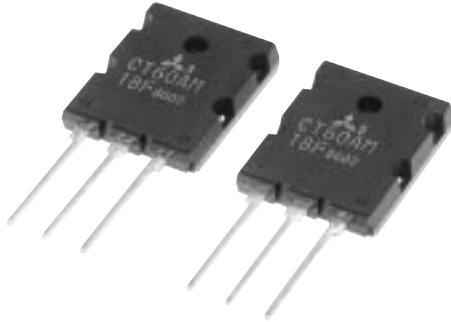


MITSUBISHI Nch IGBT
CT60AM-18F

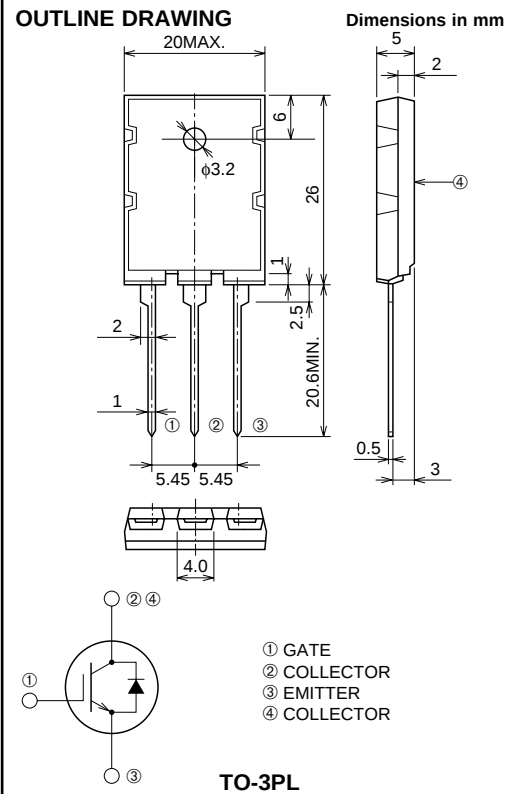
INSULATED GATE BIPOLAR TRANSISTOR

CT60AM-18F



- VCES 900V
- IC 60A
- Simple drive
- Integrated Fast-recovery diode
- Small tail loss
- Low VCE Saturation Voltage

OUTLINE DRAWING



APPLICATION

Microwave oven, Electromagnetic cooking devices, Rice-cookers

MAXIMUM RATINGS (Tc = 25°C)

Symbol	Parameter	Conditions	Ratings	Unit
VCES	Collector-Emitter Voltage	VGE = 0V	900	V
VGES	Gate-Emitter Voltage		±25	V
VGEM	Peak Gate-Emitter Voltage		±30	V
IC	Collector Current		60	A
ICM	Collector Current (Pulse)		120	A
IE	Emitter Current		40	A
PC	Maximum Power Dissipation		180	W
Tj	Junction Temperature		-40 ~ +150	°C
Tstg	Storage Temperature		-40 ~ +150	°C

Sep. 2000

INSULATED GATE BIPOLAR TRANSISTOR

ELECTRICAL CHARACTERISTICS (T_{ch} = 25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
ICES	Collector cutoff current	V _{CE} = 900V, V _{GE} = 0V	—	—	1.0	mA
IGES	Gate leakage current	V _{GE} = ±20V, V _{CE} = 0V	—	—	0.5	μA
V _{GE(th)}	Gate-emitter threshold voltage	V _{CE} = 10V, I _C = 6mA	2.0	4.0	6.0	V
V _{CE(sat)}	Collector-emitter saturation voltage	I _C = 60A, V _{CE} = 15V	—	2.1	2.7	V
C _{ies}	Input capacitance	V _{CE} = 25V, V _{GE} = 0V, f = 1MHz	—	4400	—	pF
C _{oes}	Output capacitance		—	115	—	pF
C _{res}	Reverse transfer capacitance		—	75	—	pF
t _{d(on)}	Turn-on delay time	V _{CC} = 300V, I _C = 60A, V _{GE} = 15V, R _G = 10Ω	—	0.05	—	μs
t _r	Turn-on rise time		—	0.1	—	μs
t _{d(off)}	Turn-off delay time		—	0.2	—	μs
t _f	Turn-off fall time		—	0.2	—	μs
E _{tail}	Tail loss	I _{CP} = 60A, T _J = 125°C, dv/dt = 200V/μs	—	0.6	1.0	mJ/pls
I _{tail}	Tail current		—	8	12	A
V _{EC}	Emitter-collector voltage	I _E = 60A, V _{GE} = 0V	—	2.2	3.0	V
t _{rr}	Diode reverse recovery time	I _E = 60A, dis/dt = -20A/μs	—	0.5	2.0	μs
R _{th(j-c)}	Thermal resistance (IGBT)	Junction to case	—	—	0.69	°C/W
R _{th(j-c)}	Thermal resistance (Diode)	Junction to case	—	—	4.0	°C/W