Features：

- Low switching losses
- Positive Temperature Co-efficient for Easy Parallel Operating
- Short circuit rated

Typical Applications：

- Motor drives
- UPS Systems
- High Frequency Switching Applications

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VALUE			UNIT
			Min	Type	Max	
V_{CES}	Collector-Emitter voltage	T_j=25°C			1200	V
V_{GES}	Gate-Emitter voltage	T_j=25°C			±20	V
I_C	Collector current	Continuous@ T_C=100°C			200	A
I_{CP}		T_P=1ms			400	A
P_{tot}	Power Dissipation Per IGBT				761	W
T_j	Junction temperature	/			175	℃
T_{op}	Operating temperature	/	-40		150	℃
T_{stg}	Storage temperature	/	-40		125	℃
V_{iso}	Isolation between terminal and copper base	T_j=25°C , AC：1minute	2500			V
I_{CES}	Zero gate voltage collector current	T_j=25°C ,V_{CE}=1200V，V_{GE}=0V			1	mA
		T_j=150°C ,V_{CE}=1200V，V_{GE}=0V			5	mA
I_{GES}	Gate-Emitter leakage current	T_j=25°C ,V_{CE}=0V，V_{GE}=±20V	-0.2		0.2	μA
$V_{GE(th)}$	Gate-Emitter threshold voltage	T_j=25°C ,V_{CE}=20V，I_C=3.8mA	5.0	5.8	6.6	V
$V_{CE(sat)}$	Collector-Emitter saturation voltage	T_j=25°C ,V_{GE}=15V，I_C=200A		1.55	1.85	V
		T_j=150°C ,V_{GE}=15V，I_C=200A		1.85		V
Q_g	Gate Charge	T_j=25°C, V_{CE}=600V, Ic=200A, V_{GE}=±15V		1.90		μC
R_{Gint}	Internal gate resistor	T_j=25°C		3.5		Ω
C_{ies}	Input capacitance	T_j=25°C ,V_{CE}=25V，V_{GE}=0V，f=100kHz		29.5		nF
C_{res}	Reverse transfer capacitance			0.16		nF
$t_{(d)on}$	Turn-on time	V_{CC}=600V，I_C=200A，V_{GE}=±15V，R_g=6Ω， T_j=150°C		250		ns
t_r				110		ns
$t_{(d)off}$	Turn-off time			610		ns
t_f				410		ns
E_{on}	Turn on energy			25.5		mJ
E_{off}	Turn off energy			25.5		mJ
Isc	Short circuit current	t_{psc}≤10μS, V_{GE}=15V, V_{CC}=600V, T_j=150°C		750		A
V_F	Forward on voltage	T_j=25°C ,I_F=200A		1.75	2.10	V
		T_j=150°C ,I_F=200A		1.85		V
$I_{F(AV)}$	Average forward current	T_C=100°C		200		A
I_{FRM}	Repetitive peak forward current			400		A
Q_{rr}	Reverse charge	I_F=200A , V_R=600V, V_{GE}=-15V, R_{Gon}=6Ω , T_{Vj} =150°C		35.5		μ C
I_{RRM}	Max. reverse recovery current			119		A
E_{rec}	Reverse recovery energy			13.5		mJ

$R_{th(j-c)}$	Thermal resistance(per chip)	IGBT			0.197	℃/W
		FWD			0.308	℃/W
R_{25}	Resistance	T_{Vj}=25°C		5		kΩ
$B_{25/50}$	$R_2=R_{25}$ exp [B25/50(1/T2-1/(298,15K))]			3375		K
Torque	To-sink	Recommended（M5）	3.5		5.0	N・m
W_t	Weight			300		g
Outline	M40a					

