

General Description

TRinno IGBT power module provides low conduction and switching losses as well as short circuit ruggedness. It is designed for applications such as Motor Driver, IH , Rectifier and Welder.

Features

- 1200V Field Stop Trench IGBT Technology
- Fast & Soft Recovery Diodes
- Positive Temperature Coefficient
- Short Circuit Withstanding Time : 10 s



Applications

Motor driver, IH(Induction heating), Rectifier, Welder

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	
Collector-Emitter Voltage	V_{CES}	1200	V	
Gate-Emitter Voltage	V_{GES}	± 20	V	
Continuous Collector Current	I_C	$T_C = 25$	200	A
		$T_C = 100$	100	A
Pulsed Collector Current (Note 1)	I_{CM}	200	A	
Diode Continuous Forward Current	I_F	100	A	
Power Dissipation	P_D	$T_C = 25$	658	W
		$T_C = 100$	263	W
Operating Junction Temperature	T_{vj}	-40 ~ 150		
Storage Temperature Range	T_{STG}	-40 ~ 150		

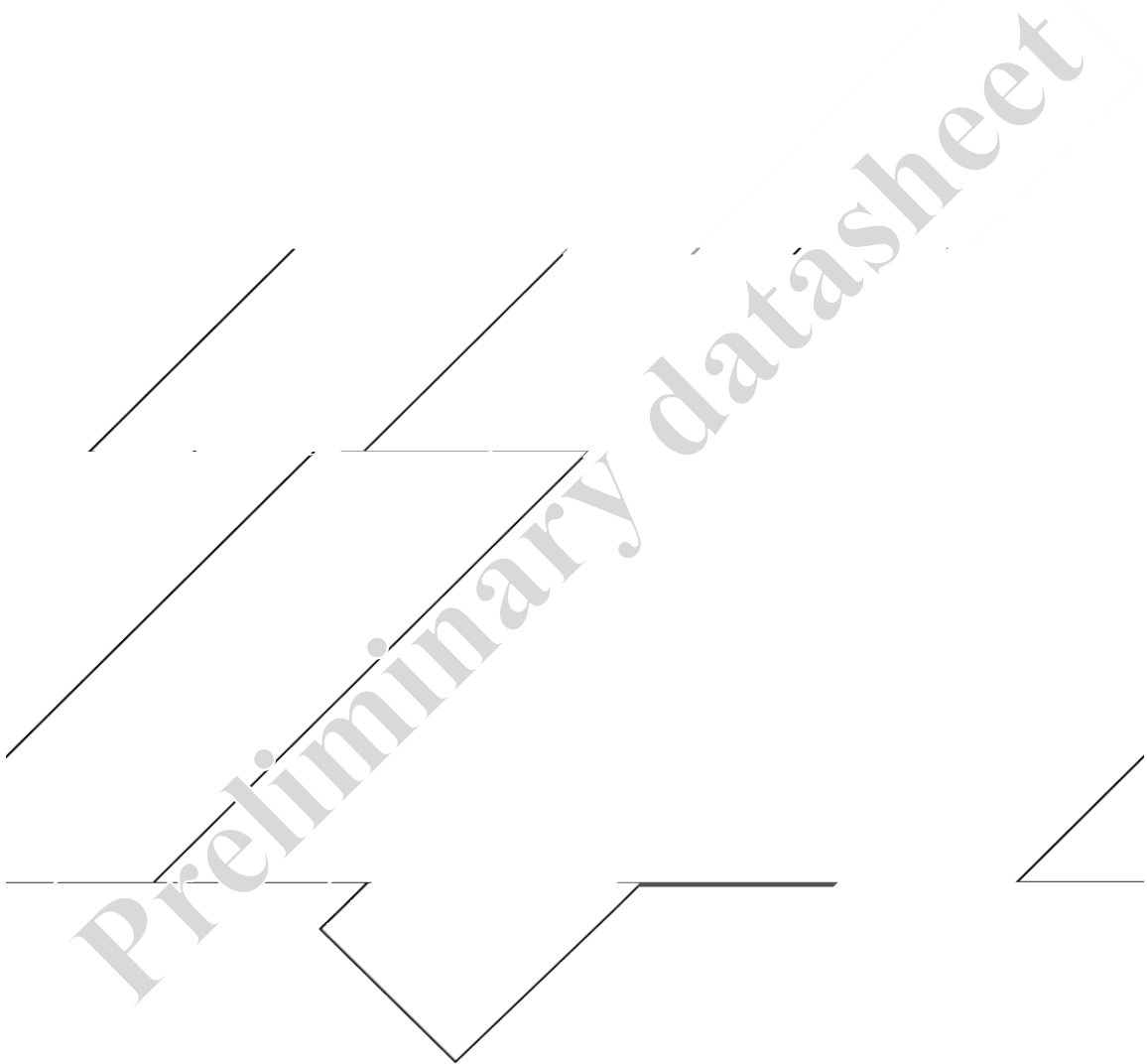
Notes :

(1) Repetitive rating : Pulse width limited by maximum junction temperature

Thermal Characteristics

Parameter	Symbol	Value	Unit
Maximum Thermal resistance, Junction-to-Case (Per ½ Module)		0.19	K/W
Maximum Thermal resistance, Junction-to-Case (Per ½ Module)		0.75	K/W

Electrical Characteristics of the IGBT $T_{vj}=25$, unless otherwise noted



Electrical Characteristics of the DIODE $T_{vj}=25$, unless otherwise noted

Parameter	Symbol	Test condition	Min.	Typ.	Max.	Unit	
Diode Forward Voltage	V_{FM}	$I_F = 100A$	$T_{vj} = 25$	--	2.3	2.8	V
			$T_{vj} = 125$	--	2.2	2.7	
Reverse Recovery Current	I_{rr}	$V_{CC} = 600V, I_F = 100A$ $R_G = 10$, $V_{GE} = 15V$ Inductive Load	$T_{vj} = 25$	--	61	--	A
			$T_{vj} = 125$	--	74	--	
Reverse Recovery Charge	Q_{rr}	$V_{CC} = 600V, I_F = 100A$ $R_G = 10$, $V_{GE} = 15V$ Inductive Load	$T_{vj} = 25$	--	4.7	--	C
			$T_{vj} = 125$	--	9.8	--	
Reverse Recovery Time	t_{rr}	$V_{CC} = 600V, I_F = 100A$ $R_G = 10$, $V_{GE} = 15V$ Inductive Load	$T_{vj} = 25$	--	130	--	ns
			$T_{vj} = 125$	--	175	--	

Characteristics of the Module

Parameter	Symbol	Test condition	Min.	Typ.	Max.	Unit
Isolation Voltage	V_{ISO}	RMS, f=50Hz, t=1 minutes	--	2.5	--	kV
Terminal mounting torque (M5)	--		2.5	--	5.0	N.m
Weight	--		--	155	--	g

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