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[2MBI100TA-60-50](#)

EN

This Datasheet is presented by
the manufacturer

DE

Dieses Datenblatt wird vom
Hersteller bereitgestellt

FR

Cette fiche technique est
présentée par le fabricant

■ Features

- High speed switching
- Voltage drive
- Low inductance module structure

■ Applications

- Inverter for Motor drive
- AC and DC Servo drive amplifier
- Uninterruptible power supply
- Industrial machines, such as Welding machines

■ Maximum ratings and characteristics

● Absolute maximum ratings (at Tc=25°C unless otherwise specified)

Item		Symbol	Conditions	Rating	Unit
Collector-Emitter voltage		V _{CES}	I _c =1mA	600	V
Gate-Emitter voltage		V _{GES}		±20	V
Collector current	Continuous	I _c	Duty=100%	100	A
	1ms	I _c pulse	1ms	200	A
	Continuous	-I _c	Duty=50%	100	A
	1ms	-I _c pulse	1ms	200	A
Max. power dissipation		P _c	1 device	310	W
Operating temperature		T _j		+150	°C
Storage temperature		T _{stg}		-40 to +125	°C
Isolation voltage		V _{is}	AC:1min.	AC 2500 (1min.)	V
Screw torque		Mounting *1		3.5	N·m
		Terminals *1		3.5	N·m

*1 : All terminals should be connected together when isolation test will be done.

*2 : Recommendable value : 2.5 to 3.5 N·m(M5)

● Electrical characteristics (at Tj=25°C unless otherwise specified)

Item	Symbol	Characteristics			Conditions	Unit
		Min.	Typ.	Max.		
Zero gate voltage collector current	I _{CES}	—	—	1.0	V _{GE} =0V, V _{CE} =600V	mA
Gate-Emitter leakage current	I _{GES}	—	—	200	V _{CE} =0V, V _{GE} =±20V	nA
Gate-Emitter threshold voltage	V _{GE(th)}	6.2	6.7	7.7	V _{CE} =20V, I _c =100mA	V
Collector-Emitter saturation voltage	V _{CE(sat)}	—	1.8	—	Chip	V
		—	2.0	2.4	Terminal	
Input capacitance	C _{ies}	—	8500	—	V _{GE} =0V	pF
Output capacitance	C _{oes}	—	1500	—	V _{CE} =10V	
Reverse transfer capacitance	C _{res}	—	1300	—	f=1MHz	
Turn-on time	t _{on}	—	0.4	1.2	V _{CC} =300V	μs
	t _r	—	0.25	0.6	I _c =100A	
	t _{r(j)}	—	0.1	—	V _{GE} =±15V	
Turn-off time	t _{off}	—	0.4	1.2	R _G =33 ohm	
	t _f	—	0.04	0.45		
Forward on voltage	V _F	—	1.7	—	Chip	V
		—	2.0	2.5	Terminal	
Reverse recovery time	t _{rr}	—	—	0.3	I _F =100A	μs
Allowable avalanche energy during short circuit cutting off (Non-repetitive)	PAV	55	—	—	I _c >200A, T _j =125°C	mJ

● Thermal resistance characteristics

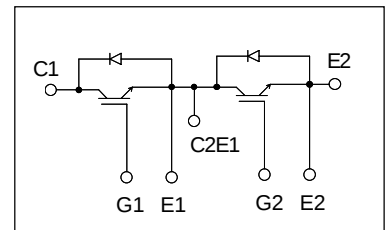
Item	Symbol	Characteristics			Conditions	Unit
		Min.	Typ.	Max.		
Thermal resistance	R _{th(j-c)}	—	—	0.400	IGBT	°C/W
	R _{th(j-c)}	—	—	1.02	FWD	°C/W
Contact Thermal resistance	R _{th(c-f)*2}	—	0.05	—	With thermal compound	°C/W

*2 : This is the value which is defined mounting on the additional cooling fin with thermal compound

