

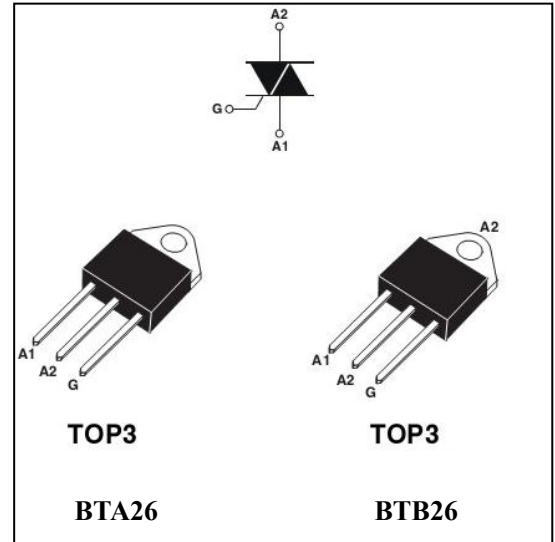
Triac

● FEATURES

NPNPN Silicon bidirectional devices with five-layer structure; Single-sided slotting technology with independent intellectual property rights, countertop glass passivation process; Backside multilayer metallized electrode; Has a higher Blocking voltage and high temperature stability;

● APPLICATIONS

Vacuum cleaners, power tools and other motor speed controllers; Solid state relays; Heating controller (temperature regulation); Other phased circuits.



● ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER			RATINGS	UNIT
$I_{T(RMS)}$	Non-repetitive peak on-state current	BTA BTB	Tc=80°C Tc=90°C	26	A
I_{TSM}	RMS on-state current	F=50HZ	t=20ms	260	A
I^2t	I^2t Limit value	tp=10ms		340	A ² S
di/dt	Critical Rate of Rise of Off-State Voltage at Commutation		Tj=125°C	50	A/us
V_{DRM}/V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage		Tj=25°C	800/1000	V
I_{GM}	Peak Gate Current	tp=20us	Tj=125°C	4	A
$P_{G(AV)}$	Average Gate Power Dissipation		Tj=125°C	1	W
Tstg Tj	Storage Temperature Range Junction Temperature			-40to+150 -40to+125	°C

● ELECTRICAL CHARACTERISTICS (Third quadrant)

SYMBOL	PARAMETER/ TEST CONDITIONS	QUADRANT		RATINGS	UNIT
I_{GT}	Trigger current $V_D=12V$ $R_L=100\ \Omega$	I II III	MAX	≤ 50	mA
V_{GT}	Trigger voltage		MAX	1.5	V
V_{GD}	Gate Non-Trigger Voltage $T_j=125^\circ C$		MIN	0.2	V
I_H	Holding current $I_T=0.5A$		MAX	60	mA
I_L	Latching Current $I_G=1.2I_{GT}$		MAX	60	mA
				100	
dv/dt	Critical Rate of Rise of Off-State Voltage $V_D=2/3V_{DRM}$ $T_j=125^\circ C$		MIN	500	V/us
(dv/dt)c	Critical Rate of Rise of Off-State Voltage at Commutation $T_j=125^\circ C$		MIN	10	V/us

● ELECTRICAL CHARACTERISTICS (Fourth quadrant)

SYMBOL	PARAMETER/ TEST CONDITIONS	QUADRANT		RATINGS		UNIT
I_{GT}	Trigger current $V_D=12V$ $R_L=100\ \Omega$	I II III IV	MAX	I、II、III	IV	mA
				≤ 50	≤ 120	
V_{GT}	Trigger voltage		MAX	1.5		V
V_{GD}	Gate Non-Trigger Voltage $T_j=125^\circ C$		MIN	0.2	V	
I_H	Holding current $I_T=0.5A$		MAX	60	mA	
I_L	Latching Current $I_G=1.2I_{GT}$		MAX	60	mA	
				100		
dv/dt	Critical Rate of Rise of Off-State Voltage $V_D=2/3V_{DRM}$ $T_j=125^\circ C$		MIN	500	V/us	
(dv/dt)c	Critical Rate of Rise of Off-State Voltage at Commutation $T_j=125^\circ C$		MIN	10	V/us	