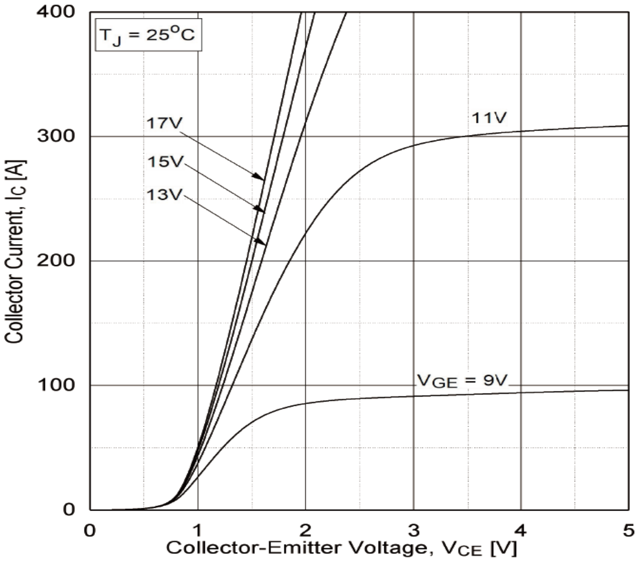


Fig 1, Output Characteristics IGBT, Inverter (typical)

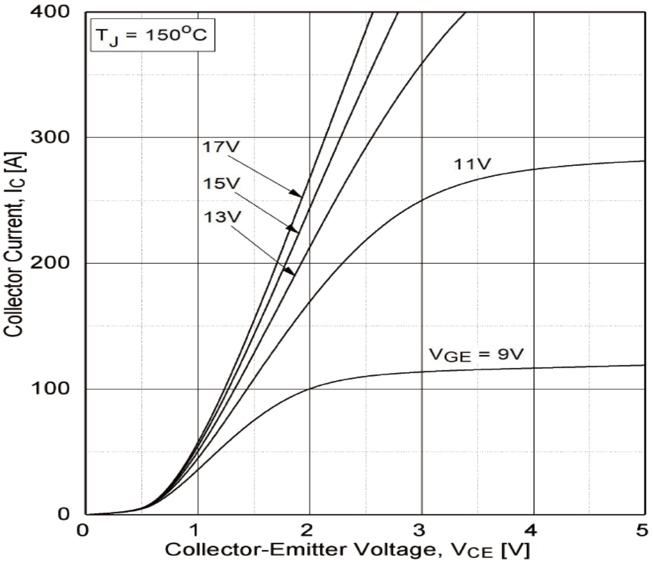


Fig 2, Output Characteristics IGBT, Inverter(typical)

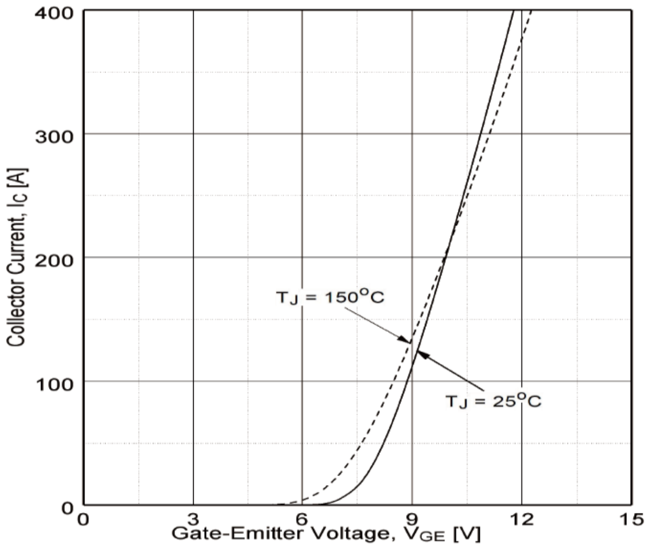


Fig 3, Transfer Characteristics IGBT, Inverter (typical)

