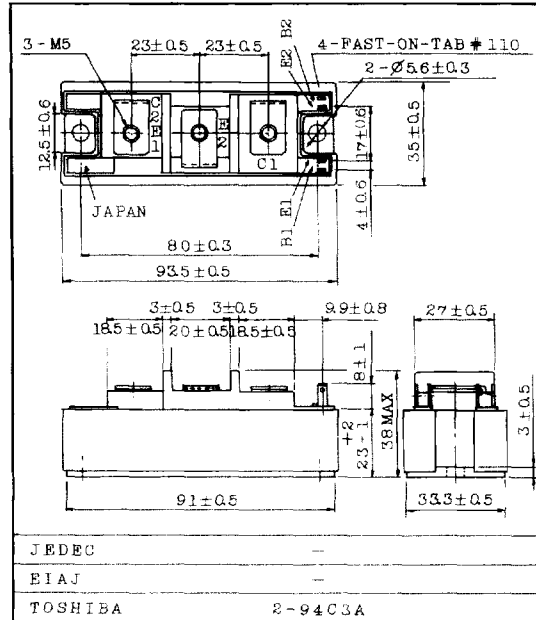
HIGH POWER SWITCHING APPLICATIONS.  
MOTOR CONTROL APPLICATIONS.

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

EQUIVALENT CIRCUIT



Unit in mm

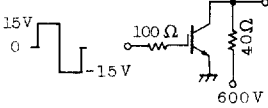


Weight : 222g

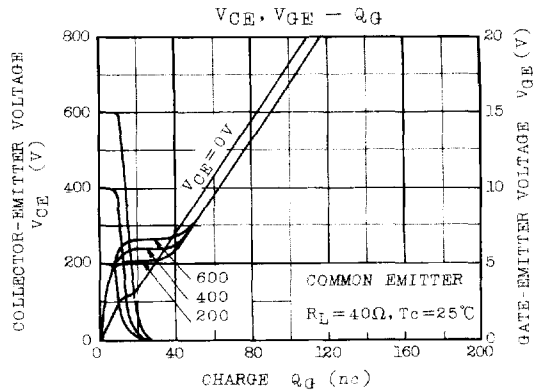
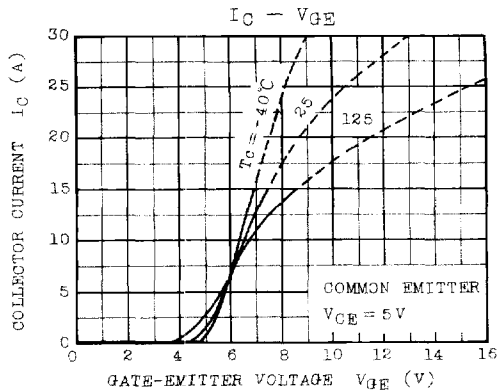
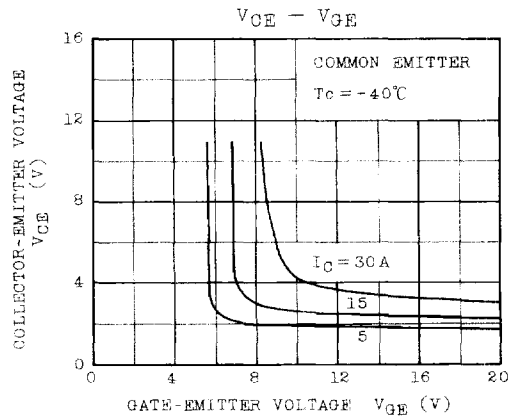
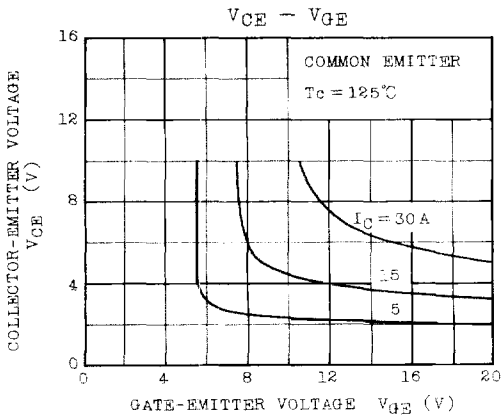
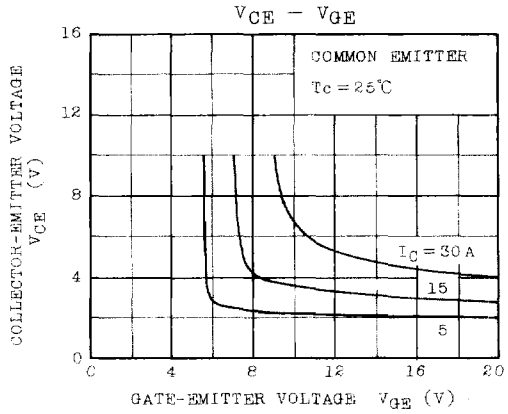
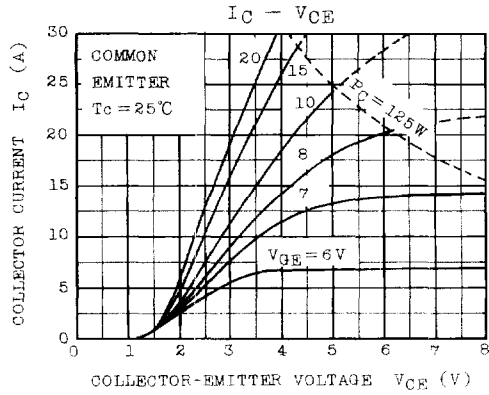
MAXIMUM RATINGS ( $T_a=25^\circ C$ )

