



IGBT Modules

V_{CES} 120V
 I_c 50A

Applications

Motor Drivers
AC and DC servo drive amplifier
UPS (Uninterruptible Power Supplies)

Features

Low switching losses
Low $V_{CE(sat)}$ with positive temperature coefficient
Including fast & soft recovery parallel FWD
Low inductance case
High short circuit capability



IGBT- inverter

Characteristic Values

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Gate-Emitter Threshold Voltage	$V_{GE(th)}$	$V_{GE}=V_{CE}$ $I_C=1.7mA$ $T_{vj}=25$	5.2	5.8		



Diode-inverter

Absolute Maximum Ratings

Parameter	Symbol	Conditions	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	$T_V=25$	1200	V
Continuous DC Forward Current	I_F		50	A
Repetitive Peak Forward Current	I_{FRM}	$t_p=1ms$	100	A

Characteristic Values

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Forward Voltage	V_F	$I_F=50A, T_V=25$		1.95	2.80	V
		$I_F=50A, T_V=125$		1.85		
		$I_F=50A, T_V=150$		1.80		



MG50P12MLE1A

COMPLIANT
RoHS

IGBT-brake-chopper

Absolute Maximum Ratings

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



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TurnonDelayTime	$t_{d(on)}$	$I_C=25A$ $V_{CE}=600V$ $V_{GE}=\pm 15V$ $R_G=20\Omega$ $T_V=150$		18		ns
RiseTime	t_r			27		ns
TurnoffDelayTime	$t_{d(off)}$			89		ns
FallTime	t_f			262		ns
EnergyDissipationDuring TurnonTime	E_{on}			2.92		mJ
EnergyDissipationDuring TurnoffTime	E_{off}			1.43		mJ
SC Data	I_{sc}	$t_p\leq 8\mu s, V_{GE}=15V, T_V=150$, $V_{CC}=600V, V_{CEM}\leq 1200V$		100		A



Diode-Rectifier

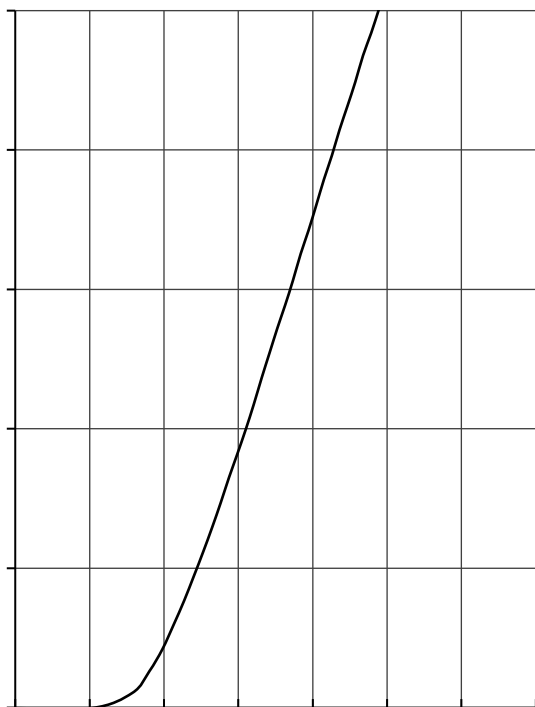
Absolute Maximum Ratings

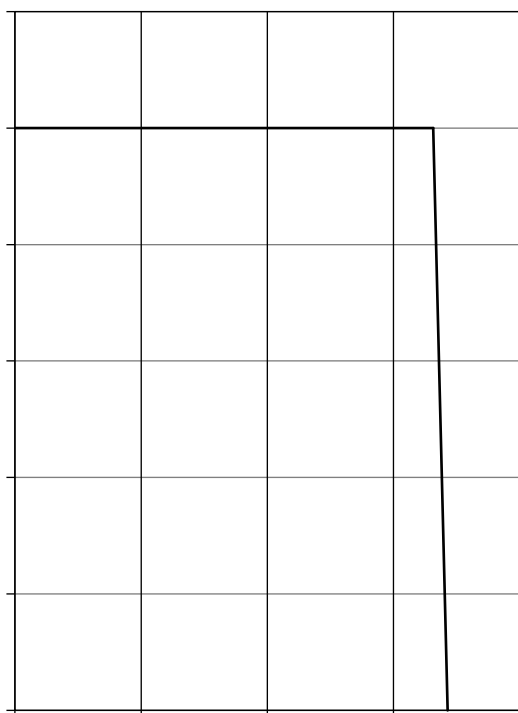
Parameter	Symbol	Conditions	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	$T_J=25$	1600	V
Average output Current 50/60Hz, sine wave	$I_{F(AV)}$	$T_C=100$	50	A
Surge Forward Current	I_{FSM}	$V_R=0V, t_p=10ms, T_J=25$	520	A
I^2t -value	I^2t	$V_R=0V, t_p=10ms, T_J=25$	1300	A ² s

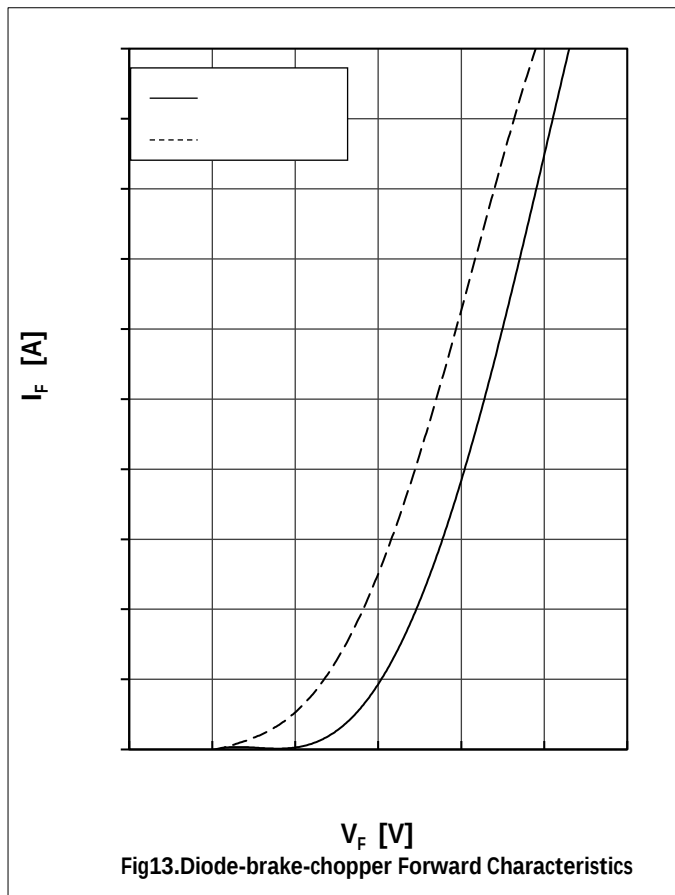
Characteristic Values

Parameter	Symbol	Conditions
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MG50



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