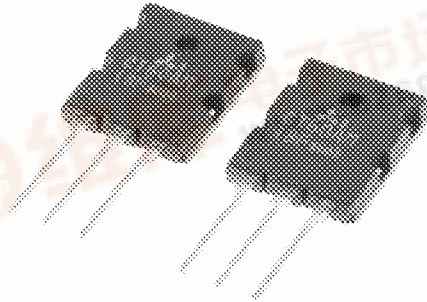


**PRELIMINARY**  
 Notice: This is not a final specification.  
 Some parametric limits are subject to change.

MITSUBISHI Nch IGBT  
**CT60AM-18F**

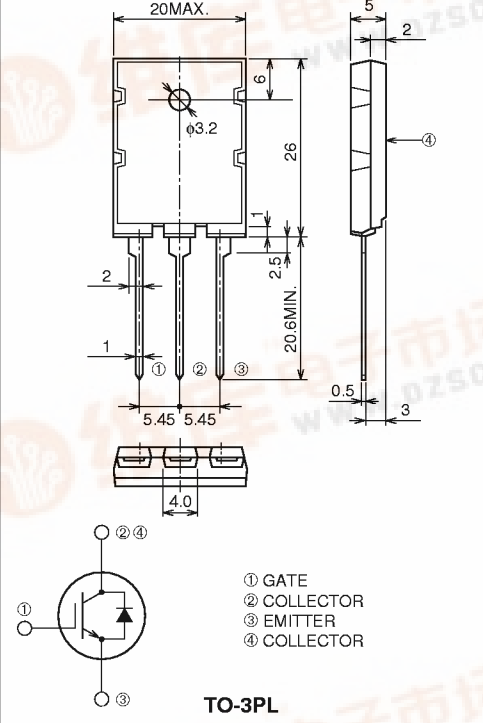
INSULATED GATE BIPOLAR TRANSISTOR

**CT60AM-18F**



- 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, Voltage-resonant inverter circuit  
 electric appliances

**MAXIMUM RATINGS** (Tc = 25°C)

Symbol	Parameter	Conditions	Ratings	Unit
V <sub>CE</sub>	Collector-Emitter Voltage	V <sub>GE</sub> = 0V	900	V
V <sub>GE</sub>	Gate-Emitter Voltage		±25	V
V <sub>GEM</sub>	Peak Gate-Emitter Voltage		±30	V
I <sub>C</sub>	Collector Current		60	A
I <sub>CM</sub>	Collector Current (Pulse)		120	A
I <sub>E</sub>	Emitter Current		40	A
P <sub>C</sub>	Maximum Power Dissipation		180	W
T <sub>J</sub>	Junction Temperature		-40 ~ +150	°C
T <sub>stg</sub>	Storage Temperature		-40 ~ +150	°C

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

MITSUBISHI Nch IGBT

**CT60AM-18F**

**INSULATED GATE BIPOLAR TRANSISTOR**

**ELECTRICAL CHARACTERISTICS** ( $T_{ch} = 25^{\circ}\text{C}$ )

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
ICES	Collector cutoff current	$V_{CE} = 900\text{V}, V_{GE} = 0\text{V}$	—	—	1.0	mA
IGES	Gate leakage current	$V_{GE} = \pm 20\text{V}, V_{CE} = 0\text{V}$	—	—	0.5	$\mu\text{A}$
$V_{GE(th)}$	Gate-emitter threshold voltage	$V_{CE} = 10\text{V}, I_C = 6\text{mA}$	2.0	4.0	6.0	V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = 60\text{A}, V_{CE} = 15\text{V}$	—	2.1	2.7	V
$C_{ies}$	Input capacitance	$V_{CE} = 25\text{V}, V_{GE} = 0\text{V}, f = 1\text{MHz}$	—	4400	—	pF
$C_{oes}$	Output capacitance		—	115	—	pF
$C_{res}$	Reverse transfer capacitance		—	75	—	pF
$t_{d(on)}$	Turn-on delay time	$V_{CC} = 300\text{V}, I_C = 60\text{A}, V_{GE} = 15\text{V}, R_G = 10\Omega$	—	0.05	—	$\mu\text{s}$
$t_r$	Turn-on rise time		—	0.1	—	$\mu\text{s}$
$t_{d(off)}$	Turn-off delay time		—	0.2	—	$\mu\text{s}$
$t_f$	Turn-off fall time		—	0.2	—	$\mu\text{s}$
$E_{tail}$	Tail loss	$I_{CP} = 60\text{A}, T_J = 125^{\circ}\text{C}, dv/dt = 200\text{V}/\mu\text{s}$	—	0.6	1.0	mJ/pls
$I_{tail}$	Tail current		—	8	12	A
$V_{EC}$	Emitter-collector voltage	$I_E = 60\text{A}, V_{GE} = 0\text{V}$	—	2.2	3.0	V
$t_{rr}$	Diode reverse recovery time	$I_E = 60\text{A}, di/dt = -20\text{A}/\mu\text{s}$	—	0.5	2.0	$\mu\text{s}$
$R_{th(j-c)}$	Thermal resistance (IGBT)	Junction to case	—	—	0.69	$^{\circ}\text{C}/\text{W}$
$R_{th(j-c)}$	Thermal resistance (Diode)	Junction to case	—	—	4.0	$^{\circ}\text{C}/\text{W}$

