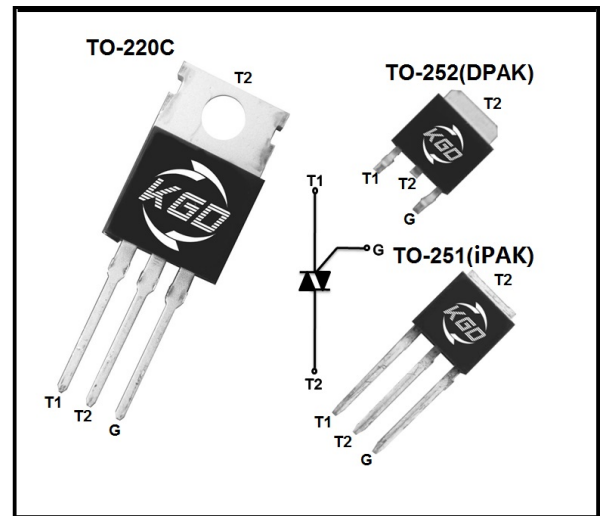


BT136 Series

- Description:**
 High current density due to mesa technology;Glass Passivation.
- Applications**
 BT136S 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 stator circuits... or for phase control operation light dimmers,motor speed controllers.
- Features:**
 Blocking voltage to 600 & 800V
 On-state RMS current to 4A
 Non-repetitive peak on-state current to 27A
- Absolute Maximum Ratings**



Symbol	Parameter	Conditions	Value	Unit
V_{DRM}	Repetitive peak off-state voltage	$T_J=25^{\circ}C$	600 & 800	V
V_{RRM}	Repetitive peak Reverse voltage	$T_J=25^{\circ}C$	600 & 800	V
$I_{T(RMS)}$	RMS on-state current (full sine wave)	TO-251/TO-252($T_c=110^{\circ}C$)	4	A
		TO-220C($T_c=107^{\circ}C$)		
I_{TSM}	Non-repetitive surge peak On-state current (full cycle, $T_J=25^{\circ}C$)	$f=60Hz, t_p=16.7ms$	27	A
		$f=50Hz, t_p=20ms$	25	
I^2t	I^2t Value for fusing	$t_p=10ms$	3.1	A^2S
I_{GM}	Peak gate current	$t_p=20\mu s, T_J=125^{\circ}C$	2	A
$P_{G(AV)}$	Average gate power dissipation		0.5	W
P_{GM}	Peak gate power dissipation	$t_p=10ms, T_J=125^{\circ}C$	5	W
T_{STG}	Storage temperature		-40 150	$^{\circ}C$
T_J	Junction temperature		-40 125	$^{\circ}C$

BT136 Series
Electrical Characteristics

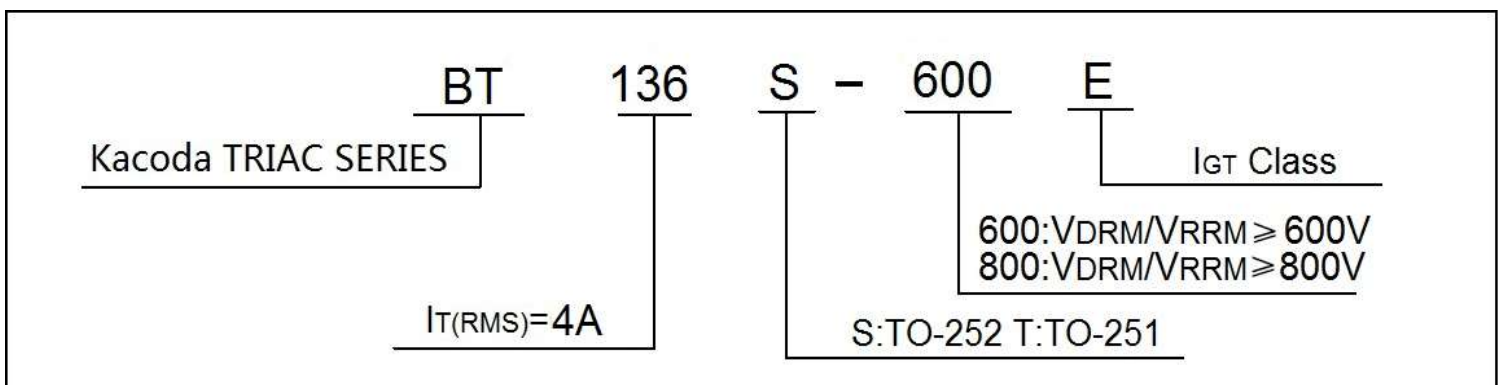
Symbol	Conditions	Quadrant	Value				Unit	
			D	E	F	G		
I_{GT}	$V_D=12V, R_L=33\Omega$	I - II - III	5	10	25	50	mA	
		IV	10	25	70	100		
V_{GT}		ALL	MAX	1.5			V	
V_{GD}	$V_D=V_{DRM}, R_L=3.3K\Omega, T_J=125^\circ C$	ALL	MIN	0.2			V	
I_L	$I_G=1.2I_{GT}$	I - III - IV	MAX	20	30	40	60	mA
		II		35	45	60	90	
I_H	$I_T=100mA$		MAX	15	25	30	60	mA
dv/dt	$V_{DM}=67\%V_{DRM}, \text{gate open}, T_J=125^\circ C$		MIN	5	50	50	200	V/ μs

