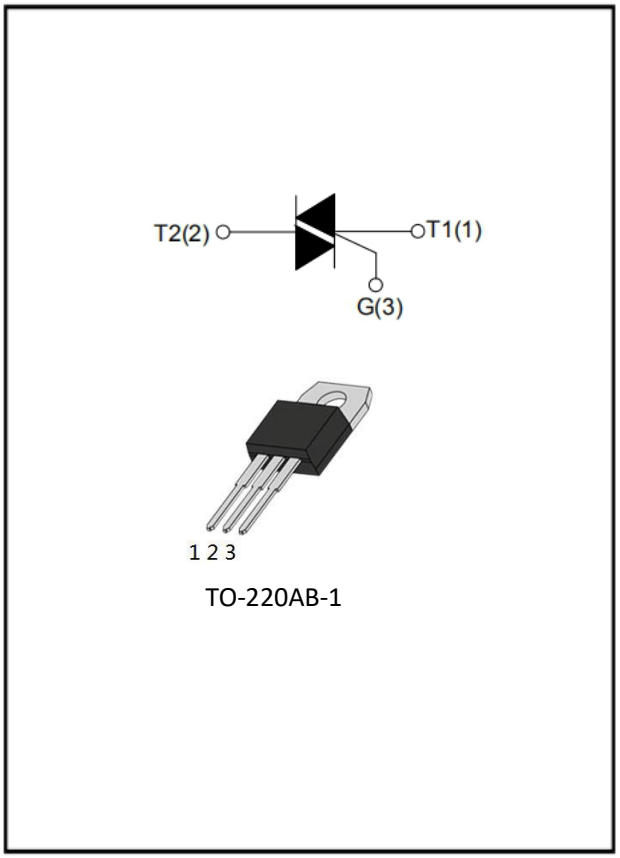
8A 4Q Triac



Features

- On-state RMS current, $I_{T(RMS)}$ 8 A
- Repetitive peak off-state voltage, V_{DRM}/V_{RRM} 800 V
- Triggering gate current, $I_{GT\ (Q1)}$ 10 mA

Applications

- General purpose switching and phase control
- General purpose switching

Mechanical Data

- Case Material: “Green” Molding Compound
- Package:TO-220AB-1

DEVICE	PACAKGE
ACYMA0820-08A	TO-220AB-1

Main Characteristics

SYMBOL	LIMITS	UNIT
$I_{T(RMS)}$	8	A
V_{DRM}/V_{RRM}	800	V
I_{GT}	10	mA

■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Storage junction temperature range	Tstg	-40~150	℃
Operating junction temperature range	Tj	-40~125	℃
Repetitive surge peak Off-state voltage (Tj=25℃)	V_{DRM}	800	V
Repetitive peak reverse voltage (Tj=25℃)	V_{RRM}	800	V
RMS on-state current	$I_{T(RMS)}$	8	A
Non-repetitive surge peak on-state current (full sine wave, tp=20ms,Tj=25℃)	I_{TSM}	80	A
I^2t value for fusing (tp=10ms)	I^2t	32	A^2s
Critical rate of rise of on-state current (IG=2×I_{GT})	dI/dt	100	A/μs
Peak gate current	I_{GM}	4	A
Average gate power dissipation	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	5	W

■Electrical Characteristics（T_j=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	QUADRANT	MIN	TYP	MAX
Gate trigger current	IGT	mA	VD=12V, RL=33Ω	Ⅰ-Ⅱ-Ⅲ			10
				Ⅳ			20
Gate trigger voltage	VGT	V	VD=12V, RL=33Ω	ALL			1.5
Non-triggering gate voltage	VGD	V	VD=VDRM	ALL	0.2		
Holding current	IH	mA	IT=100mA	ALL			40
Latching current	IL	mA	IG=3 IGT	Ⅰ-Ⅲ-Ⅳ			50
				Ⅱ			70
Rate of rise of off-state voltage	dV/dt	V/μs	VD=0.66×VDRM Tj=125℃ Gate open	ALL	200		

■Static Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MAX
Peak on-state voltage	VTM	V	ITM=11A tp=380μS	1.5
Peak off-state current Peak reverse current	IDRM IRRM	μA	VDRM= VRRM，Tj=25℃	5
		mA	VDRM= VRRM，Tj=125℃	1

■Thermal Resistance

PARAMETER		SYMBOL	UNIT	Pacakge	Value
Thermal Resistance (Typical)	Junction to case	$R_{\theta J-C}$	℃/W	TO-220AB-1	2.8

■ Characteristics (Typical)

