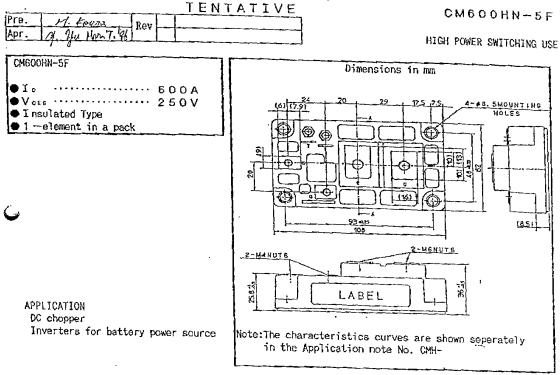
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ABSOLUTE MAXIMUM RATINGS (Tj = 25 °C)

ī		TE MMAIMUM RATINGS (1) = 25	<u>*C)</u>		
ł	Symbol	Item	Conditions	Ratings	Unit
ı		Collector-emitter voltage	G-E Short	250	V
-	Vars	Gate-emitter voltage	C-E Short	±20	
	Ic	Collector curren	Tc= 25 °C	600	V
	Icm		Pulse (2)		Α
	$\mathbf{I}_{\mathbf{E}}(\mathbf{I})$	Fuithta	Tc= 25 °C	1200	1
Į	IEM®	Emitter current	Pulse ②	600	$A \vdash$
1		Maximum collector dissipation		1200	
-	Τj	Junction temperature	10-20 0	1780	W
1	Tetg	Storage temperature		-40~+150	°C
ļ	Viso	1-	Main tornical to I	-40~+125	°C
		Mounting torque	Main terminal to base plate, AC 1 min.		V
			Main Terminal M 6	$1.96 \sim 2.94$	N·m
				20 ~ 30	kg·cm
			Mounting M B	1.96 ~ 2.94	N·m
				20 ~ 30	kg · cm
			G(E) Terminal M 4	0.98 ~ 1.47	N·m
	 			10 ~ 15	kg · cm
		In or gare	Typical value	400	9

TSM-1228

1-2

MITSUBISHI (IGBT MODULE)

CM600HN-6F HIGH POWER SWITCHING USE

Symbol	Item	Conditions	Min.	Typ.	Max.	Unit	
Ices	Collector cutoff current	Vce=Vces,Vce= OV			1	mA	
V _{GE (th)}	Gate-emitter threshold voltage	Ic=60 mA, Vos= 10V	3.0	4.0	5.0	V	
IGES	Gate leakage voltage	VGE=VCES, VCE= OV		_	0.5	μА	
Vce (sot)	Collector to emitter saturation voltage	$Tj = 25 ^{\circ}C$ $I_{c} = 600 A$ $Tj = 150 ^{\circ}C$ $V_{GE} = 10 V$		1.2	1.7	V	
Cies	Input capacitannee	V _{CE} = 10V		1.10	165	<u> </u>	
Coes ·	Output capacitance	V _{GE} = 0V			7.5	nF	
)res	Reverse transfer capacitance		<u> </u>		5.6	∤ ''	
Q _e	Total gate charge	$V_{cc} = 100 V$, $I_{c} = 600 A$ $V_{gE} = 10 V$	-	2200	-	n C	
td(on)	Turn-on delay time	V _{cc} =100V, Ic= 600A			1000		
tr	Turn-on rise time	V _{GE1} = V _{GE2} = 10V	<u> </u>		4000	ł	
td(off)	Turn-off delay time	$R_c=4.2\Omega$, Resistive load			1000	ns	
tf	Turn-off fall time	switching operation			500		
V _{EC} D	Emitter-collector volatge	I = 600 A, V GE = 0V			2.0	v	
trr ①	Reverse recovery time	I _E = 600 A			300	ns	
Qrr ①	Reverse recovery charge	die/dt=-1200 A/μs	<u>-</u>	9.6		μC	
Rth(j-c)Q	Thermal resistance	IGBT part			0.07		
Rth(j-c)R		FWDi part			0.07		
Rth(c-f)	Contact thermal resistance	Case to fin Conductive grease applied			0.11	°C/W	

- ① IE, VEC, trr, Qrr & dic/dt represent characteristics of the anti-parallel, emitter to collector free-wheel diode (FWDi).
- ② Pulse width and repetition rate should be such that the device junction temp.(Tj) dose not exceed Tjmax rating.
- ③ Junction temperature (Tj) should not increase beyond 150°C.
- Pulse width and repetition rate should be such as to cause neglible temperature rise.