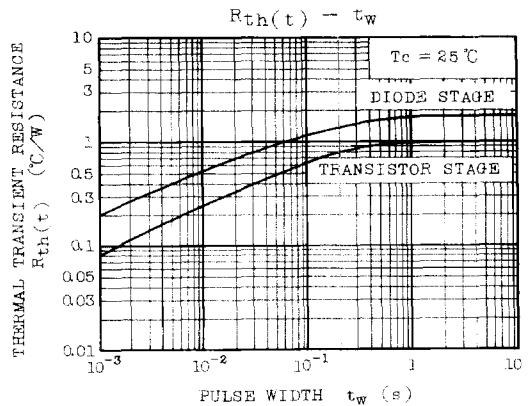
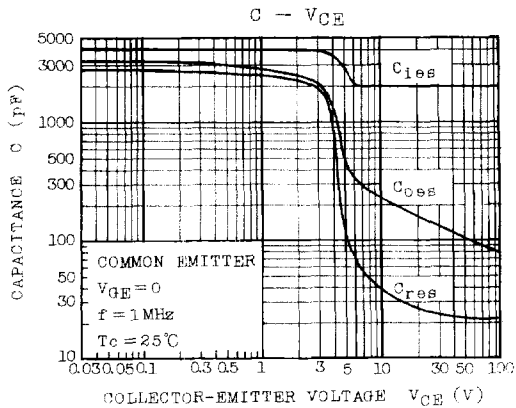
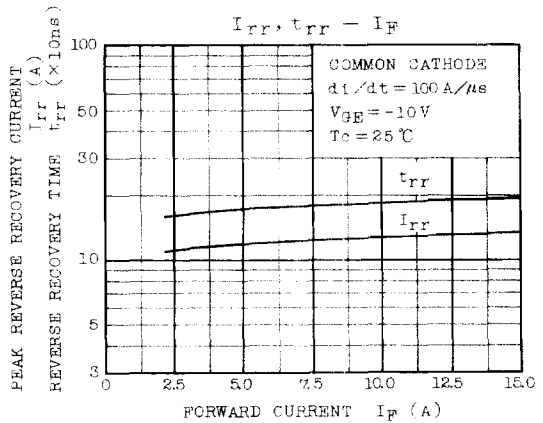
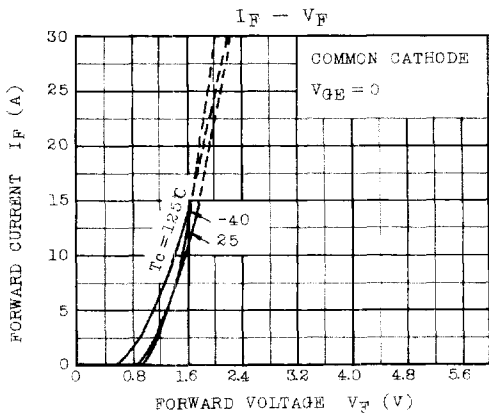
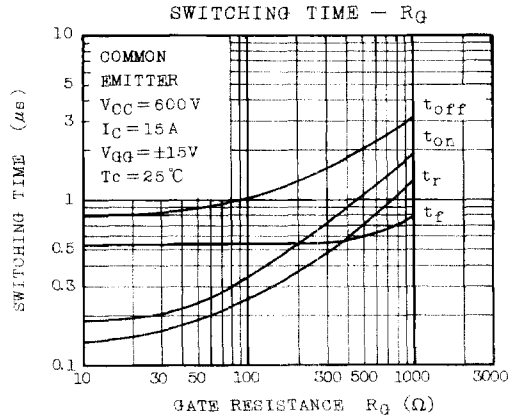
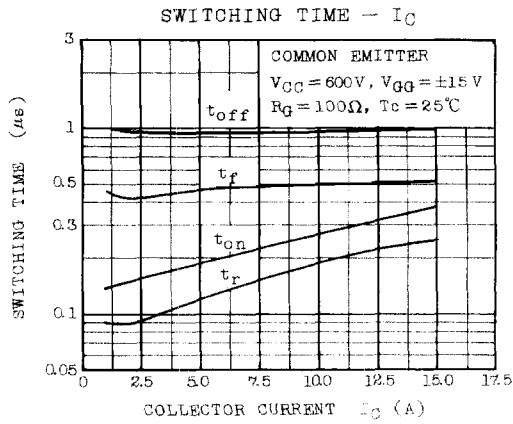
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	$V_{CES}$	1000	V
Gate-Emitter Voltage	$V_{GES}$	$\pm 20$	V
Collector Current	DC	$I_C$	15
	1ms	$I_{CP}$	30
Forward Current	DC	$I_F$	15
	1ms	$I_{FM}$	30
Collector Power Dissipation	$P_C$	125	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage 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

## 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=15mA, VCE=5V	3.0	-	6.0	V
Collector-Emitter Saturation Voltage		VCE(sat)	IC=15A, VGE=15V	-	3.0	5.0	V
Input Capacitance		Cies	VCE=10V, VGE=0, f=1MHz	-	2000	-	pF
Switching Time	Rise Time	tr		-	0.3	1.0	μs
	Turn-on Time	ton		-	0.4	1.0	
	Fall Time	tf		-	0.6	1.0	
	Turn-off Time	toff		-	1.0	2.0	
Forward Voltage		VF	IF=15A, VGE=0	-	1.8	2.5	V
Reverse Recovery Time		trr	IF=15A, VGE=-10V di/dt=100A/μs	-	0.2	0.5	μs
Thermal Resistance		Rth(j-c)	Transistor	-	-	1.0	°C/W
			Diode	-	-	1.8	

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