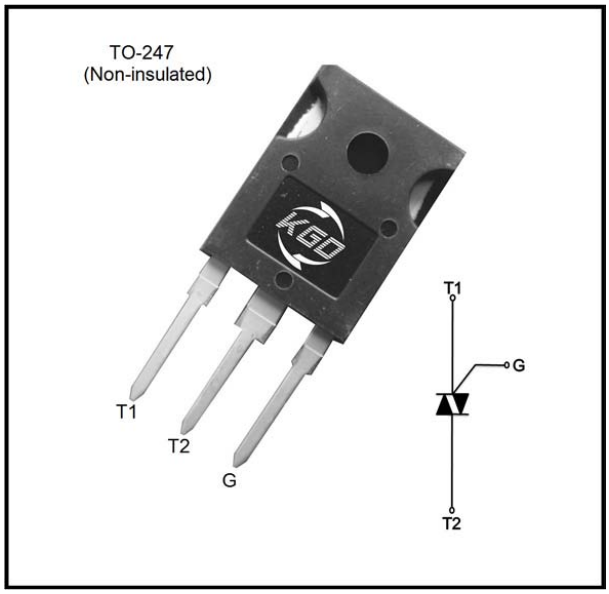
GT50 Series

- **Description:**
  High current density due to double mesa trchnology;

- **Applications:**
  GT50 Series triacs is suitable for general purpose AC switching. They can be used as an ON/OFF function in applications such as static relays,heating regulation,induction motor stating circuits... or for phase contol operation light dimmers,motorspeed controllers

- **Features:**
  GT50 series are 3 Quadrants TRIACS,
  They are specially recommended for use on inductive loads.
  GT50 are isolated internally,they providesa 2500V RMS isolation voltage from all three terminals to extemal heetsink.
  GT50 series are non-insulated design
  Blocking voltage to 800/1000/12000V
  On-state RMS current to 50A
  Non-repetitive peak on-state current to 520A



- **Absolute Maximum Ratings**

Symbol	Parameter	Conditions	Min	Max	Unit
V_{DRM}	Repetitive peak off-state voltage	T_J=25℃	800	1200	V
V_{RRM}	Repetitive peak Reverse voltage	T_J=25℃	800	1200	V
$I_{T(RMS)}$	RMSon-statecurrent	F=60Hz,Tc=70℃	-	50	A
I_{TSM}	Non-repetitive peak On-state current	F=50Hz, t=20ms	-	500	A
		F=60Hz, t=16.7ms	-	520	A
I^2t	I^2t for fusing	T_P=10ms	-	1100	A^2S
di/dt	Critical rate of rise of on-state current	I_G=2×I_{GT},t_r≤100ns,f=120HZ,T_J=125℃	-	50	A/μs
I_{GM}	Peak gate current	T_P=20μs, T_J=125℃	-	8.0	A
$P_{G(AV)}$	Average gate power		-	1.0	W
T_{STG}	Storage temperature		-40	150	℃
T_J	Junction temperature		-40	125	℃

GT50 Series

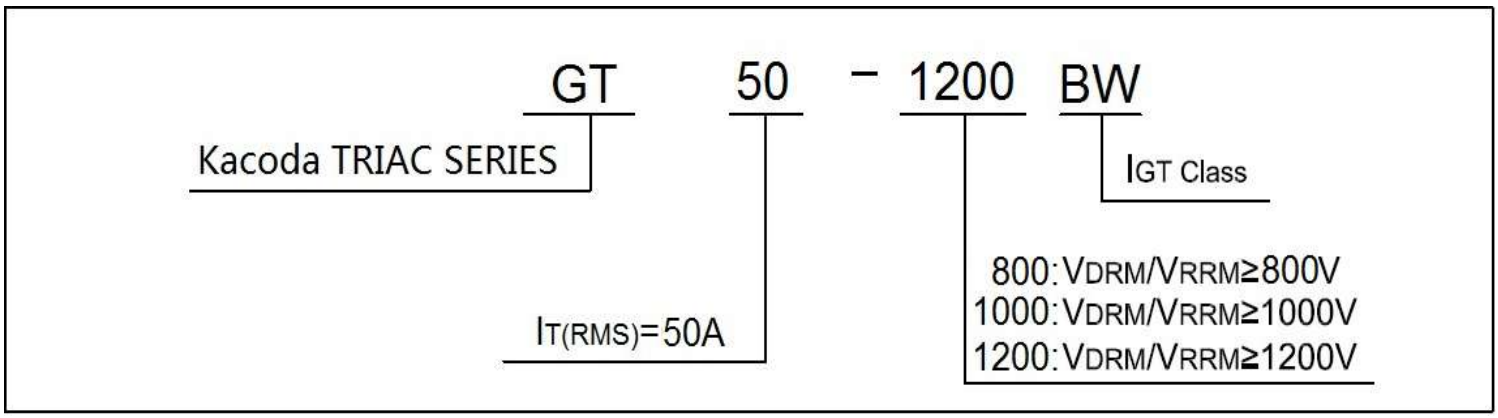
● Thermal Characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$R_{th(j-mb)}$	Junction to Case(AC)	Full cycle	-	-	0.35	℃/W
$R_{th(j-a)}$	Junction to am bient	mounted,minimum pad sizes	-	-	40	℃/W

