IGBT Dual Transistor

MG120V2YS40

1700V / 120A

DATASHEET

OEM – Toshiba

Source: Toshiba Databook 1995/96

Datasheet Rev. 1.0 – 07/21 – data without warranty / liability

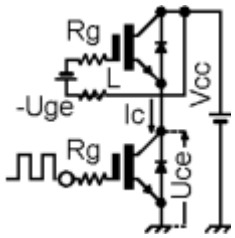
MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		Vces	1700	V
Gate-Emitter Voltage		Vges	+/-20	V
Collector Current	DC	IC	120	A
	1ms	Icp	240	A
Forward Current	DC	If	120	A
	1ms	Ifm	240	A
Collector Power Dissipation		Pc	1200	W
Junction Temperature		Tj	150	°C
Storage Temperature Range		Tstg	-40~125	°C
Isolation Voltage		Visol	4000 (AC 1min.)	V
Screw Torque (Terminal / Mounting)		-	3/3	N*m

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTICS		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		Iges	Uge=+/-20V, Vce=0	-	-	+-100	nA
Collector Cut-off Current		Ices	Uce=1700V, Uge=0	-	-	2.0	mA
Gate-Emitter Cut-off Voltage		Uge (off)	Ic=120mA, Uce=5V	4.0	-	8.0	V
Collector-Emitter Saturation Voltage		Uce (sat)	IC=120A, Uge=15V	-	3.2	4.5	V
Input Capacitance		Cies	Uce=10V, Uge=0, f=1MHz	-	16400	-	pF
Switching Time	Turn-on Delay	td(on)	Inductive Load Vcc=900V, Ic=120A, Uge=+/-15V, Rg=4,7R (Note1)	-	0.10	-	uS
	Rise Time	tr		-	0.10	-	
	Turn-on Time	ton		-	0.50	-	
	Turn-off Delay	td (off)		-	0.40		
	Fall Time	tf		-	0.50	1.50	
	Turn-off Time	toff		-	1.0	-	
Forward Voltage		Vf	If=120A,Uge=0	-	3.50	4.50	V
Reverse Recovery Time		trr	If=120A, Uge=-10V di/dt=500A/uS	-	0.30	0.60	uS
Termal Resistance		Rth (j-c)	Transistor	-	-	0.104	°C/W
			Diode	-	-	0.25	

Note 1



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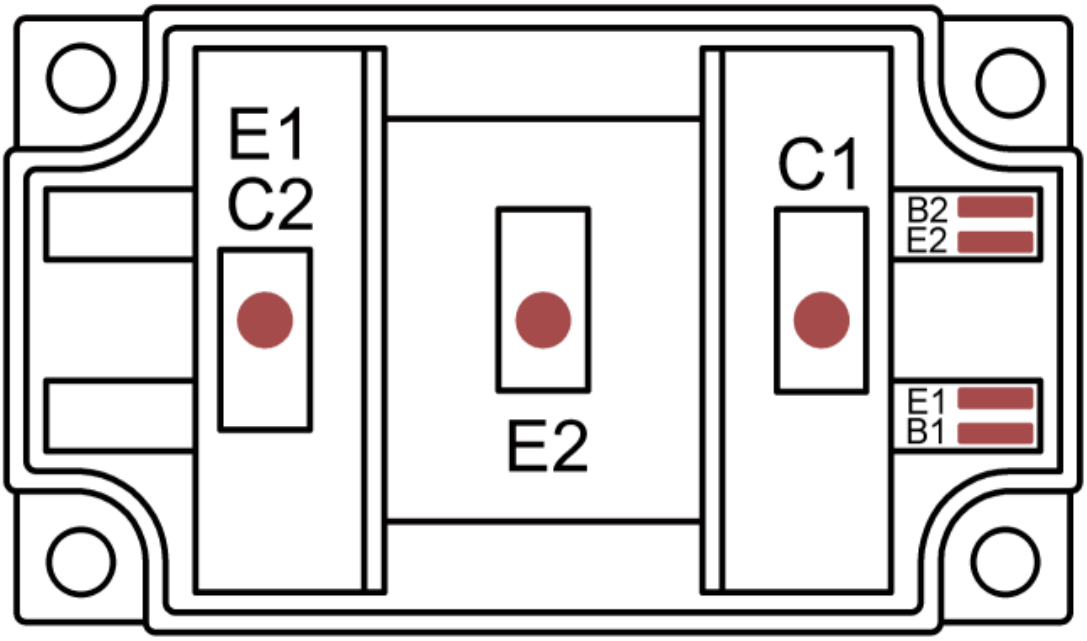

EQUIVALENT CIRCUIT