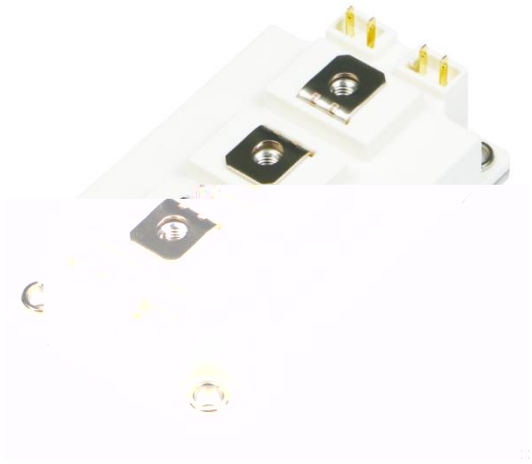
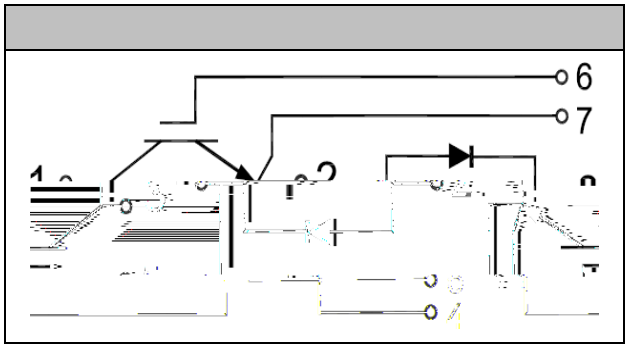
MG300HF12LEC2

RoHS COMPLIANT





IGBT Modules

VCES	1200V
IC	300A

Applications

- High frequency drivers
- Solar inverters
- UPS (Uninterruptible Power Supplies)
- Electric welding machine

Features

- High speed IGBT in NPT technology
- Low switching losses
- High short circuit capability(10us)
- Including ultra fast & soft recovery anti-parallel FWD
- Low inductance
- Maximum junction temperature 150

● 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
Continuous Collector Current	I_C	T_c=80	300	A
Repetitive Peak Collector Current	I_{CRM}	tp=1ms	600	A
Gate-Emitter Voltage	V_{GES}	T_{vj}=25	20	V
Total Power Dissipation	P_{tot}	T_c=25 T_{vjmax}=150	2000	W

Characteristic values

Parameter	Symbol	Conditions	Value	Unit

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		300	A
Repetitive Peak Forward Current	I_{FRM}	t_p=1ms	600	A