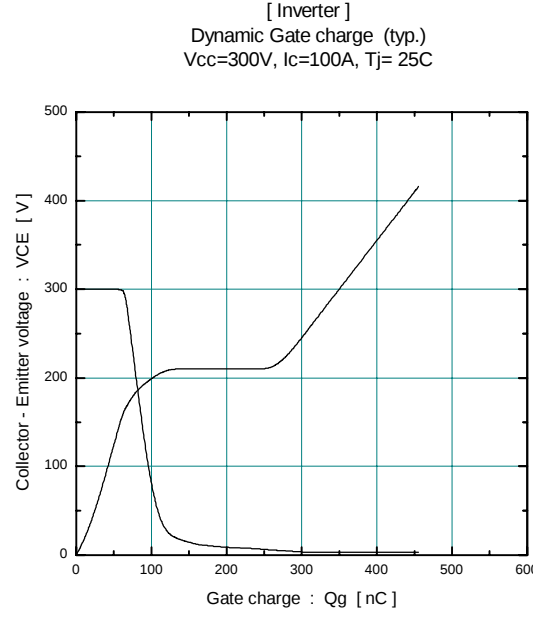
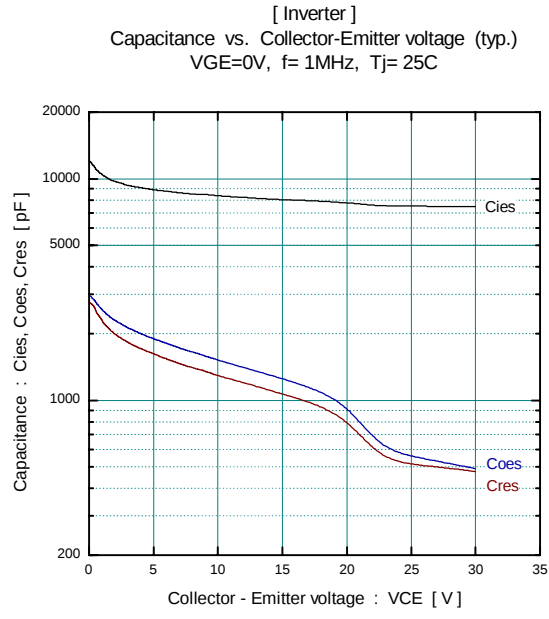
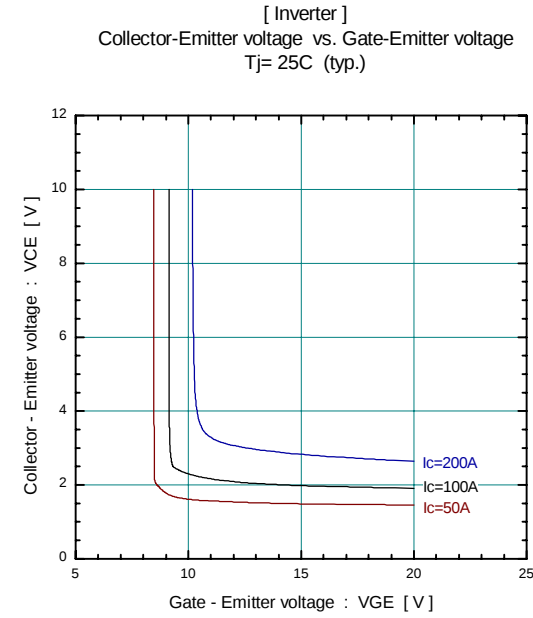
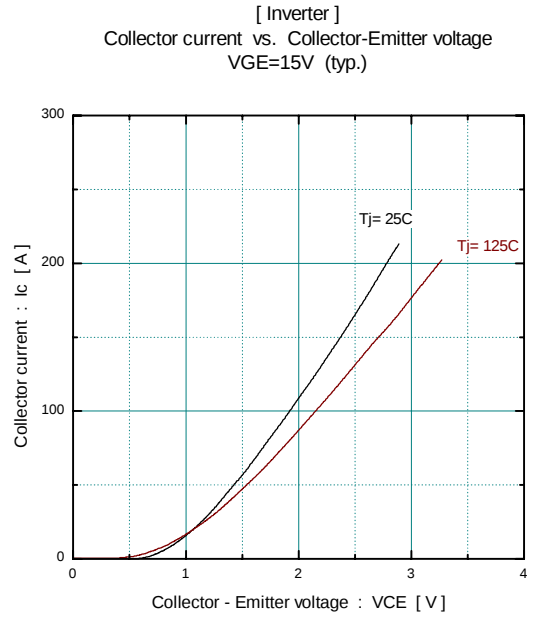
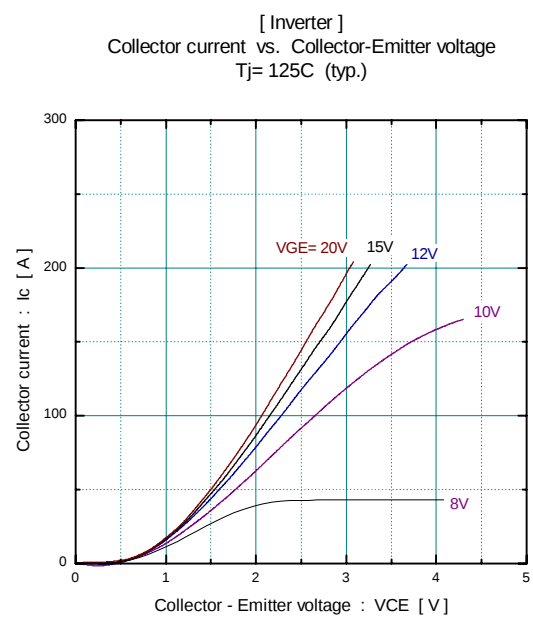
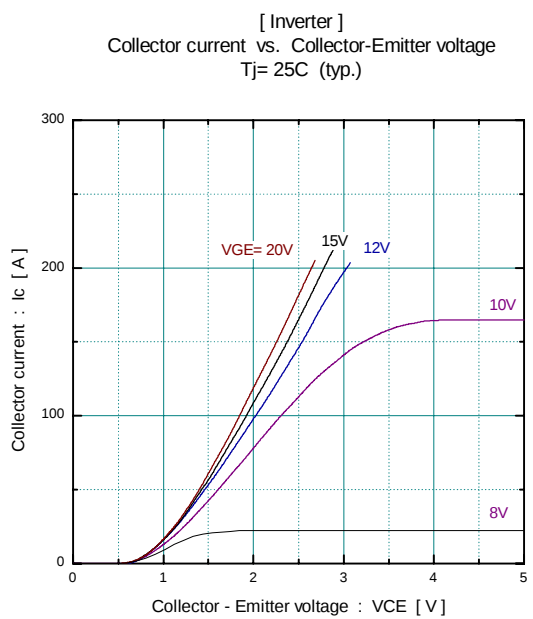
IGBT Module T-Series

