

## CT60AM-18F

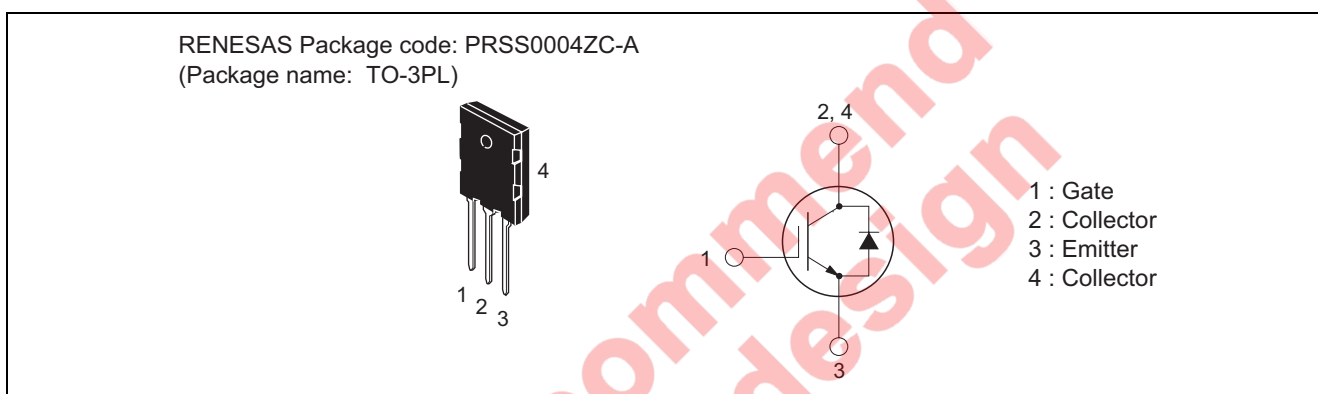
### Insulated Gate Bipolar Transistor

REJ03G1374-0200  
 (Previous: MEJ02G0023-0101)  
 Rev.2.00  
 Jul 07, 2006

#### Features

- $V_{CES}$ : 900 V
- $I_C$ : 60 A
- Integrated fast-recovery diode

#### Appearance Figure



#### Applications

Microwave oven, Electromagnetic cooking devices, Rice-cookers

#### Maximum Ratings

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

Parameter	Symbol	Ratings	Unit	Conditions
Collector-emitter voltage	$V_{CES}$	900	V	$V_{GE} = 0\text{ V}$
Gate-emitter voltage	$V_{GES}$	$\pm 25$	V	
Peak gate-emitter voltage	$V_{GEM}$	$\pm 30$	V	
Collector current	$I_C$	60	A	
Collector current (Pulse)	$I_{CM}$	120	A	
Emitter current	$I_E$	40	A	
Maximum power dissipation	$P_C$	180	W	
Junction temperature	$T_j$	- 40 to +150	$^\circ\text{C}$	
Storage temperature	$T_{stg}$	- 40 to +150	$^\circ\text{C}$	