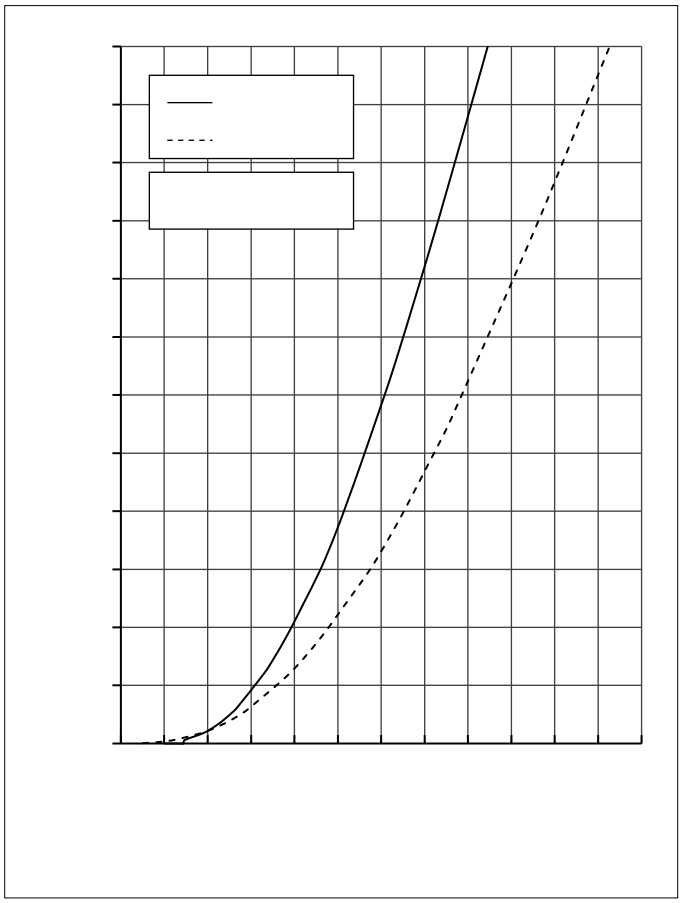
Characteristic values

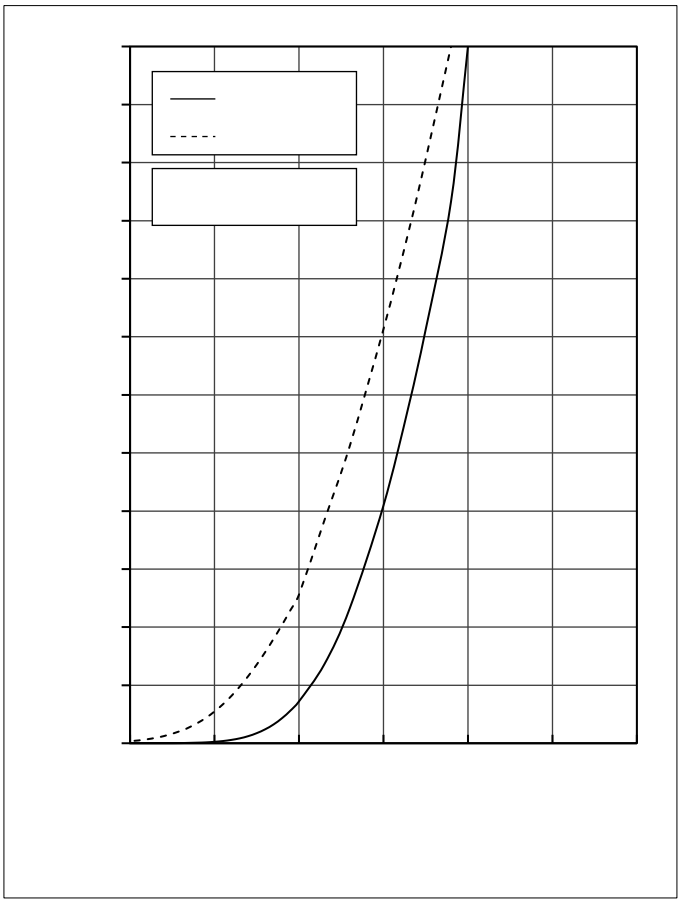
Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Forward Voltage	V_F	I_F=300A,T_{vj}=25		1.70	2.0	V
		I_F=300A,T_{vj}=125		1.75		
Recovered Charge	Q_{rr}	I_F =300 A V_R=600V -di_F/dt =3600A/us T_{vj}=25		16.8		uC
Peak Reverse Recovery Current	I_{rr}			240		A
Reverse Recovery Energy	E_{rec}			10.2		mJ
Recovered Charge	Q_{rr}	I_F =300 A V_R=600V -di_F/dt =3600A/us T_{vj}=125		36.5		uC
Peak Reverse Recovery Current	I_{rr}			290		A
Reverse Recovery Energy	E_{rec}			20.3		mJ