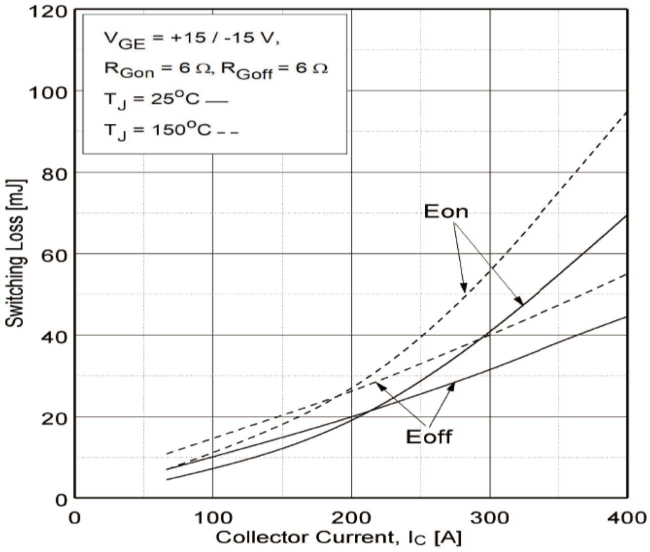


Fig 4, Switching Losses IGBT, Inverter (typical)

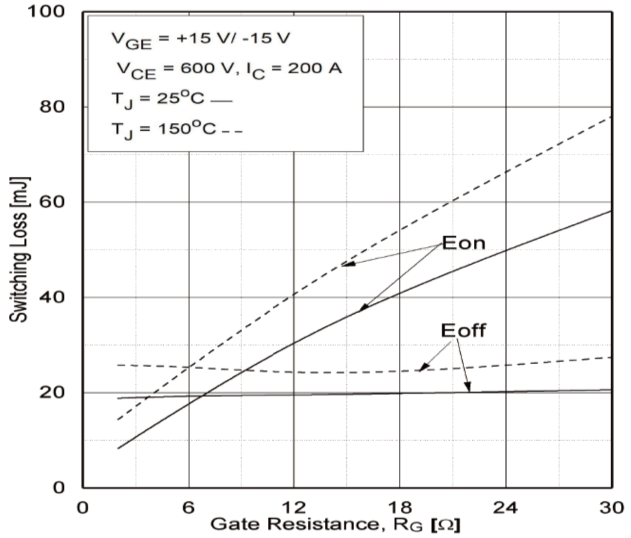


Fig 5, Switching Losses IGBT, Inverter (typical)