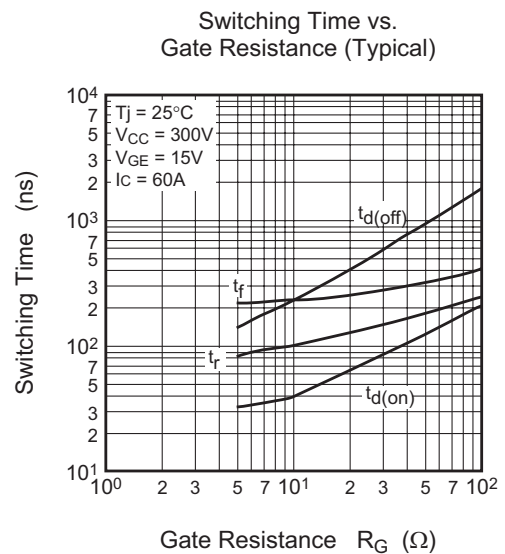
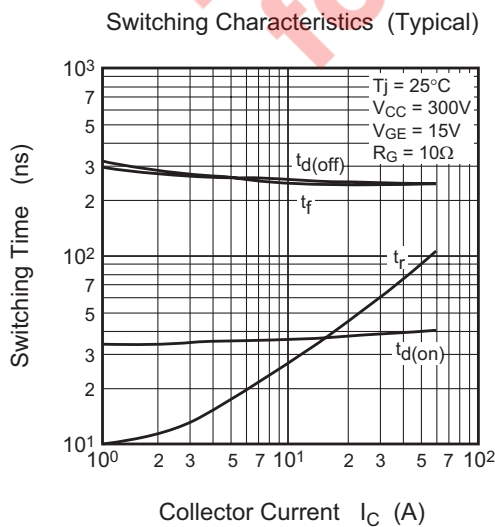
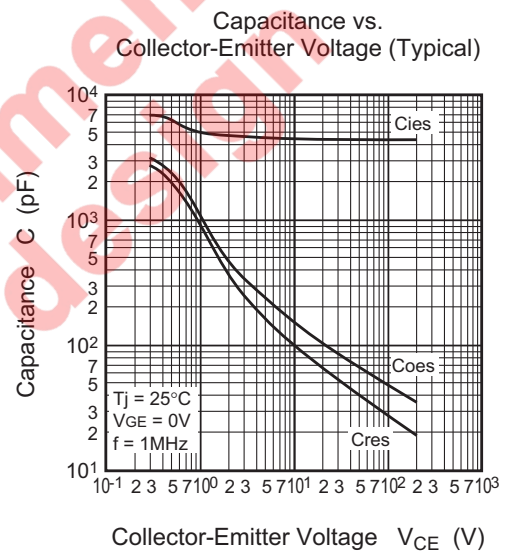
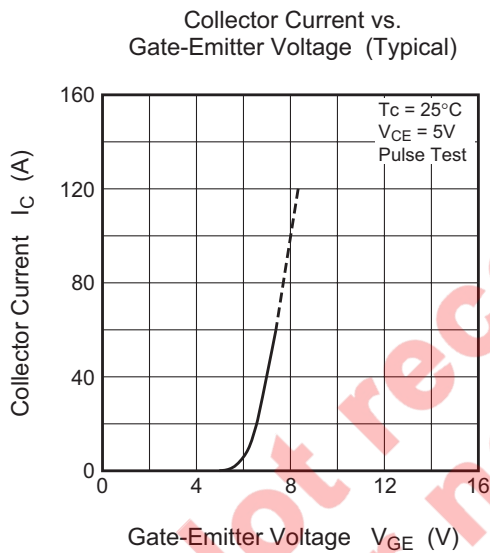
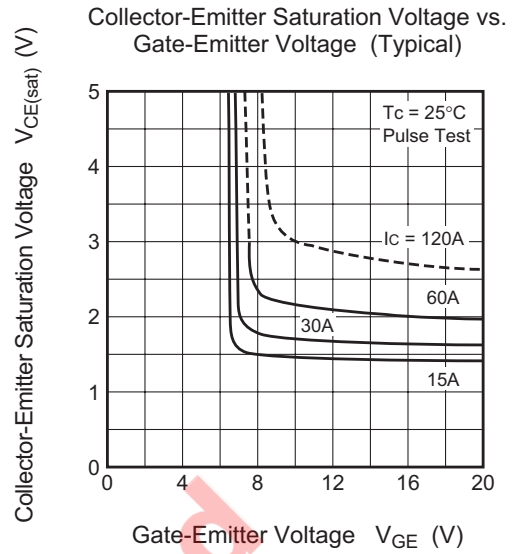
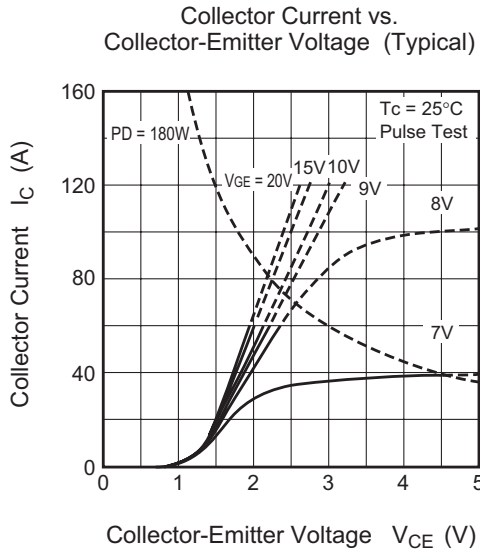
## Electrical Characteristics