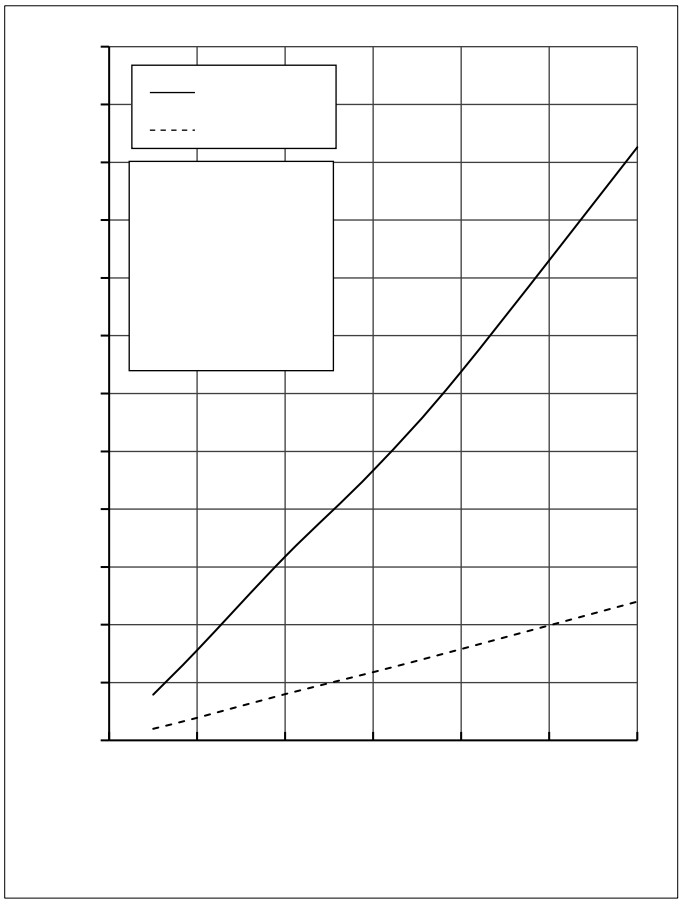
Module Characteristics

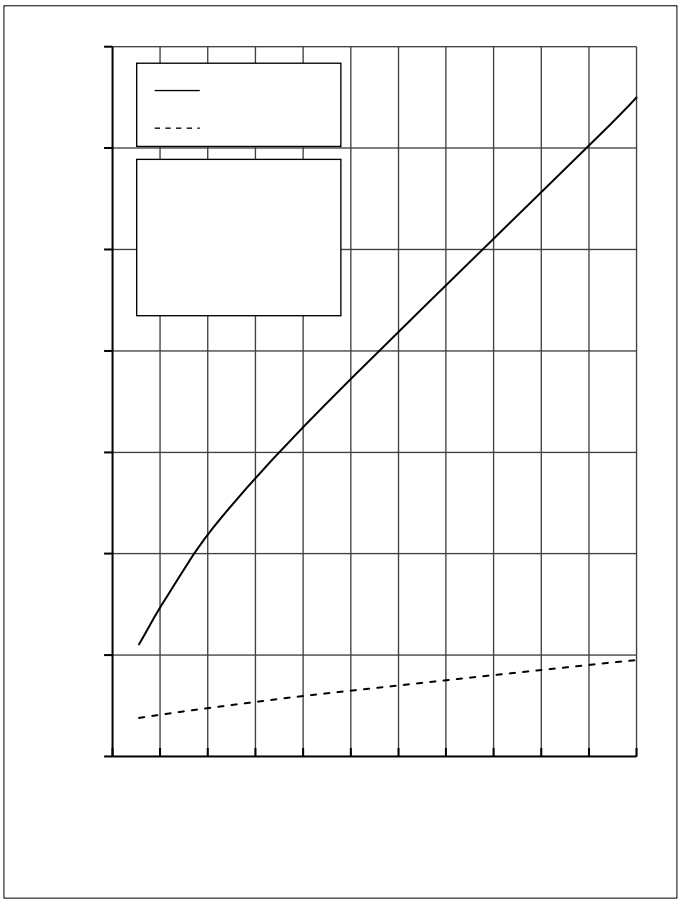
T_C=25°C unless otherwise specified

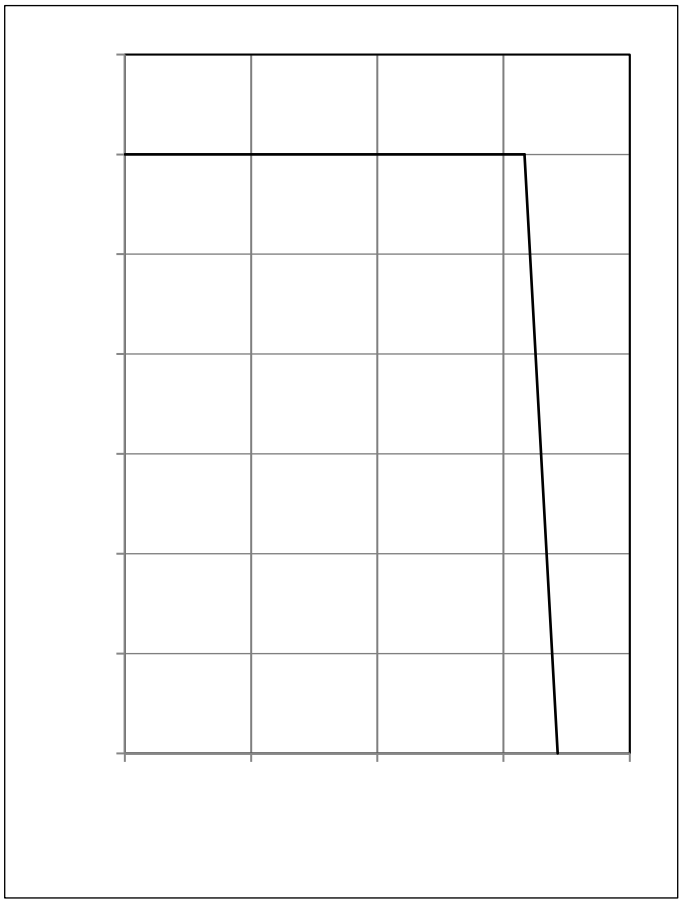
Parameter	Symbol	Conditions	Value			Unit
			Min.			

