

- **Description:**

High current density due to double mesa technology;
BTA80 Series triacs is suitable for general purpose AC switching.

- **Applications:**

they can be used as an ON/OFF function in applications such as static relays, heating regulation, induction motor starting circuits... or for phase control operation light dimmers, motor speed controllers

- **Features:**

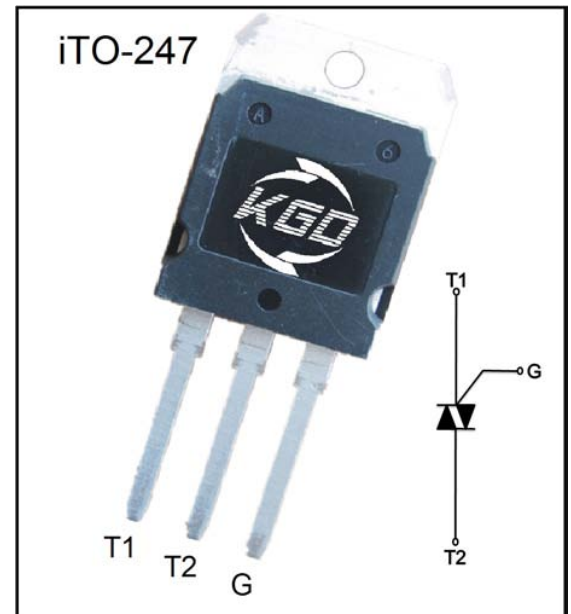
BTA80 series are 3 Quadrants TRIACS, They are specially recommended for use on inductive loads.

Using **iTO-247** Insulated Package

Blocking voltage to 12000/1600V

On-state RMS current to 80A

Non-repetitive peak on-state current to 800A



- **Absolute Maximum Ratings**

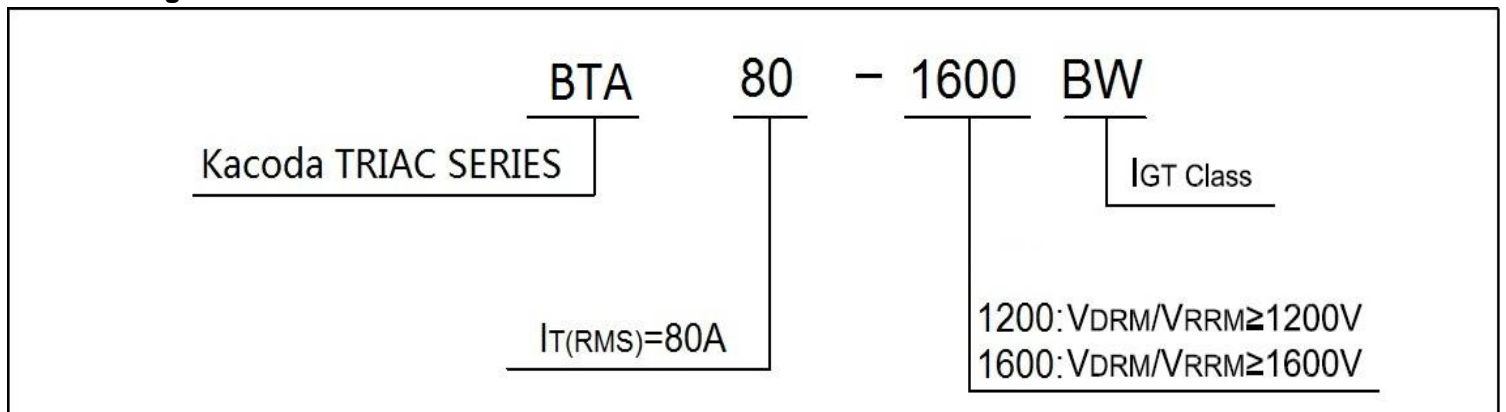
Symbol	Parameter	Conditions	Min	Max	Unit
V_{DRM}	Repetitive peak off-state voltage	$T_J=25^\circ\text{C}$	1200	1600	V
V_{RRM}	Repetitive peak Reverse voltage	$T_J=25^\circ\text{C}$	1200	1600	V
$I_{T(RMS)}$	RMS on-state current	$F=60\text{Hz}, T_c=70^\circ\text{C}$	-	80	A
I_{TSM}	Non-repetitive peak On-state current	$F=50\text{Hz}, t=20\text{ms}$	-	800	A
I^2t	I^2t for fusing	$T_p=10\text{ms}$	-	3200	A^2S
di/dt	Critical rate of rise of on-state current	$I_G=2 \times I_{GT}, t_r \leq 100\text{ns}, f=120\text{HZ}, T_J=125^\circ\text{C}$	-	100	$\text{A}/\mu\text{s}$
I_{GM}	Peak gate current		-	8	A
P_{GM}	Peak gate power	$T_p=20\mu\text{s}, T_J=125^\circ\text{C}$	-	10	W
$P_{G(AV)}$	Average gate power		-	2	W
T_{STG}	Storage temperature		-40	150	$^\circ\text{C}$
T_J	Junction temperature		-40	125	$^\circ\text{C}$

