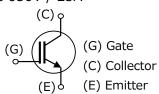


PRELIMINARY

Power Semiconductor IGBT (Insulated Gate Bipolar Transistor)

MR-Series 650V / 25A

MMJ6525B00**



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

Features

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

Absolute Maximum Ratings

Tj=25deg unless otherwise noted.

Parameter	Symbol	Rating	Unit
Collector-Emitter voltage	VCES	650	V
Gate-Emitter voltage	VGES	±30	٧
Collector current *1)	IC	25	Α
Junction temperature	Tj	-40~+150	$^{\circ}$

Die Specification

Item	Value	Unit
Die thickness	86	μm
Die size	3.38x3.38(11.42)	mm
Front metal(AlSi)	6.5	μm
Backside metal(AlSi/Ti/Ni/Au)	1.25	μm

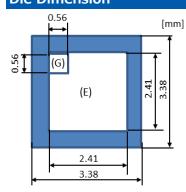
^{*1)}Collector current is limited by Tj(max) and thermal properties of assembly.

Electrical Characteristics

Tj=25deg unless otherwise noted.

Parameter	Symbol	Specification		Unit	condition		
. 3. 3. 110001	3,111301	Min	Тур	Max	0.110	551,416,51	
Zero gate voltage collector current	ICES	-	1	1	μΑ	Vce=650V,Vge=0V	
Gate-Emitter leakage current	IGES	-	ı	±100	nA	Vge=±30V,Vce=0V	
Gate-emitter threshold voltage	VGE(th)	4.0	-	6.0	V	Vce=10V,Ic=0.8mA	
Collecter-Emitter saturation	VCE	_	1.6	1.9	V	Ic=25A,Vge=15V	
voltage	(sat)		1.0	1.5		10-25A, vgc-15 v	
Input capacitance	Cies	1	960	-	рF	VCE=25V,VGE=0V,	
Reverse transfer capcitance	Cres	-	48	-	pF	f=100kHz	
	td(on)	-	50	-	ns	Vcc=330V,Ic=25A VGE=15/0V,Tj=150°C Rg(on/off)=15Ω/41Ω,	
Switching time	tr	ı	45	-	ns		
*Reference characteristics	td(off)	-	300	-	ns		
	tf	-	100	-	ns	Inductive load	
Short circuit withstand time	Tsc	5	-	-	μs	Vcc=400V,Vge=15V,Tj=150℃	

Die Dimension



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

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.