IGBT MODULES Ratings and Specifications

1 600 volts class IGBT modules

- The turnoff time is one tenth or less that of bipolar transistors, enabling a high conversion ferquency for power converters.
- The voltage drive element enables the drive circuit to be miniaturized and used in common.
- · Because the safe operating area is wide at turnoff, operation is possible at margins under high voltage.

Device type	Vces volts	V _{GES} volts	lc cont. amps.	Pc watts	Vce(sat) Max. volts	(V _{GE} =15V) Ic amps.	Switching time (Max.)			Package	Net	Equivalent
							ton μsec.	toff μsec.	tf μsec.		weight grams	circuit (page 40)
2MBI50-060	600	±20	50	250	5.0	50	1.0	1.5	1.0	M211	210	Fig. H2
2MBI75-060	600	±20	75	325	5.0	75	1.0	1.5	1,0	M211	210	Fig. H2
2MBI100-060	600	±20	100	400	5.0	100	1,0	1.5	1.0	M211	210	Fig. H2
2MBI150-060	600	±20	150	600	5.0	150	1.0	1.5	1.0	M212	275	Fig. H2
2MBI200-060	600	±20	200	800	5.0	200	1.0	1.5	1.0	M213	395	Fig. H2
2MBI3Q0-060	600	±20	300	1200	5.0	300	2.0	2.0	1.0	M210	470	Fig. H2
1MBI400-060	600	±20	400	1600	5.0	400	2.0	2.0	1.0	M106	460	Fig. H1

2 600 volts class 6-pack IGBT modules

- · 6 IGBTs and 6 free wheel diodes are built into one package.
- · Optimal for miniaturizing and reducing the weight of three-phase 200 to 220 volts input inverters.

Device	VCES	VGES	1c		Vcs(sat) Max. volts	(V _{GE} =15V) Ic amps.	Switching time (Max.)			Package	Net	Equivalent
type	volts	volts	cont. amps.				t _{on} μsec.	toff μsec.	tf μsec.		weight grams	circuit (page 40)
6MBI10-060	600	±20	10	40	5.0	10	1.2	1.5	1.0	M604	150	Fig. H3
6MBI15-060	600	±20	15	60	5.0	15	1,0	1.5	1.0	M604	150	Fig. H3
6MBI20-060	600	±20	20	80	5.0	20	1.2	1.5	1.0	M604	150	Fig. H3
6MBI30-060	600	±20	30	120	5.0	30	1.2	1.5	1.0	M607	235	Fig. H4
6MBI50-060	600	±20	50	250	5.0	50	1.0	1,5	1.0	M608	510	Fig. H5
6MBI75-060	600	±20	75	300	5.0	75	1.0	1.5	1.0	M608	510	Fig. H5
6MBI100-060	600	±20	100	400	5.0	100	1.0	1.5	1.0	M608	510	Fig. H5

Letter symbols

VGES

Vces : Collector-to-emitter rated voltage

(Gate-to-emitter short-circuited)
: Gate-to-emitter rated voltage

(Collector-to-emitter short-circuited)

Ic : Rated collector current
Pc : Collector power dissipation

Vce (sat) : Collector-to-emitter saturation voltage

 $\begin{array}{lll} t_{on} & : \ Turnon \ time \\ t_{off} & : \ Turnoff \ time \\ t_{f} & : \ Fall \ time \\ \end{array}$