Electrical Characteristics

Symbol	Parameter	Numerical	Unit	
V_{TM}	$I_T=5A, t_p=380\mu s$	$T_J=25^\circ C$	1.7	V
I_{DRM}	$V_D=V_{DRM}, V_R=V_{RRM}$	$T_J=25^\circ C$	10	μA
I_{RRM}		$T_J=125^\circ C$	1	mA

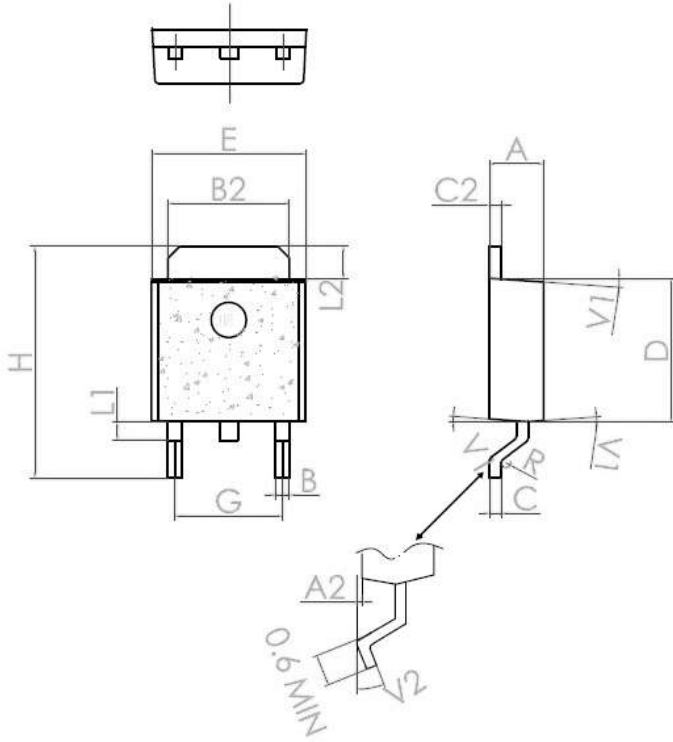
Thermal Characteristics

Symbol	Parameter	Numerical(MAX)	Unit	
$R_{th(j-c)}$	Junction to case(AC)	TO-251/TO-252	4.0	$^\circ C/W$
		TO-220C	3.0	

