

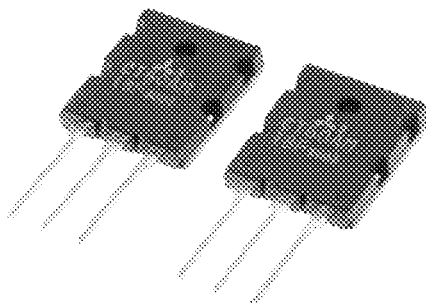
PRELIMINARY
 Notice: This is not a final specification.
 Some parametric limits are subject to change.

MITSUBISHI Nch IGBT

CT60AM-18F

INSULATED GATE BIPOLAR TRANSISTOR

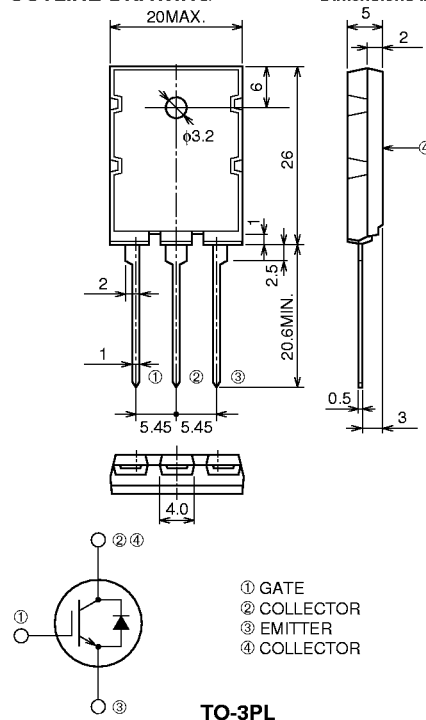
CT60AM-18F



- V_{CES} 900V
- I_C 60A
- Simple drive
- Integrated Fast-recovery diode
- Small tail loss
- Low V_{CE} Saturation Voltage

OUTLINE DRAWING

Dimensions in mm



APPLICATION

Microwave oven, Electromagnetic cooking devices,
 Rice-cookers, Voltage-resonant inverter circuit
 electric appliances

MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)

Symbol	Parameter	Conditions	Ratings	Unit
V_{CES}	Collector-Emitter Voltage	$V_{GE} = 0V$	900	V
V_{GES}	Gate-Emitter Voltage		± 25	V
V_{GEM}	Peak Gate-Emitter Voltage		± 30	V
I_C	Collector Current		60	A
I_{CM}	Collector Current (Pulse)		120	A
I_E	Emitter Current		40	A
P_C	Maximum Power Dissipation		180	W
T_j	Junction Temperature		$-40 \sim +150$	$^\circ\text{C}$
T_{stg}	Storage Temperature		$-40 \sim +150$	$^\circ\text{C}$

Sep.1998

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ELECTRICAL CHARACTERISTICS (Tch = 25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
ICES	Collector cutoff current	VCE = 900V, VGE = 0V	—	—	1.0	mA
IGES	Gate leakage current	VGE = ±20V, VCE = 0V	—	—	0.5	μA
VGE(th)	Gate-emitter threshold voltage	VCE = 10V, IC = 6mA	2.0	4.0	6.0	V
VCE(sat)	Collector-emitter saturation voltage	IC = 60A, VCE = 15V	—	2.1	2.7	V
Cies	Input capacitance	VCE = 25V, VGE = 0V, f = 1MHz	—	4400	—	pF
Coes	Output capacitance		—	115	—	pF
Cres	Reverse transfer capacitance		—	75	—	pF
td(on)	Turn-on delay time		—	0.05	—	μs
tr	Turn-on rise time	VCC = 300V, IC = 60A, VGE = 15V, RG = 10Ω	—	0.1	—	μs
td(off)	Turn-off delay time		—	0.2	—	μs
tf	Turn-off fall time		—	0.2	—	μs
Etail	Tail loss	ICP = 60A, TJ = 125°C, dv/dt = 200V/μs	—	0.6	1.0	mJ/pls
Itail	Tail current		—	8	12	A
VEC	Emitter-collector voltage	IE = 60A, VGE = 0V	—	2.2	3.0	V
trr	Diode reverse recovery time	IE = 60A, dis/dt = -20A/μs	—	0.5	2.0	μs
Rth(j-c)	Thermal resistance (IGBT)	Junction to case	—	—	0.69	°C/W
Rth(j-c)	Thermal resistance (Diode)	Junction to case	—	—	4.0	°C/w