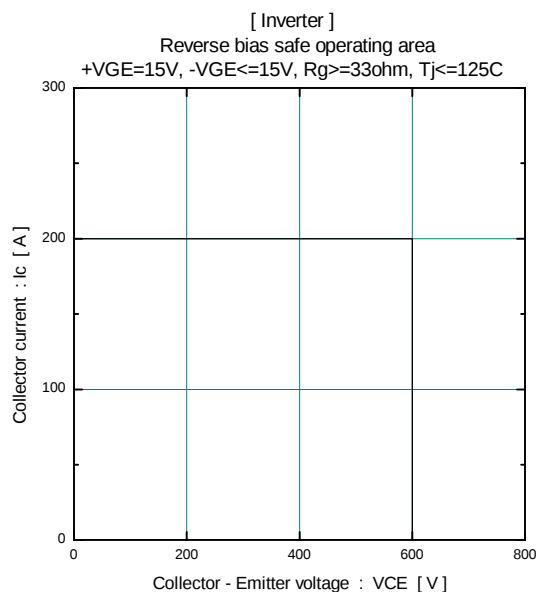
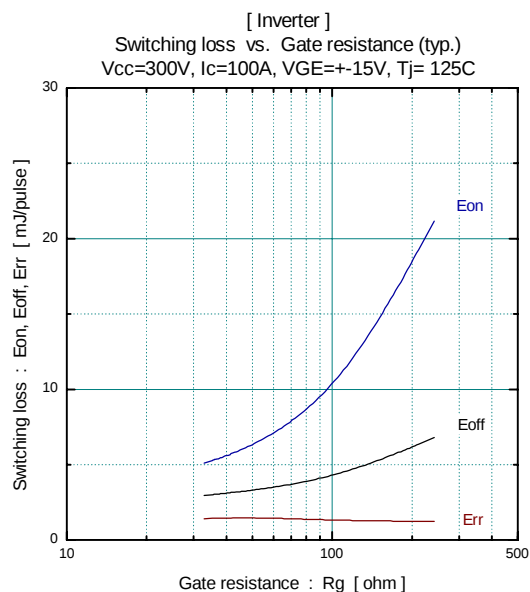
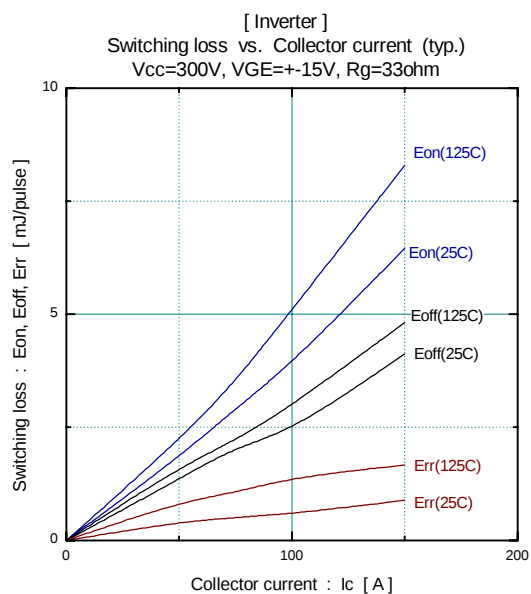
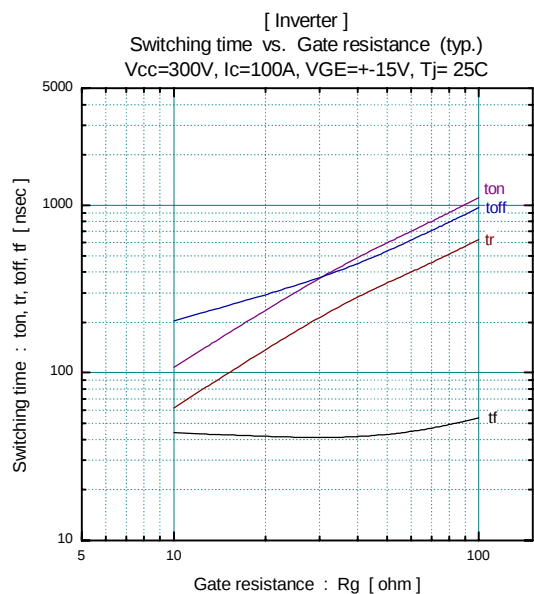
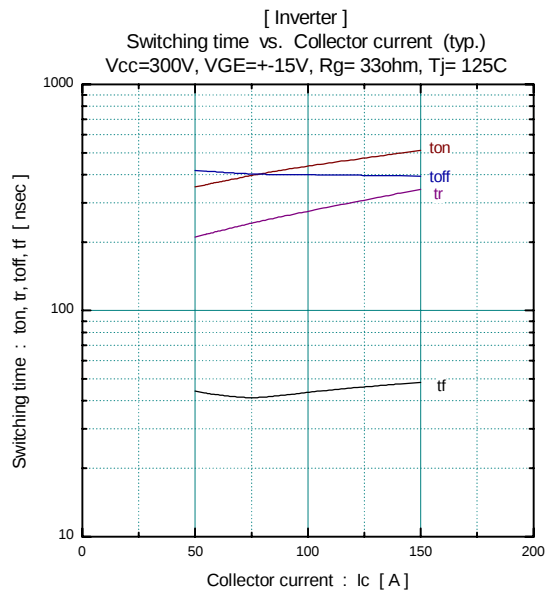
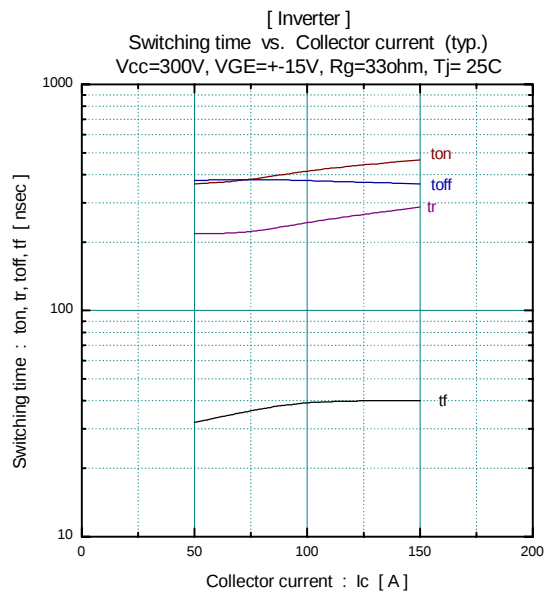
600V / 100A 2 in one-package