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

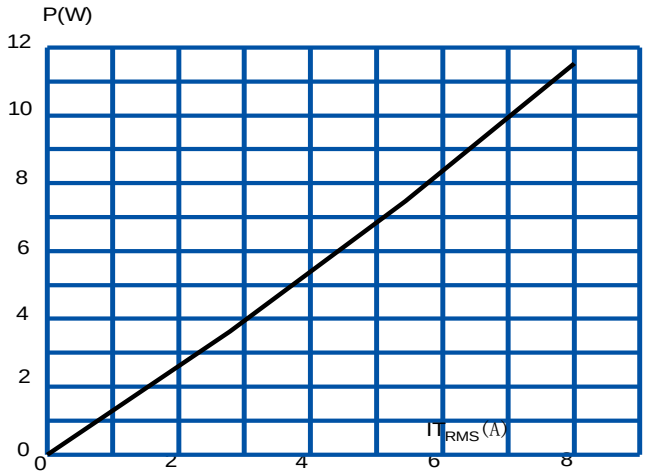


FIG.2：RMS on-state current versus case temperature

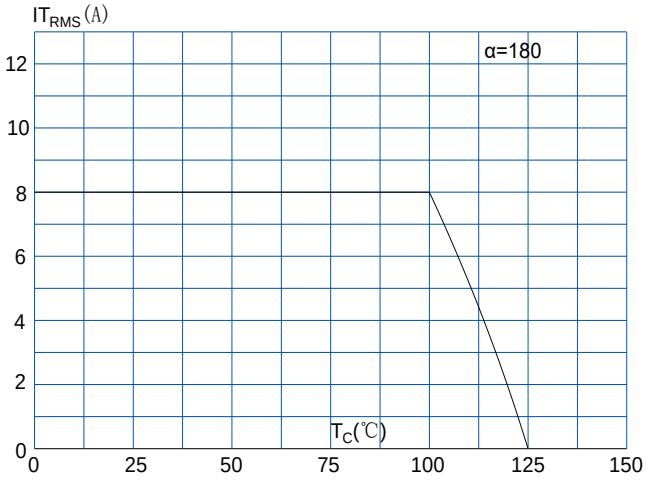


FIG.3：Surge peak on-state current versus number of cycles

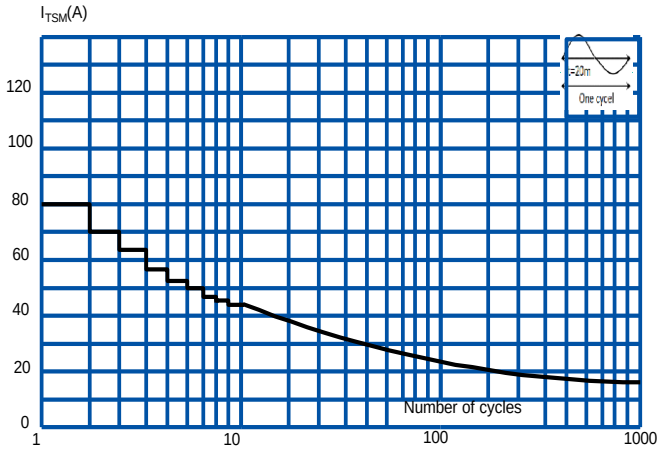


FIG.4：On-state haracteristics(maximum values)

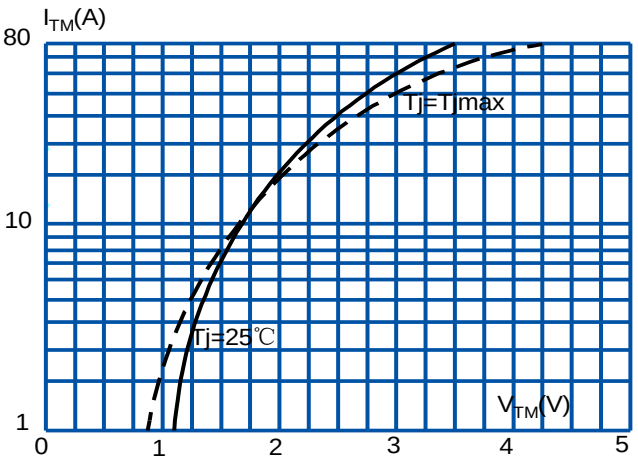


FIG.5：Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<20ms, and corresponging value of I2t (Ⅰ-Ⅱ-Ⅲ:dI/dt < 50A/μs;)

