

BT134W Series
Description:

Logic level sensitive gate triac intended to interfaced directly to microcontrollers, logic integrated circuits and other low power gate trigger circuits.

Applications

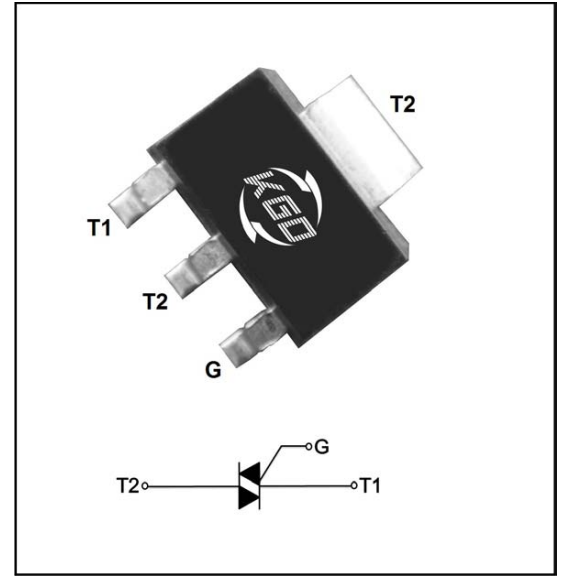
This device is suitable for low power AC switching application, phase control application such as fan speed and temperature modulation control, lighting control and static switching relay.

Features:

Blocking voltage to 600/800V

On-state RMS current to 1.0A

Non-repetitive peak on-state current to 8A

Absolute Maximum Ratings


Symbol	Parameter	Conditions	Value		Unit
			Min	Max	
V_{DRM}	Repetitive peak off-state voltage	$T_J=25^\circ\text{C}$	600	800	V
V_{RRM}	Repetitive peak Reverse voltage	$T_J=25^\circ\text{C}$	600	800	V
$I_{T(RMS)}$	RMS on-state current (full sine wave)	$T_C=110^\circ\text{C}$	1		A
I_{TSM}	Non-repetitive surge peak On-state current (One full cycle, sine wave, $T_C=110^\circ\text{C}$)	$t_p=10\text{ms}$	12		A
		$t_p=8.3\text{ms}$	12.8		
I^2t	I^2t Value for fusing	$t_p=10\text{ms}$	0.72		A^2S
I_{GM}	Peak gate current	$t_p \leq 2\mu\text{s}, T_J=80^\circ\text{C}$	1		A
$P_{G(AV)}$	Average gate power dissipation	$t_p \leq 10\text{ms}, T_J=80^\circ\text{C}$	0.5		W
P_{GM}	Peak gate power dissipation		5		W
T_{STG}	Storage temperature		-40	150	$^\circ\text{C}$
T_J	Junction temperature		-40	125	$^\circ\text{C}$

● Electrical Characteristics

Symbol	Conditions	Quadrant	Value		Unit
			MIN	MAX	
I_{GT}	$V_D=12V, R_L=33\Omega$	I - II - III	/	5	mA
		IV	/	10	
V_{GT}		ALL	/	1.3	V
V_{GD}	$V_D=V_{DRM}, R_L=3.3K\Omega, T_J=125^\circ C$	ALL	0.2	/	V
I_H	$I_T=200mA$		/	5	mA
dv/dt	$V_{DM}=67\%V_{DRM}$, gate open, $T_J=125^\circ C$		5	/	V/ μs
$(dv/dt)_c$	$(dv/dt)_c=0.3A/ms, T_J=125^\circ C$		1	/	V/ μs

● Electrical Characteristics

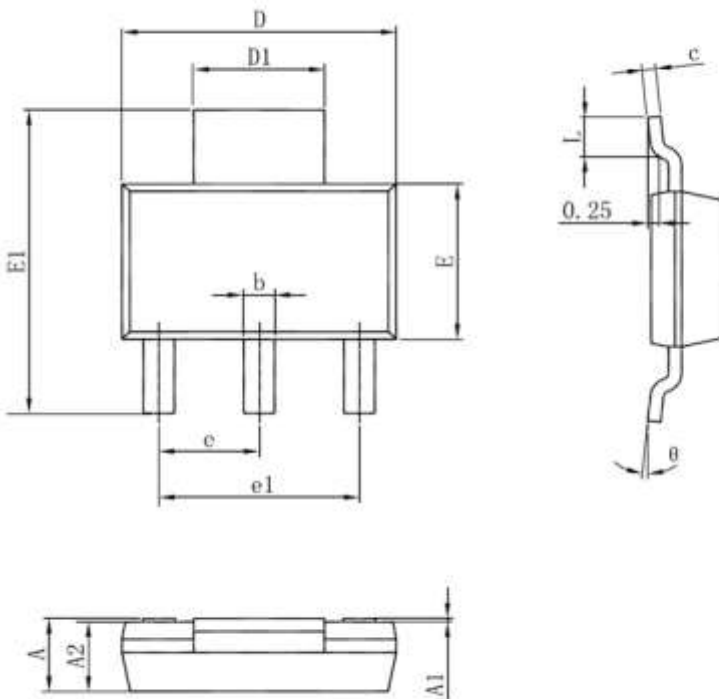
Symbol	Parameter	Numerical	Unit
V_{TM}	$I_T=2A, tp=380\mu s$ $T_J=25^\circ C$	1.5	V
I_{DRM}	$V_D=V_{DRM}, V_R=V_{RRM}$ $T_J=25^\circ C$	10	μA
I_{RRM}	$T_J=125^\circ C$	500	mA