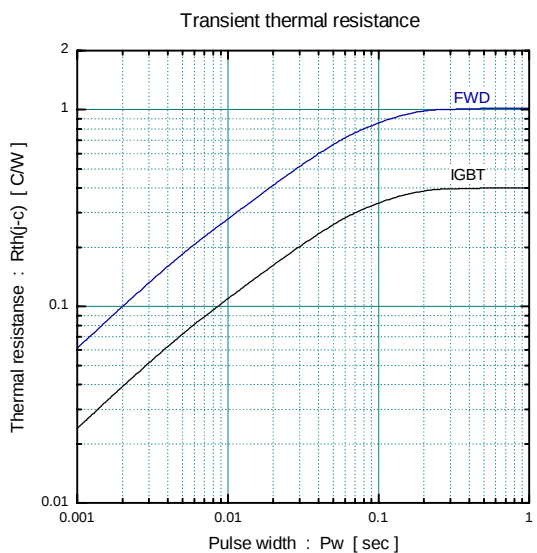
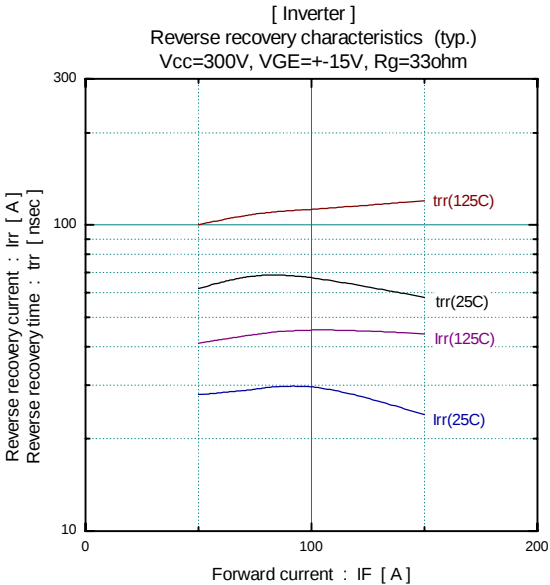
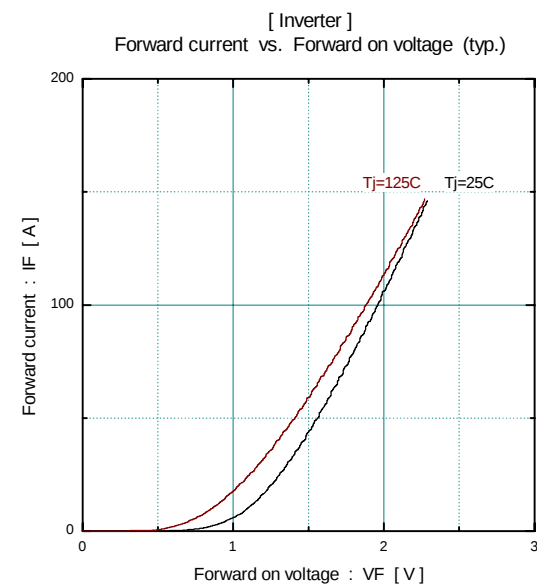
Equivalent Circuit Schematic