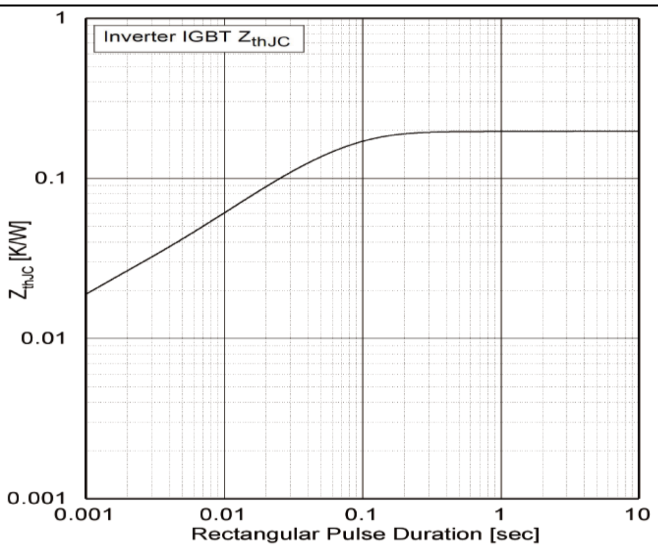


Fig 6, Transient Thermal Impedance IGBT, Inverter

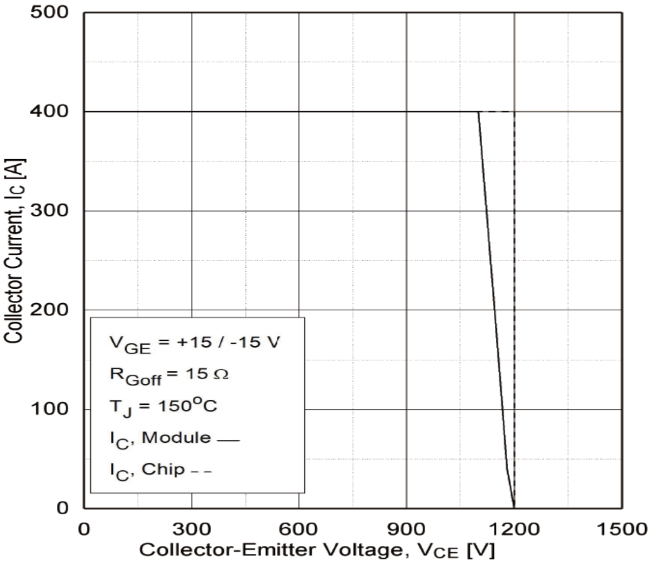


Fig 7, Reverse Bias Safe Operating Area IGBT, Inverter(RBSOA)

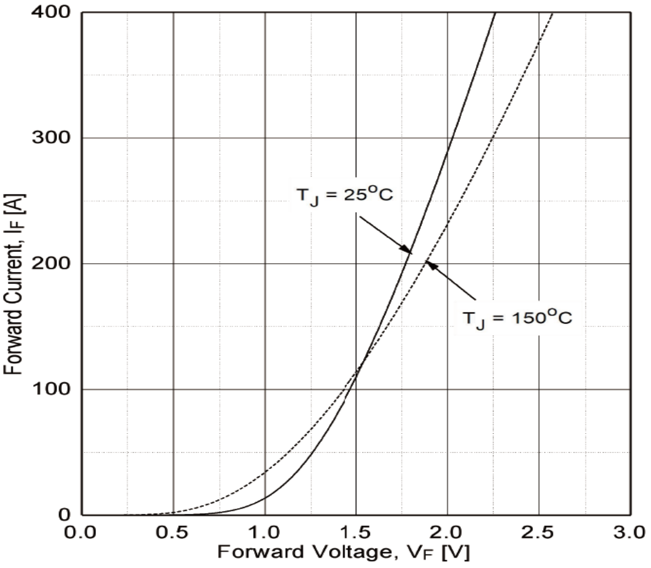


Fig 8, Forward Characteristics of Diode, Inverter (typical)

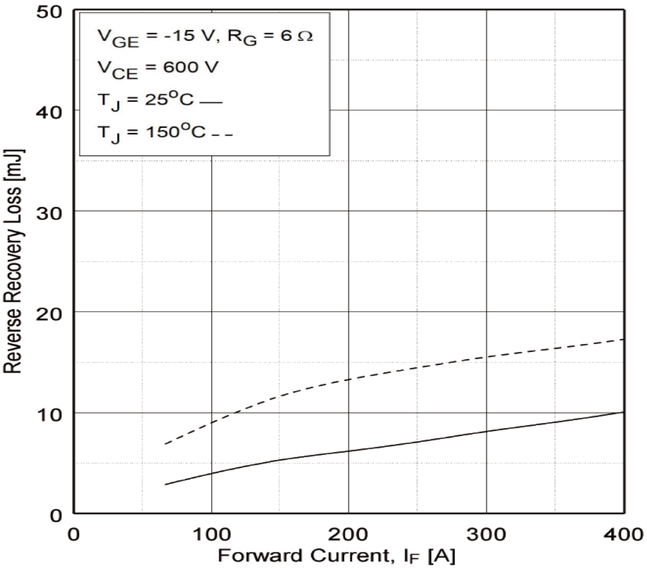


Fig 9, Switching Losses Diode, Inverter (typical)