Ordering Information


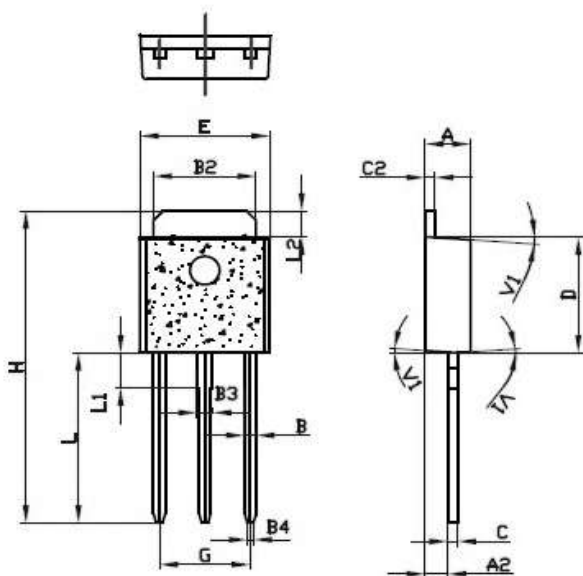
● Package Outline Dimensions

TO-252 / DPAK

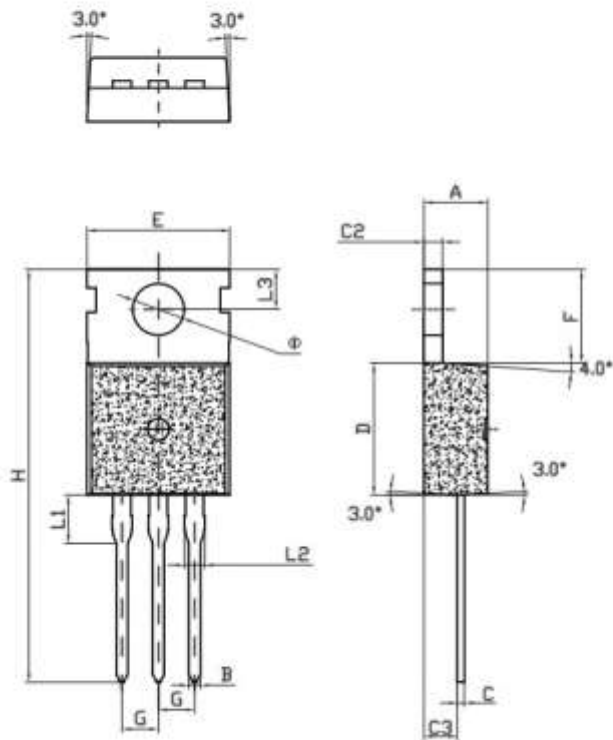


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.2		2.4	0.086		0.095
A2	0.03		0.23	0.001		0.009
B	0.55		0.65	0.021		0.026
B2	5.2		5.4	0.204		0.212
C	0.45		0.62	0.017		0.024
C2	0.48		0.62	0.019		0.024
D	6		6.2	0.236		0.244
E	6.4		6.6	0.251		0.259
G	4.40		4.60	0.173		0.181
H	9.35		10.1	0.368		0.397
L1		0.8			0.031	
L2	1.37		1.5	0.054		0.059
V1		4°			4°	
V2	0°		8°	0°		8°

TO-251(iPAK)



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.2		2.4	0.086		0.095
A2	0.9		1.1	0.035		0.043
B	0.55		0.65	0.021		0.026
B2	5.1		5.4	0.200		0.212
B3	0.76		0.85	0.030		0.033
B4		0.32			0.013	
C	0.45		0.62	0.017		0.024
C2	0.48		0.62	0.019		0.024
D	6		6.2	0.236		0.244
E	6.4		6.7	0.252		0.264
G	4.4		4.7	0.173		0.185
H	16.0		16.7	0.630		0.658
L	8.9		9.4	0.350		0.370
L1	1.8		1.9	0.071		0.075
L2	1.37		1.5	0.054		0.059
V1		4°			4°	

TO-220C


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.4		4.6	0.173		1.181
B	0.7		0.9	0.027		0.035
C	0.45		0.6	0.018		0.024
C2	1.23		1.32	0.048		0.052
C3	2.2		2.6	0.086		0.102
D	8.9		9.9	0.350		0.390
E	9.9		10.3	0.390		0.406
F	6.3		6.9	0.248		0.272
G		2.54			0.1	
H	28.0		29.8	11.0		11.7
L1		3.2			0.126	
L2	1.14		1.7	0.045		0.067
L3	2.65		2.95	0.104		0.116
Φ		3.6			0.142	

