

Power Semiconductor IGBT (Insulated Gate Bipolar Transistor)

MMJ65B0A00**

Outline

IGBT (Bare chip) utilizes various technologies that we cultivated by analog semiconductor device production and is the product which prepared a lineup of the wide high voltage, high current which can contribute to high efficiency and saving energy.

Applications

Industrial Motor Drivers

- Inverter
- Welding
- •UPS

Absolute Maximum Ratings

I J=25deg unless otherwise noted.						
Parameter	Symbol	Rating	Unit			
Collector-Emitter voltage	VCES	650	V			
Gate-Emitter voltage	VGES	±30	V			
Collector current *1)	IC	200	Α			
Junction temperature	Tj	-40~+175	°C			

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Features

- ① Field Stop Trench gate IGBT
- Low Collector-Emitter saturation voltage
- ③ High short circuit capability
- ④ Low swiching losses

Die Specification

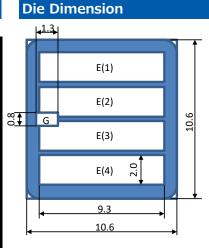
Item	Value	Unit
Die thickness	90	μm
Die size	10.6x10.6(112.4)	mm
Front metal(AlSi)	6.5	μm
Backside metal(AlSi/Ti/Ni/Au)	1.25	μm

*1)Collector current is limited by Tj(max) and thermal properties of assembly.

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Electrical Characteristics

Tj=25deg unless otherwise noted.								
Parameter		Symbol	Specification		Unit	condition		
		Symbol	Min	Тур	Max	onne	condicion	
Zero gate voltage collector current		ICES	-	-	1	μA	Vce=650V,Vge=0V	
Gate-Emitter leakage current		IGES	-	-	±500	nA	Vge=±30V,Vce=0V	
Gate-emitter threshold voltage		VGE(th)	5.00	-	6.80	V	Vce=10V,Ic=4.0mA	
Collecter-Emitter saturation voltage	Tj=25℃	VCE	-	1.5	1.8	V		
	Tj=175℃	(sat)	-	1.7	-		Ic=200A,Vge=15V	
Input capacitance		Cies	-	16000	-	pF	VCE=25V,VGE=0V,	
Reverse transfer capcitance		Cres	-	600	-	pF	f=1MHz	
Switching time *Reference characteristics		td(on)	-	100	-	ns	Vcc=300V,Ic=200A	
		tr	-	100	-	ns	VGE=-15/+15V,	
		td(off)	-	500	-	ns	Rg=10.0Ω, Inductive load,	
		tf	-	70	-	ns	Ls≒100nH	
Short circuit withstand time		Tsc	10	-	-	μs	Vcc=360V,Vge=15V,Tj=150℃	
This characteristic is when it is incorporated in a mold package or evaluation board								



PRELIMINARY

(G) Gate

(C) Collector

(E) Emitter

(C) q

(E)

MR-Series 650V / 200A

(G)

This characteristic is when it is incorporated in a mold package or evaluation board.

前項語

Depending on the assembly conditions etc., it may not be satisfied. Please note that it is not a guaranteed value.

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The details listed here are not a guarantee of the individual products at the time of ordering.

When using the products, you will be asked to check their specifications.

Feb 2022 Rev.0