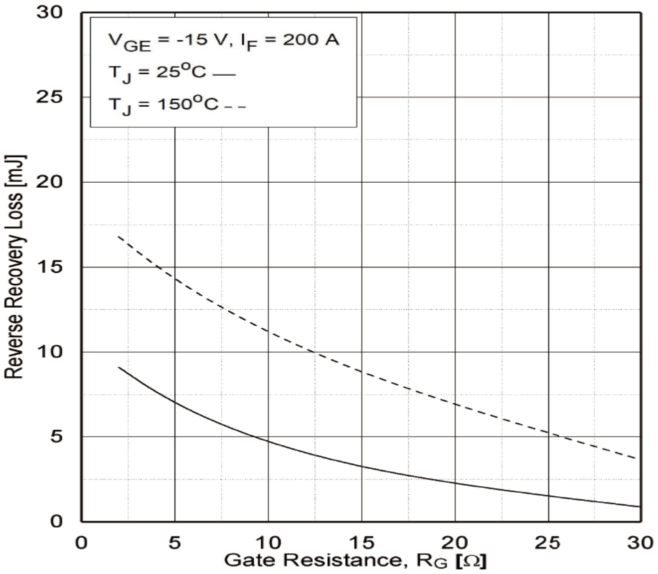


Fig 10, Switching Losses Diode, Inverter (typical)