● STATIC CHARACTERISTICS

SYMBOL	PARAMETER/ TEST CONDITIONS			RATINGS	UNIT
V_{TM}	On-state voltage $I_{TM}=52A$	$T_j=25^{\circ}C$	MAX	1.50	V
V_{T0}	Threshold Voltage	$T_j=125^{\circ}C$	MAX	0.85	V
R_d	Dynamic Resistance	$T_j=125^{\circ}C$	MAX	9.2	$m\Omega$
I_{DRM} I_{RRM}	Repetitive Peak Off-State Current	$T_j=25^{\circ}C$	MAX	10	μA
		$T_j=125^{\circ}C$		2	mA
$R_{th(j-c)}$	Thermal resistance, junction to case	BTA		0.9	$^{\circ}C/W$
		BTB		0.6	

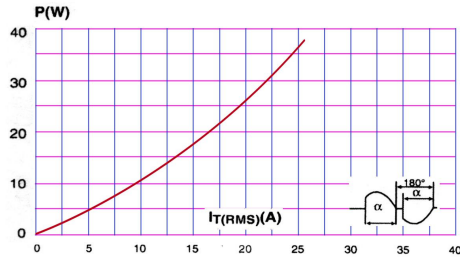


FIG.1: Maximum power dissipation versus RMS on-state current

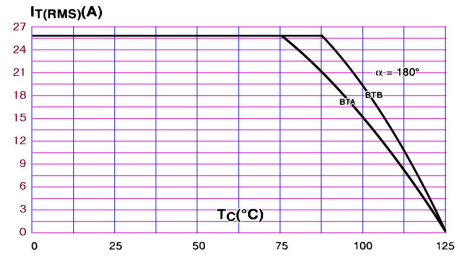


FIG.2: RMS on-state current versus case temperature

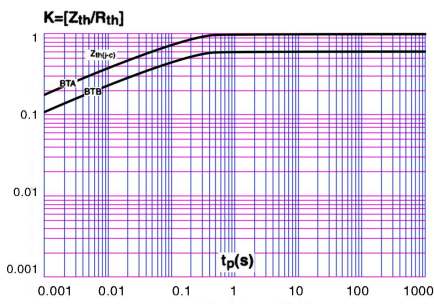


FIG.3: Relative variation of thermal impedance versus pulse duration

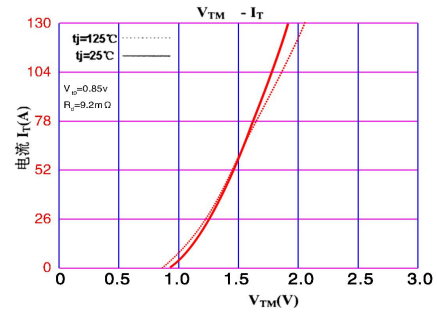


FIG.4: On-state characteristics

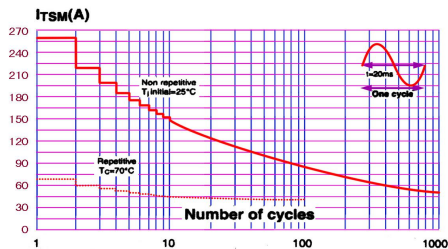


FIG.5: Surge peak on-state current versus number of cycles

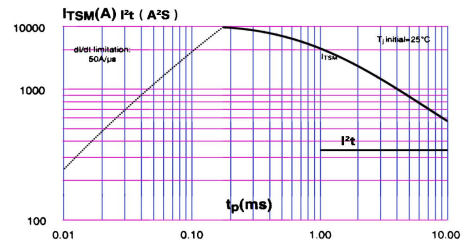


FIG.6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of I^2t ($di/dt < 50\text{A}/\mu\text{s}$)

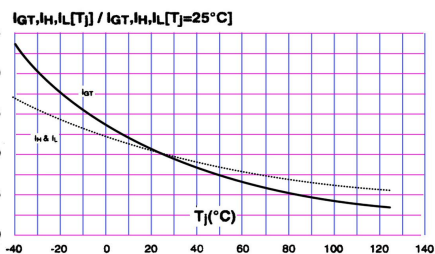


FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

PACKAGE OUTLINE

TOP3

