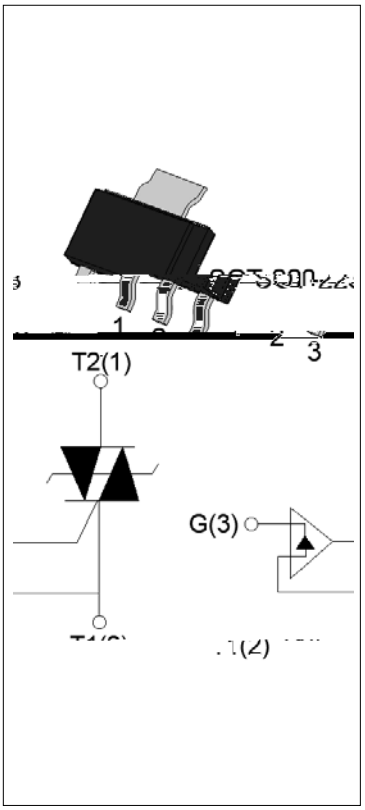
ACJP04V-800SW 1A TRIAC

Rev.A.1.1

DESCRIPTION:

The ACJP04V-800SW triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. The ACJP04V-800SW embeds a TVS structure to absorb the inductive turn-off energy such as those described in the IEC 61000-4-5 standards. At the same time, the triac shields the positive signal trigger to reduce the probability of product misoperation. It is triggered with a negative gate current flowing out of the gate pin. Package SOT-223 is RoHS compliant.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	1	A
V_{DRM} /V_{RRM}	800	V
I_{GT} /	10/10	mA

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-125	
Repetitive peak off-state voltage (T_j=25)	V_{DRM}	800	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	800	V
RMS on-state current ($T_C \leq$ 103)	$I_{T(RMS)}$	1	A
Non repetitive surge peak on-state current (full cycle , t_p=20ms , T_j=25)	I_{TSM}	25	A
Non repetitive surge peak on-state current (full cycle , t_p=16.6ms , T_j=25)		27.5	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	3.125	A^2s
Critical rate of rise of on-state current (I_G=2 × I_{GT} , f=100Hz , T_j=125)	dI/dt	100	A s
Peak gate current (t_p=20 s , T_j=125)	I_{GM}	4	A
Positive applied gate voltage	V_{GM}	15	V

Average gate power dissipation (T_j=125)	$P_{G(AV)}$	0.5	W
Peak gate power	P_{GM}	10	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.8)	V_{pp}	2.75	kV

ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D =12V R_L =33	-	MAX.	10	mA
V_{GT}		-	MAX.	1.3	V
V_{GD}	V_D =V_{DRM} T_j =125 R_L =3.3k	-	MIN.	0.15	V
I_L	I_G =1.2I_{GT}		MAX.	35	mA
				15	
I_H	I_T =100mA		MAX.	15	mA
dV/dt	V_D=540V Gate Open T_j =125		MIN.	100	V s
(dI/dt)c	(dV/dt)c=1 j=125		MIN.	0.7	A/ms
t_{on}	I_G=20mA I_A=200mA I_R=20mA T_j=25				

ORDERING INFORMATION

ACJ P 04 V -800 SW

- ACJ: JieJie AC switch series
- P: Plannar technology
- 04: $I_{T(RMS)}$:1A
- V: SOT-223
- -800: 800:V_{DRM} /V_{RRM} ≥ 800V
- SW: SW:I_{GT2-3} 10mA