FIG.1 Maximum power dissipation versus RMS on-state current

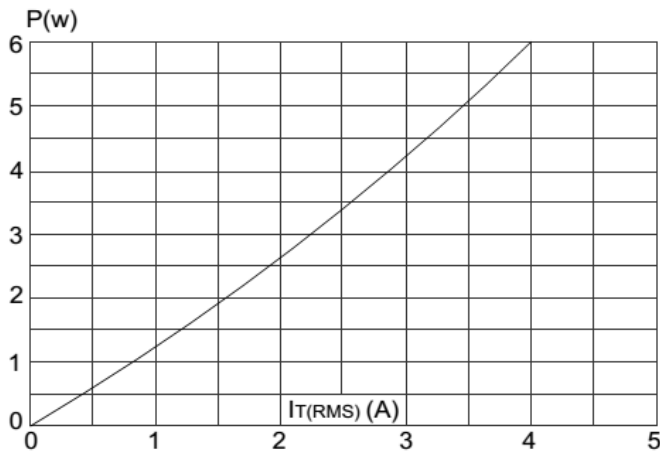


FIG.2: RMS on-state current versus case temperature

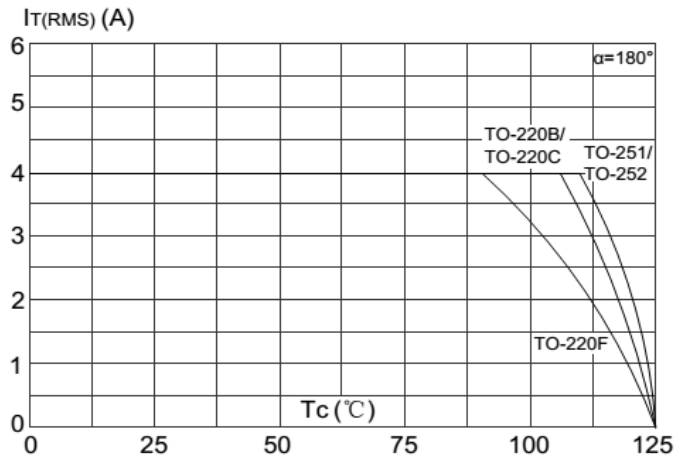


FIG.3: Surge peak on-state current versus number of cycles

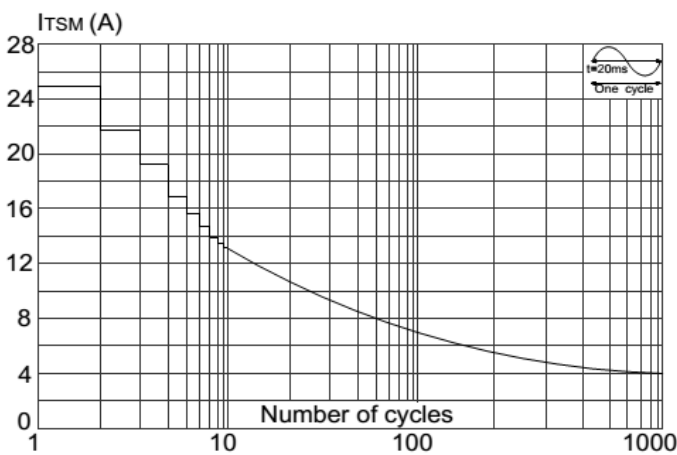


FIG.4: On-state characteristics (maximum values)

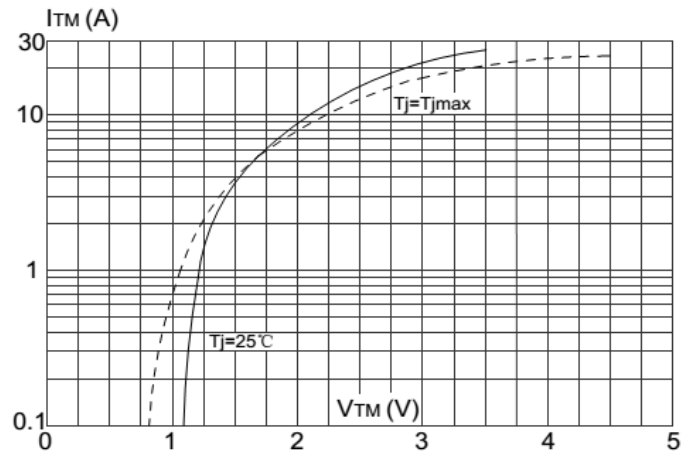


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20ms$ and corresponding value of I^2t (I - II -III: $di/dt < 50A/\mu s$; IV: $di/dt < 10A/\mu s$)

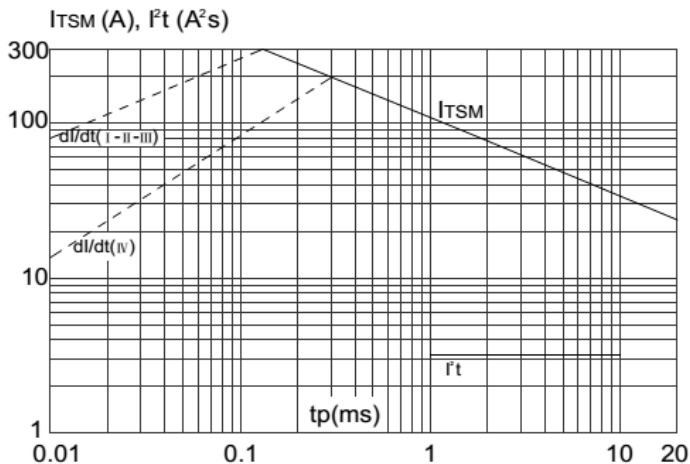


FIG.6: Relative variations of gate trigger current versus junction temperature