● Electrical Characteristics

Symbol	Conditions	Quadrant		Numerical	Unit
V_{TM}	I_T=80A,tp=380μs	T_J=25℃	MAX	1.55	V
I_{DRM} I_{RRM}	$V_D=V_{DRM}$,$V_R=V_{RRM}$	T_J=25℃	MAX	20	μA
		T_J=125℃	MAX	5	mA
I_{GT}	V_D=12V,R_L=33Ω	I-II-III	MAX	50	mA
V_{GT}		I-II-III	MAX	1.3	V
V_{GD}	$V_D=V_{DRM}$,R_L=3.3KΩ, T_J=125℃	I-II-III	MIN	0.2	V
I_L	$I_T=1.2I_{GT}$	I-III	MAX	80	mA
		II	MAX	160	mA
I_H	I_T=500mA		MAX	80	mA
dv/dt	$V_{DM}=67\%V_{DRM}$,gate open,T_J=125℃		MIN	1000	V/μs

● Ordering Information



GT50 Series

- **Package Outline Dimensions**

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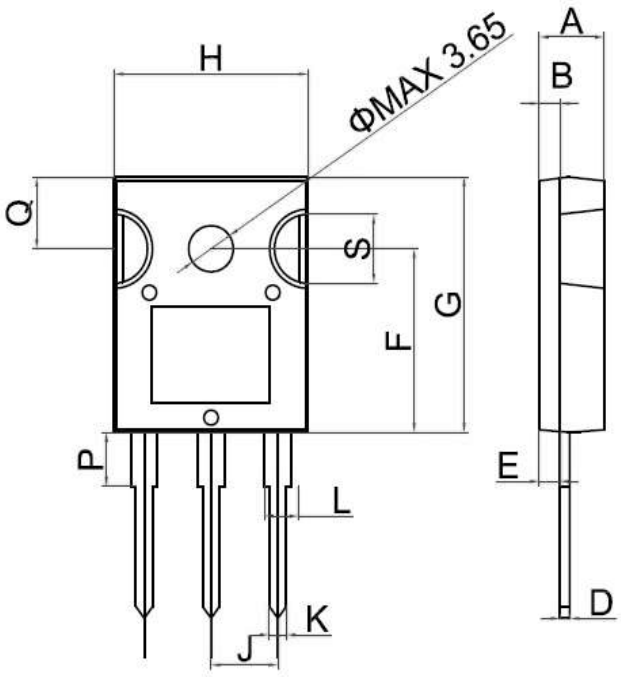

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	5.1	5.4	0.201	0.213
B	1.6	1.8	0.063	0.071
C	14.35	15.4	0.565	0.606
D	0.6	0.9	0.024	0.035
E	1.5	1.75	0.059	0.069
F	14.4	15.1	0.567	0.594
G	19.7	20.6	0.775	0.811
H	15.4	16.2	0.606	0.638
J	5.3	5.6	0.209	0.220
K	1.3	1.5	0.051	0.059
L	2.0	2.3	0.079	0.091
P	4.1	4.4	0.161	0.173
Q	5.6	5.8	0.220	0.228
S	5.35	5.65	0.211	0.222