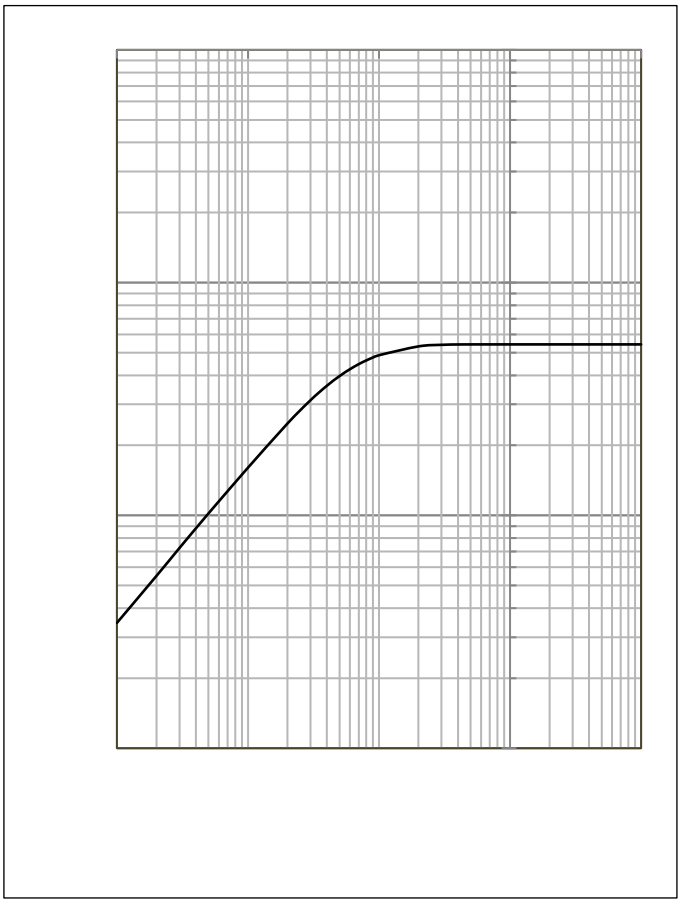


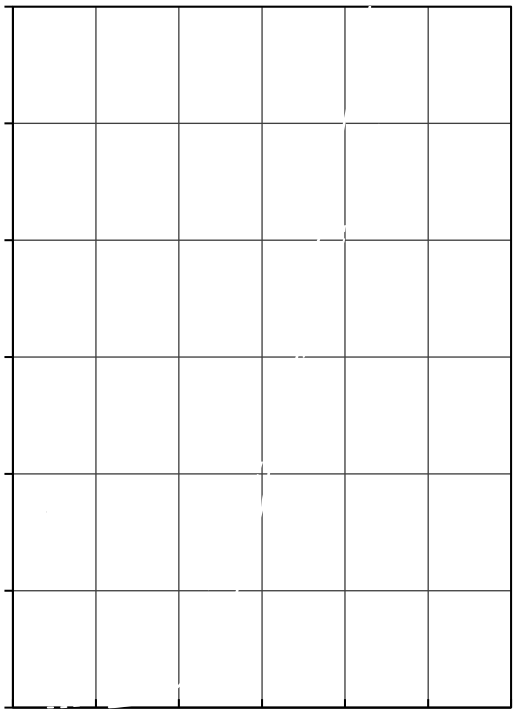


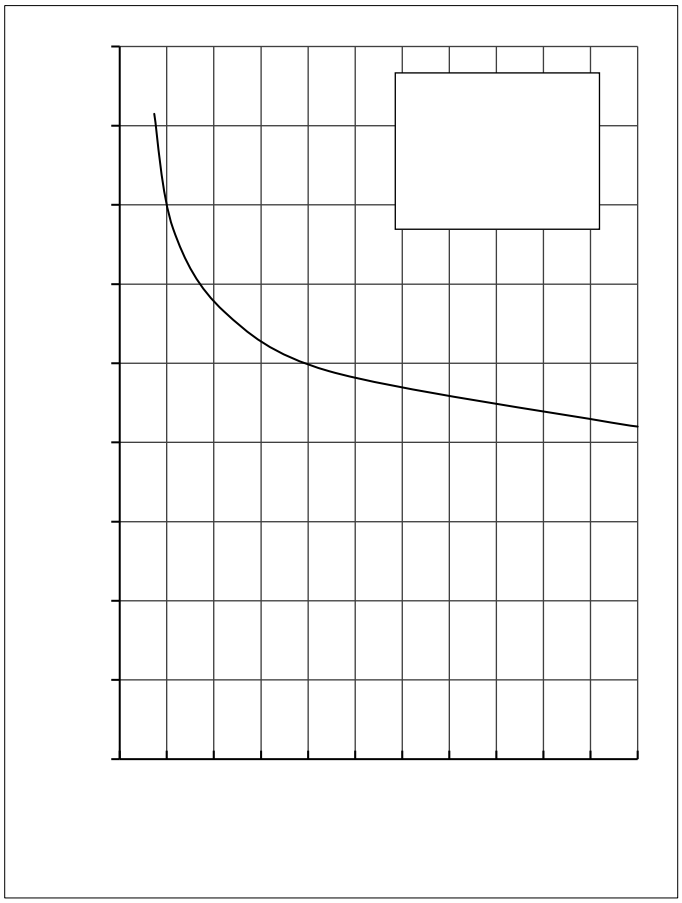


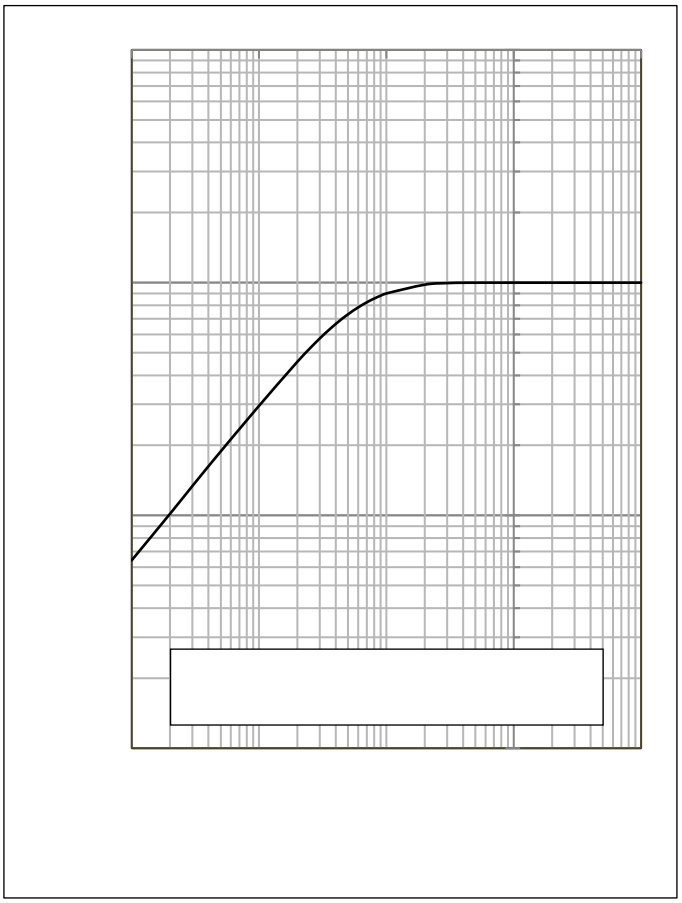




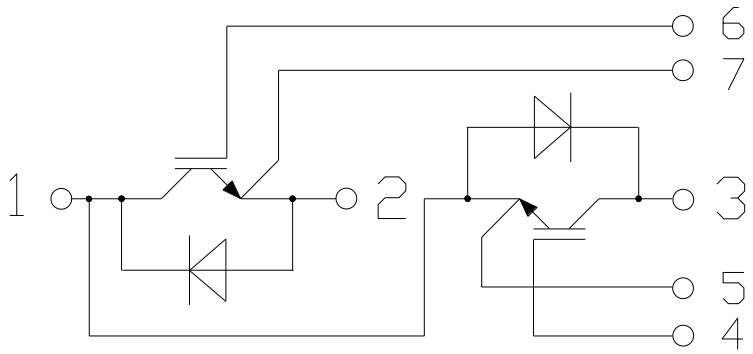








- **Circuit Diagram**



- **Package Outline Information**

Dimensions in Millimeters