● Thermal Characteristics

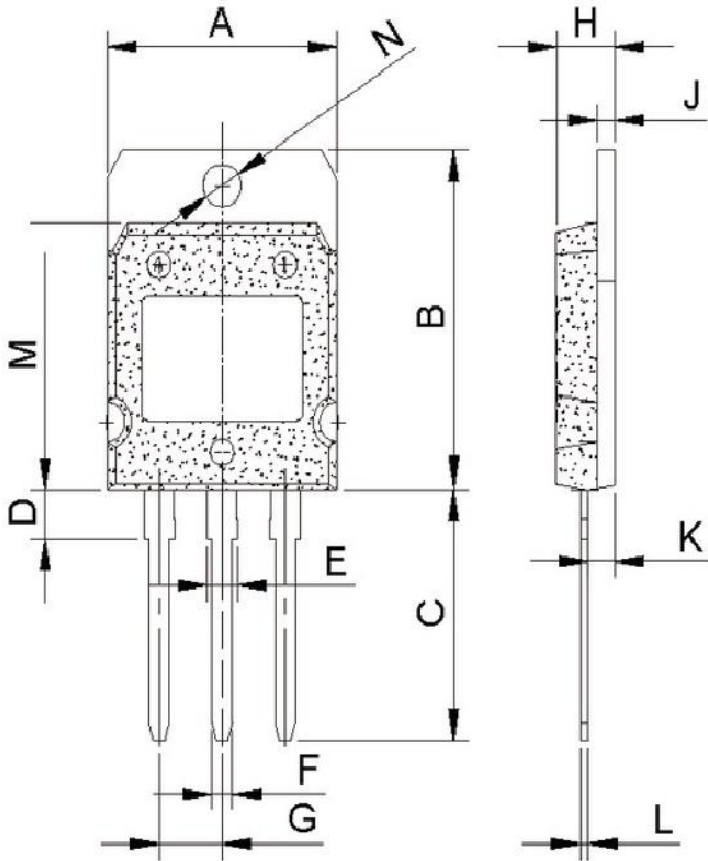
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$R_{th(j-mb)}$	Junction to Case(AC)	Full cycle	-	-	0.5	$^{\circ}C/W$
$R_{th(j-a)}$	Junction to ambient	mounted, minimum pad sizes	-	40	-	$^{\circ}C/W$

● Electrical Characteristics

Symbol	Conditions	Quadrant	Numerical	Unit
V_{TM}	$I_T=90A, t_p=380\mu s$	$T_J=25^{\circ}C$ MAX	1.6	V
I_{DRM}	$V_D=V_{DRM}, V_R=V_{RRM}$	$T_J=25^{\circ}C$ MAX	20	μA
I_{RRM}		$T_J=125^{\circ}C$ MAX	10	mA
I_{GT}	$V_D=12V, R_L=33\Omega$	I-II-III MAX	50	mA
V_{GT}		I-II-III MAX	1.3	V
V_{GD}	$V_D=V_{DRM}, R_L=3.3K\Omega, T_J=125^{\circ}C$	I-II-III MIN	0.2	V
I_L	$I_T=1.2I_{GT}$	I-II-III MAX	120	mA
I_H	$I_T=100mA$	MAX	80	mA
dv/dt	$V_{DM}=67\%V_{DRM}, \text{gate open}, T_J=125^{\circ}C$	MIN	1500	$V/\mu s$

● Ordering Information


● Package Outline Dimensions

iTO-247


REF.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	19.7	20.1	0.776	0.791
B	26.9	27.3	1.059	1.075
C	19.4	20.4	0.764	0.803
D	3.80	4.00	0.150	0.157
E	2.56	2.76	0.101	0.109
F	1.66	1.86	0.065	0.073
G	5.45 Typ.		0.215 Typ.	
H	5.05	5.50	0.199	0.217
J	1.45	1.55	0.057	0.061
K	2.20	2.40	0.087	0.094
L	0.60	0.80	0.024	0.031
M	21.2	21.4	0.835	0.843
ΦN	3.20	3.40	0.126	0.134