



## IGBT Modules

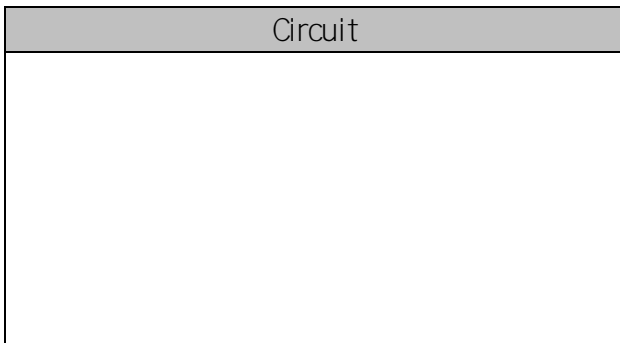
$V_{CES}$  1200V  
 $I_C$  600A

### Applications

- Motion/servo control
- High frequency switching application
- UPS (Uninterruptible Power Supplies)
- Welding machine

### Features

- Low  $V_{CE(sat)}$  with Trench technology
- Low switching losses especially Eoff
- $V_{CE(sat)}$  with positive temperature coefficient
- High short circuit capability(10us)
- Including ultra fast & soft recovery anti-parallel FWD
- Low inductance package
- Maximum junction temperature 175



## IGBT

### Absolute Maximum Ratings

Parameter	Symbol	Conditions	Value	Unit
Collector-Emitter Voltage	$V_{CES}$	$V_{GE}=0V, I_C=1mA, T_{vj}=25$	1200	V



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Characteristic Values



## Diode

### Absolute Maximum Ratings

Parameter	Symbol	Conditions	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	$T_{vj}=25$	1200	V
Continuous DC Forward Current	$I_F$		600	A
Repetitive Peak Forward Current	$I_{FRM}$	$t_p=1ms$	1200	A
I <sup>2</sup> t-value	I <sup>2</sup> t	$V_R=0V, t_p=10ms, T_{vj}=125$	35000	A <sup>2</sup> s
		$V_R=0V, t_p=10ms, T_{vj}=150$	32000	

### Characteristic Values

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Forward Voltage	$V_F$	$I_F=600A, T_{vj}=25$		1.55	2.10	V
		$I_F=600A, T_{vj}=125$		1.46		
		$I_F=600A, T_{vj}=150$		1.41		
Recovered Charge	$Q_{rr}$	$I_F=600A$		68.9		μC
Peak Reverse Recovery Current	$I_{rr}$	$V_R=600V$ $-di_F/dt=5700A/us$		296		A
Reverse Recovery Energy	$E_{rec}$	$T_{vj}=25$		18.5		mJ
Recovered Charge	$Q_{rr}$	$I_F=600A$		136.1		μC
Peak Reverse Recovery Current	$I_{rr}$	$V_R=600V$ $-di_F/dt=5700A/us$		343		A
Reverse Recovery Energy	$E_{rec}$	$T_{vj}=150$		39.8		mJ



