

IGBT Transistor Module

MG25J6ES42

600V / 25A

DATASHEET

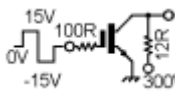
OEM – Toshiba

Source: Toshiba Databook 1995/96

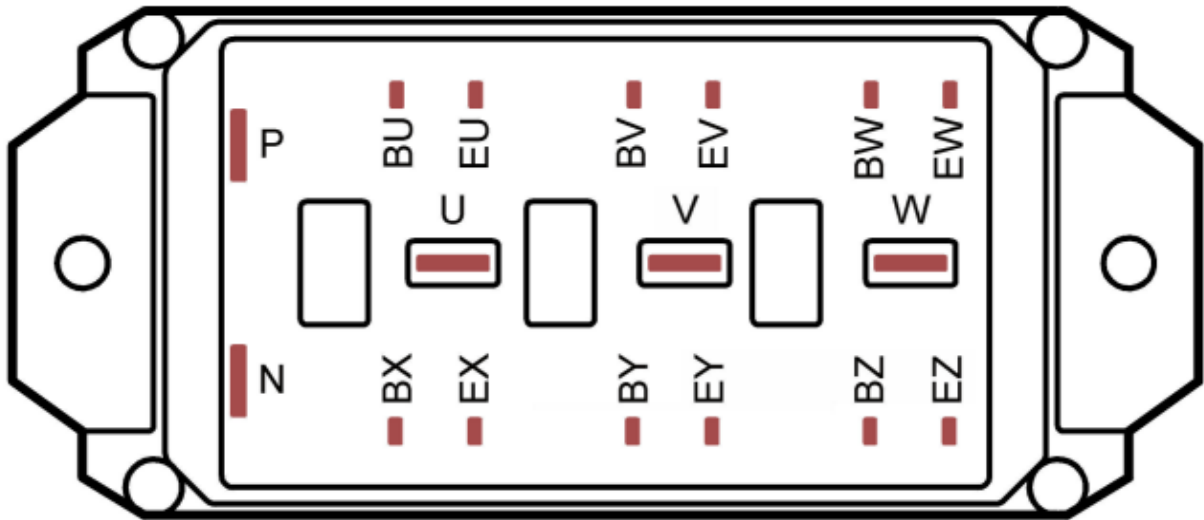
MAXIMUM RATINGS (Tc=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		Vces	600	V
Gate-Emitter Voltage		Vges	+/-20	V
Collector Current	DC	IC	25	A
	1ms	Icp	50	A
Forward Current	DC	If	25	A
	1ms	Ifm	50	A
Collector Power Dissipation		Pc	100	W
Junction Temperature		Tj	150	°C
Storage Temperature Range		Tstg	-40~125	°C
Isolation Voltage		Visol	2500 (AC 1min.)	V
Screw Torque		-	3	N*m

ELECTRICAL CHARACTERISTICS (Tc=25°C)

CHARACTERISTICS		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		Iges	Uge=+/-20V, Vce=0	-	-	+500	nA
Collector Cut-off Current		Ices	Uce=600V, Uge=0	-	-	1.0	mA
Gate-Emitter Cut-off Voltage		Uge (off)	Ic=25mA, Uce=5V	3.0	-	6.0	V
Collector-Emitter Saturation Voltage		Uce (sat)	IC=25A, Uge=15V	-	2.7	3.5	V
Input Capacitance		Cies	Uce=10V, Uge=0, f=1MHz	-	2000	-	pF
Switching Time	Rise Time	tr		-	0.30	0.60	uS
	Turn-on Time	ton		-	0.40	0.80	
	Fall Time	tf		-	0.18	0.35	
	Turn-off Time	toff		-	0.60	1.00	
Forward Voltage		Vf	If=25A, Uge=0	-	1.7	2.5	V
Reverse Recovery Time		trr	If=25A, Uge=-10V di/dt=50A/uS	-	0.08	0.15	uS
Thermal Resistance		Rth (j-c)	Transistor	-	-	1.25	°C/W
			Diode	-	-	1.56	

2-93A3A



EQUIVALENT CIRCUIT