MARKING

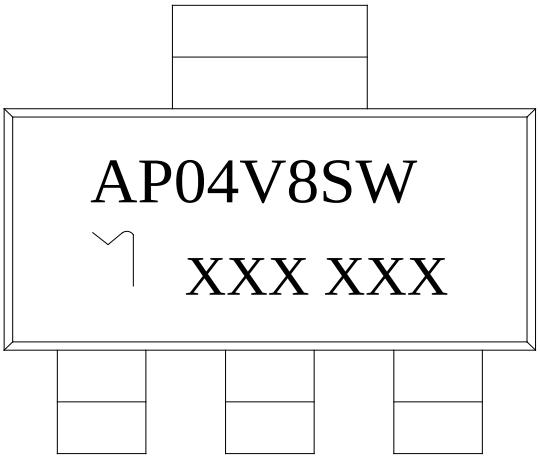


FIG.1: Maximum power dissipation versus RMS on-state current

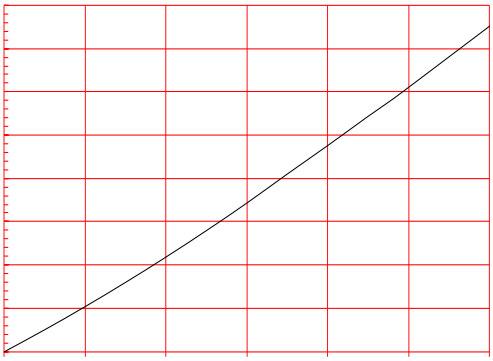


FIG.2: RMS on-state current versus case temperature

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

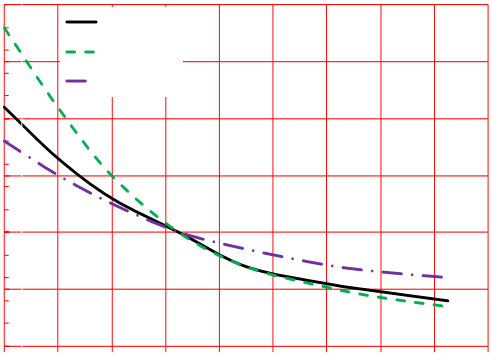
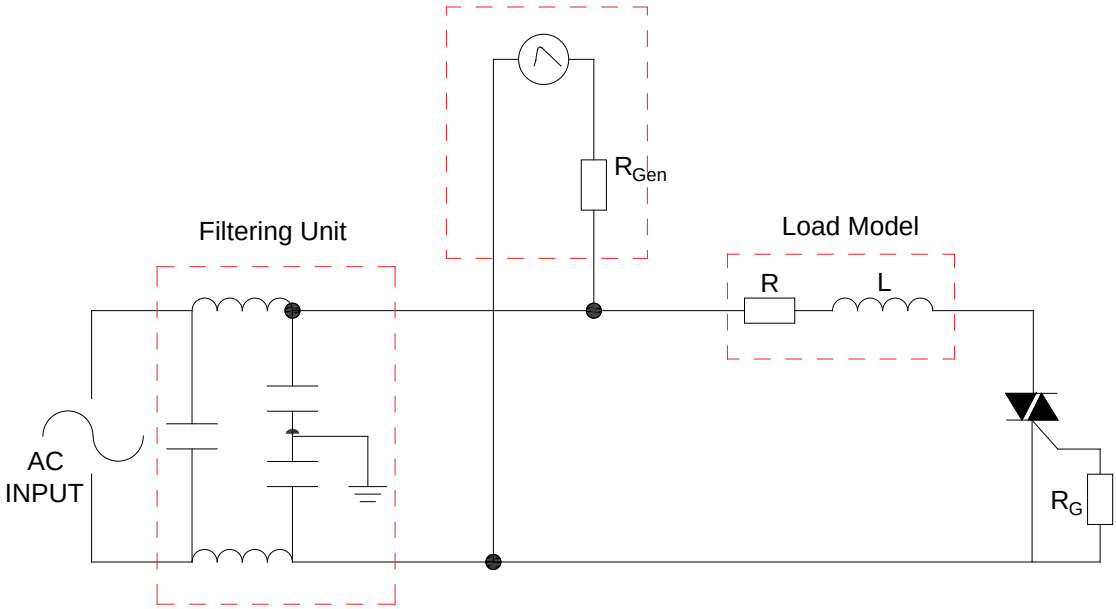


FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode	(

PACKAGE MECHANICAL DATA

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A						

DELIVERY MODE

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	-		12.30	-		0.482
E	1.65	1.75	1.85	0.065	0.069	0.073
F	5.45	5.50	5.55	0.215	0.217	0.219
D0		1.55	1.60		0.061	0.063
D1		-				
P0	3.90	4.00	4.10		0.157	(1.95)Tj 4.18
P1	7.90	8.00	8.10			
P2	1.95	2.00	2.05			
10P0	39.80	40.00	40.20			
A0	6.85	6.95	7.05			
B0	7.15	7.25	7.35			
K0	1.95	2.05	2.15			
T	0.20	0.25	0.30			