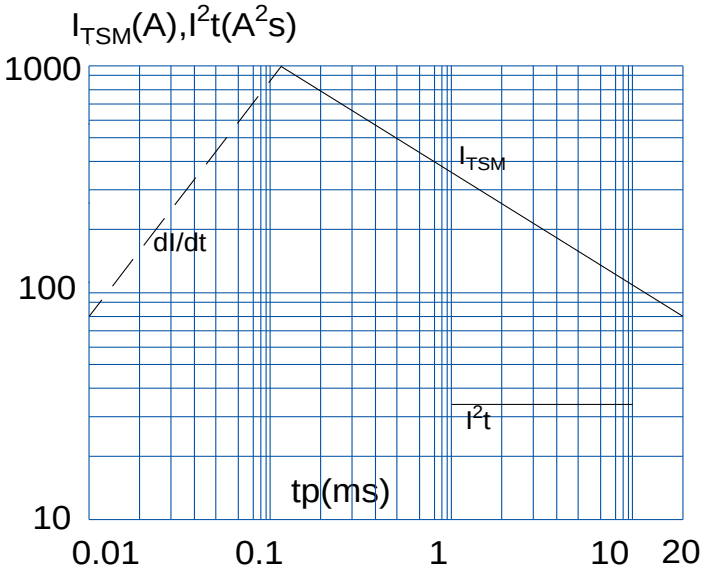
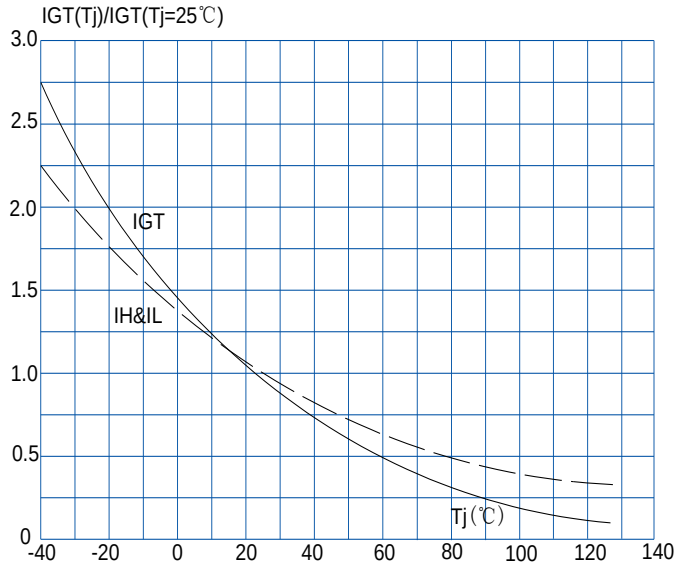
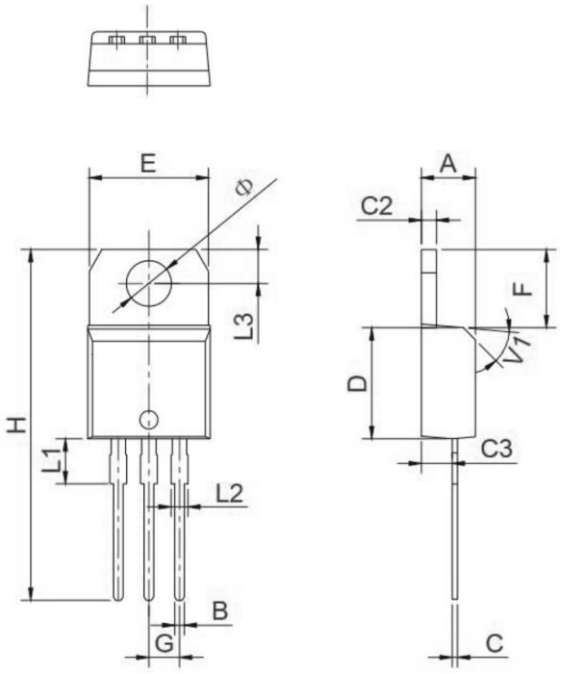


FIG.6：Relative variations of gate trigger current versus junction temperature



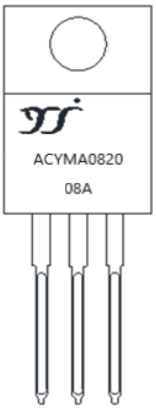
■ Outline Dimensions

TO-220AB-1 Package Dimensions



Symbol	Min.(mm)	Typ.(mm)	Max.(mm)
A	4.4	4.47	4.6
B	0.61		0.88
C	0.46	0.50	0.70
C2	1.21	1.27	1.32
C3	2.4		2.72
D	8.6		9.7
E	9.8		10.4
F	6.4		6.8
G		2.54	
H	28		29.8
L1		3.75	
L2	1.14		1.7
L3	2.65		2.95
V1		45°	
Φ	3.7	3.75	3.8

■ Marking information



(TO-220AB-1 Package)

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