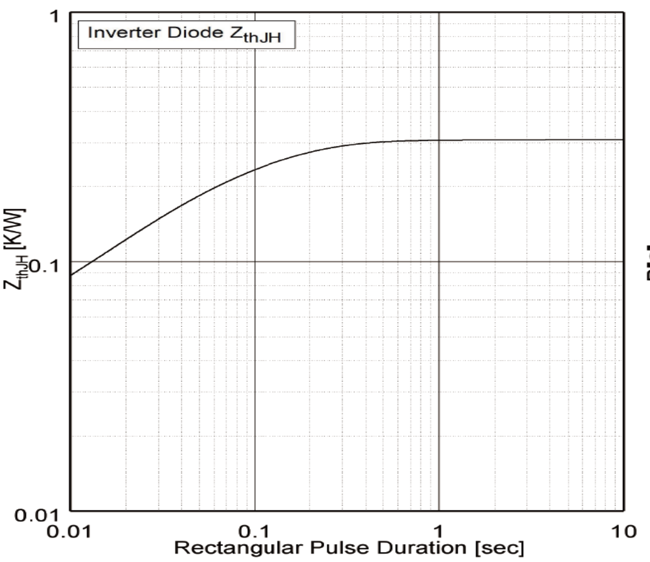


Fig 11, Transient Thermal Impedance Diode, Inverter

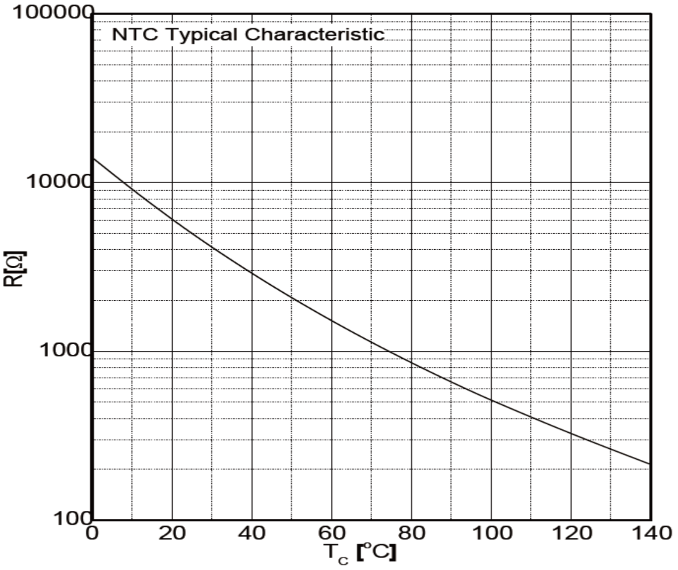
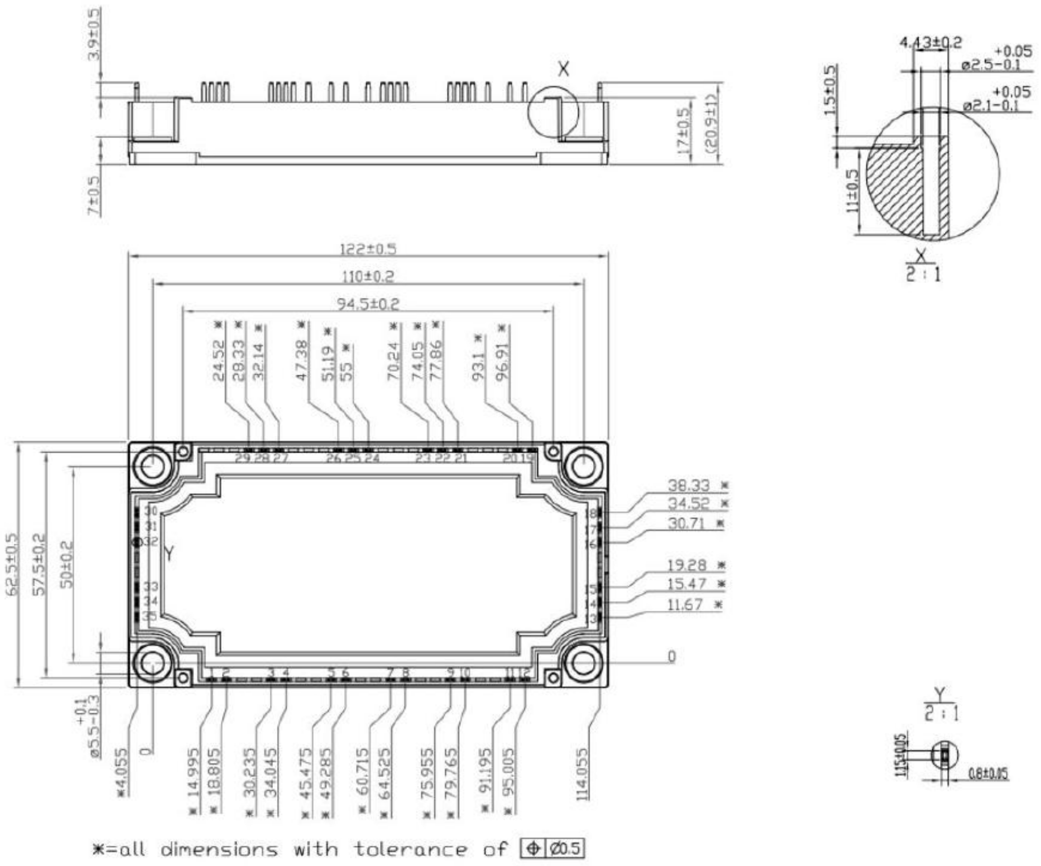
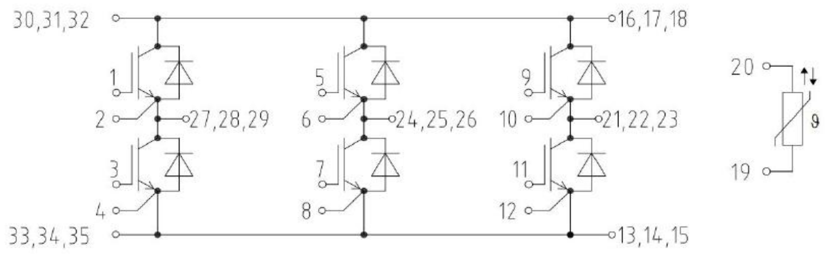


Fig 12, NTC Characteristics (typical)

Outline:



MT200MB120CS



Unmarked dimensional tolerance：±0.5mm

NIPS reserves the right to change specifications without notice.