

Power Semiconductor IGBT (Insulated Gate Bipolar Transistor)

MMJ65A0A00**

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	100	Α			
Junction temperature	Tj	-40~+175	°C			

2Edag uplage

Features

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

Die Specification

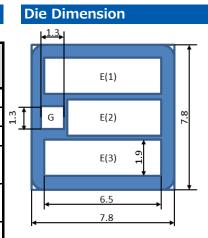
Item	Value	Unit
Die thickness	90	μm
Die size	7.8x7.8(60.8)	mm
Front metal(AlSi)	6.5	μm
Backside metal(AlSi/Ti/Ni/Au)	1.25	μm

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

athomulao

Electrical Characteristics

Tj=25deg unless otherwise noted.								
Parameter		Symbol	Specification		Unit	condition		
		Symbol	Min	Тур	Max	onne	condition	
Zero gate voltage collector current		ICES	-	-	1	μA	Vce=650V,Vge=0V	
Gate-Emitter leakage current		IGES	I	-	±500	nA	Vge=±30V,Vce=0V	
Gate-emitter threshold voltage		VGE(th)	5.00	-	6.80	V	Vce=10V,Ic=2.0mA	
Collecter-Emitter saturation voltage	Tj=25℃	VCE	-	1.5	1.8	V		
	Tj=175℃	(sat)	-	1.7	-	v	Ic=100A,Vge=15V	
Input capacitance		Cies	-	8000	-	pF	VCE=25V,VGE=0V,	
Reverse transfer capcitance		Cres	-	300	-	pF	f=1MHz	
Switching time *Reference characteristics		td(on)	-	50	-	ns	Vcc=300V,Ic=100A VGE=-15/+15V, Rg=10.0Ω, Inductive load,	
		tr	-	50	-	ns		
		td(off)	-	300	-	ns		
		tf	-	60	-	ns	Ls≒100nH	
Short circuit withstand time		Tsc	10	-	-	μs	Vcc=360V,Vge=15V,Tj=150°C	
This characteristic	r is when it i	s incornor	i hote	n > m	old na	ckago	or evaluation board	



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.

MinebeaMitsumi Passion to Create Value through Difference

Mitsumi Q Search

https://mtm-sec.mitsumi.co.jp/web/ic/

Mitsumi Electric CO.,LTD.

Semiconductor Business Division Strategy Engineering Department

tel:+81-46-230-3470

Any products mentioned this leaflet are subject to any modification in their appearance and others for improvements without p rior notification.

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.

MR-Series 650V / 100A

(G)

PRELIMINARY

(G) Gate

(C) Collector(E) Emitter

(C) գ