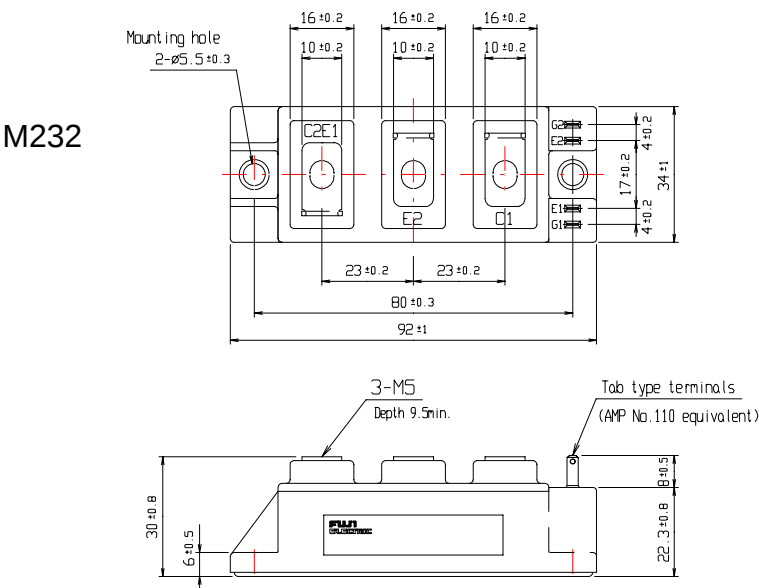
Characteristics (Representative)







■ Outline Drawings, mm



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