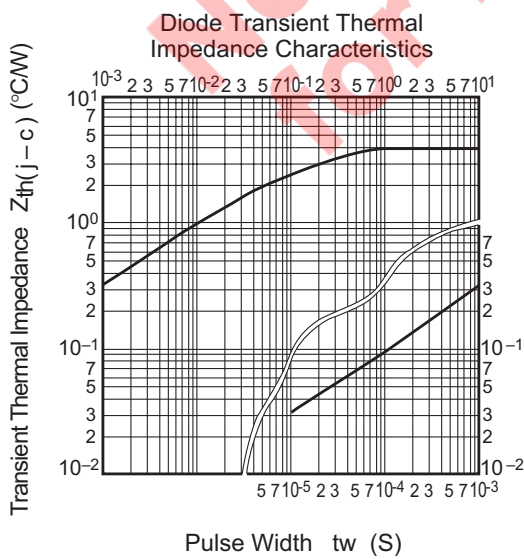
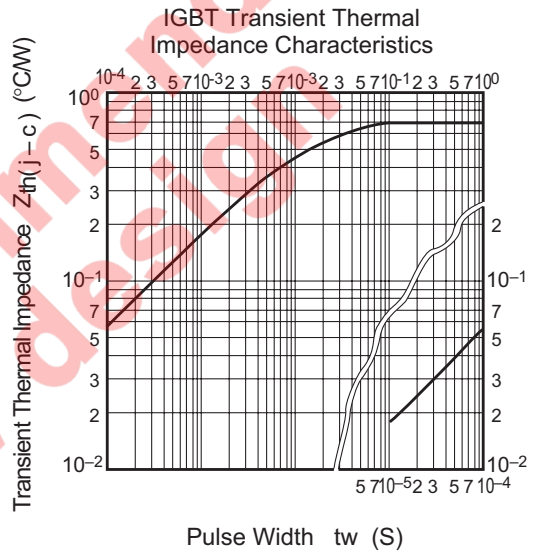
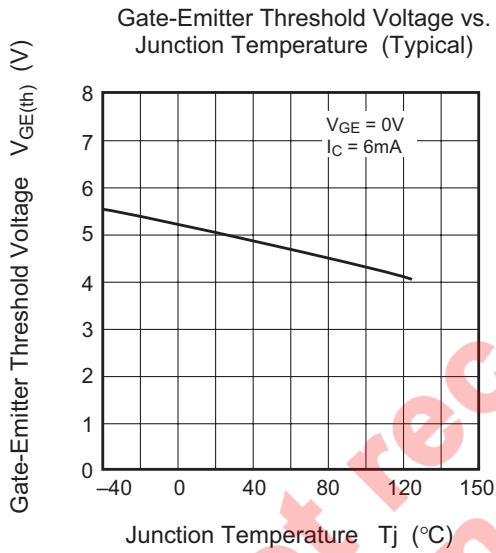
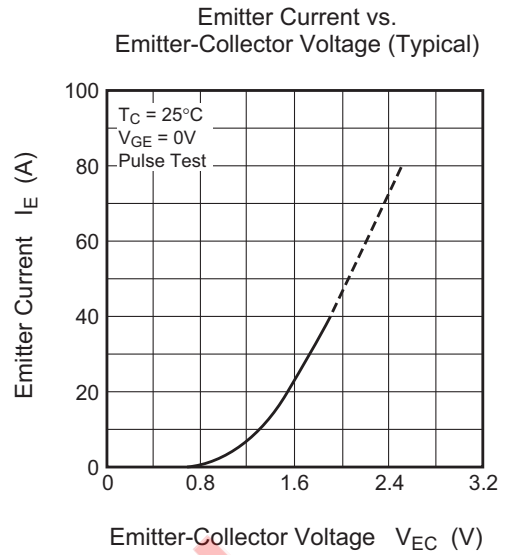
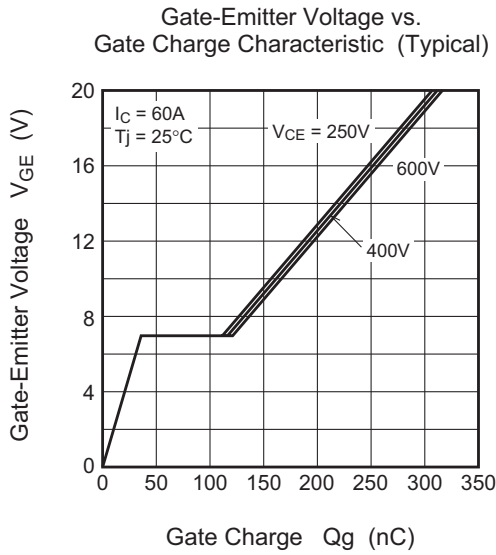
(Tch = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Collector-emitter leakage current	$I_{CES}$	—	—	1	mA	$V_{CE} = 900\text{ V}, V_{GE} = 0\text{ V}$
Gate-emitter leakage current	$I_{GES}$	—	—	0.5	$\mu\text{A}$	$V_{GE} = \pm 20\text{ V}, V_{CE} = 0\text{ V}$
Gate-emitter threshold voltage	$V_{GE(th)}$	2.0	4.0	6.0	V	$V_{CE} = 10\text{ V}, I_C = 6\text{ mA}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	2.1	2.7	V	$I_C = 60\text{ A}, V_{CE} = 15\text{ V}$
Input capacitance	$C_{ies}$	—	4400	—	pF	$V_{CE} = 25\text{ V}, V_{GE} = 0\text{ V},$ $f = 1\text{ MHz}$
Output capacitance	$C_{oes}$	—	115	—	pF	
Reverse transfer capacitance	$C_{res}$	—	75	—	pF	