● Thermal Characteristics

Symbol	Parameter	Numerical(MAX)	Unit
$R_{th(j-c)}$	Junction to case(AC)	15	$^\circ C/W$
$R_{th(j-a)}$	Junction to ambient(AC)	156	$^\circ C/W$

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● Package Outline Dimensions



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.520	1.800	0.060	0.071
A1	0.000	0.100	0.000	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.820	0.026	0.032
c	0.250	0.350	0.010	0.014
D	6.200	6.400	0.244	0.252
D1	2.900	3.100	0.114	0.122
E	3.300	3.700	0.130	0.146
E1	6.830	7.070	0.269	0.278
e	2.300(BSC)		0.091(BSC)	
e1	4.500	4.700	0.177	0.185
L	0.900	1.150	0.035	0.045
θ	0°	10°	0°	10°

FIG.1: Maximum power dissipation versus average on-state current.

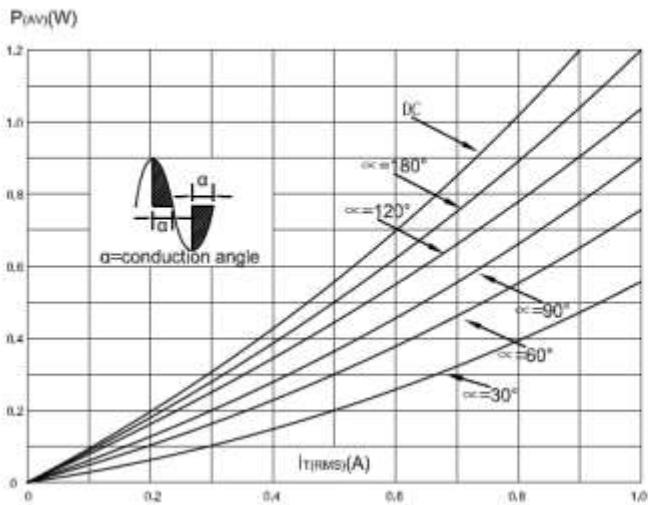


FIG.2: RMS on-state current versus case temperature.

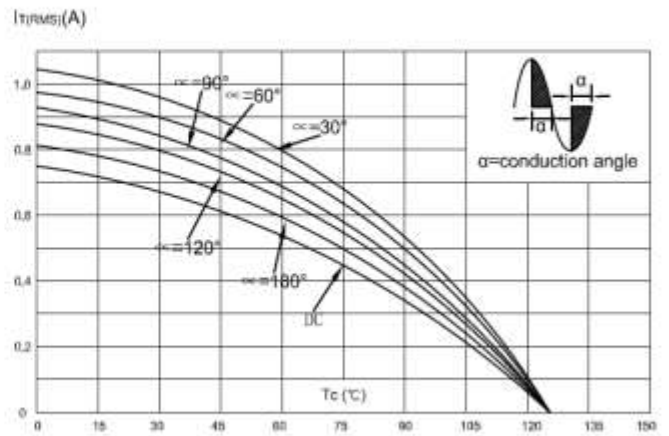


FIG.3: On-state characteristics (maximum values)

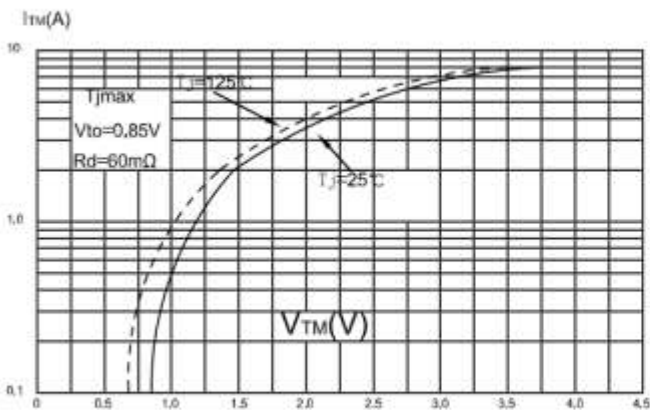


FIG.4: Surge peak on-state current versus number of cycles.

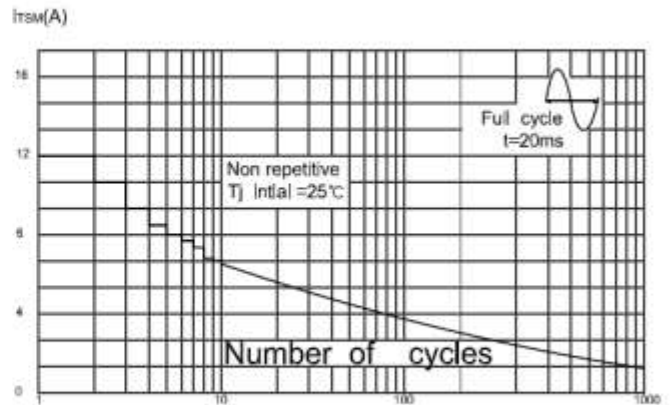


FIG.5: Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).