Turn-on delay time	$t_{d(on)}$	—	0.05	—	$\mu\text{s}$	$V_{CC} = 300\text{ V}, I_C = 60\text{ A},$ $V_{GE} = 15\text{ V}, R_G = 10\ \Omega$
Turn-on Rise time	$t_r$	—	0.1	—	$\mu\text{s}$	
Turn-off delay time	$t_{d(off)}$	—	0.2	—	$\mu\text{s}$	
Turn-off Fall time	$t_f$	—	0.3	—	$\mu\text{s}$	
Tail loss	$E_{tail}$	—	0.6	1.0	mJ/pls	$I_{CP} = 60\text{ A}, T_j = 125^\circ\text{C},$ $d_v/d_t = 200\text{ V}/\mu\text{s}$
Tail current	$I_{tail}$	—	6.0	12	A	
Emitter-collector voltage	$V_{EC}$	—	2.2	3.0	V	$I_E = 60\text{ A}, V_{GE} = 0\text{ V}$
Diode reverse recovery time	$t_{rr}$	—	0.5	2.0	$\mu\text{s}$	$I_E = 60\text{ A}, d_{IS}/d_t = -20\text{ A}/\mu\text{s}$
Thermal resistance (IGBT)	$R_{th(j-c)}$	—	—	0.69	$^\circ\text{C}/\text{W}$	Junction to case
Thermal resistance (Diode)	$R_{th(j-c)}$	—	—	4.0	$^\circ\text{C}/\text{W}$	Junction to case

Not recommended  
for new designs

Performance Curves







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