

16A 3Q Triac

Features

- On-state rms current, $I_{T(RMS)}$ 16 A
- Repetitive peak off-state voltage, V_{DRM}/V_{RRM} 800 V
- Triggering gate current, $I_{GT(Q1)}$ 35 mA

Applications

- General purpose switching and phase control
- General purpose switching

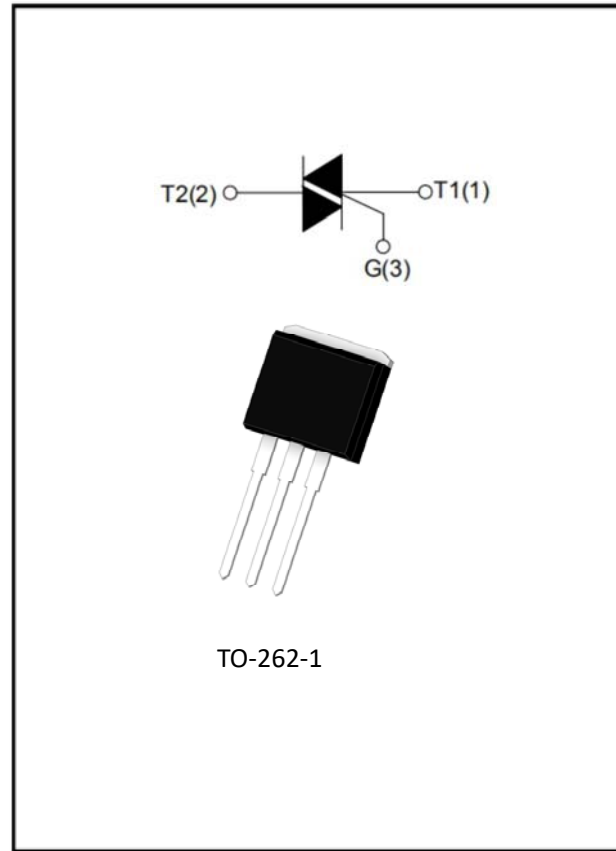
Mechanical Data

- Case Material: "Green" Molding Compound
- Package: TO-262-1

DEVICE	PACAKGE
ACYMB1635H-08G	TO-262-1

Main Characteristics

SYMBOL	LIMITS	UNIT
$I_{T(RMS)}$	16	A
V_{DRM}/V_{RRM}	800	V
I_{GT}	35	mA



Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Storage junction temperature range	T_{stg}	-40~150	°C
Operating junction temperature range	T_j	-40~150	°C
Repetitive surge peak Off-state voltage ($T_j=25^{\circ}C$)	V_{DRM}	800	V
Repetitive peak reverse voltage ($T_j=25^{\circ}C$)	V_{RRM}	800	V
RMS on-state current ($TC=80^{\circ}C$)	$I_{T(RMS)}$	16	A
Non-repetitive surge peak on-state current (full cycle, $F=50Hz$)	I_{TSM}	160	A
I^2t value for fusing ($t_p=10ms$)	I^2t	128	A ² s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$)	di/dt	50	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



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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	QUADRANT	MIN	TYP	MAX
Gate trigger current	I _{GT}	mA	V _D =12V, R _L =33Ω	I - II - III			35
Gate trigger voltage	V _{GT}	V	V _D =12V, R _L =33Ω	I - II - III			1.3
Non-triggering gate voltage	V _{GD}	V	V _D =V _{DRM}	I - II - III	0.2		
Holding current	I _H	mA	I _T =100mA	I - II - III			35
Latching current	I _L	mA	I _G =1.2 I _{GT}	I - III			50
				II			60
Rate of rise of off-state voltage	dV/dt	V/μs	V _D =0.66×V _{DRM} T _j =125℃ Gate open	I - II - III			400

■Thermal Characteristics (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MAX
Peak on-state voltage	V _{TM}	V	I _{TM} =22.5A t _p =380μs	1.55
Peak off-state current	I _{DRM} I _{RRM}	μA	V _{DRM} = V _{RRM} , T _j =25℃	10
Peak reverse current		mA	V _{DRM} = V _{RRM} , T _j =125℃	5

■Thermal Resistance (T_a=25℃ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	Pacakge	Value
Thermal Resistance (Typical)	Junction to case	R _{θJ-C}	℃/W	TO-262-1	1.2



■ Characteristics (Typical)

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

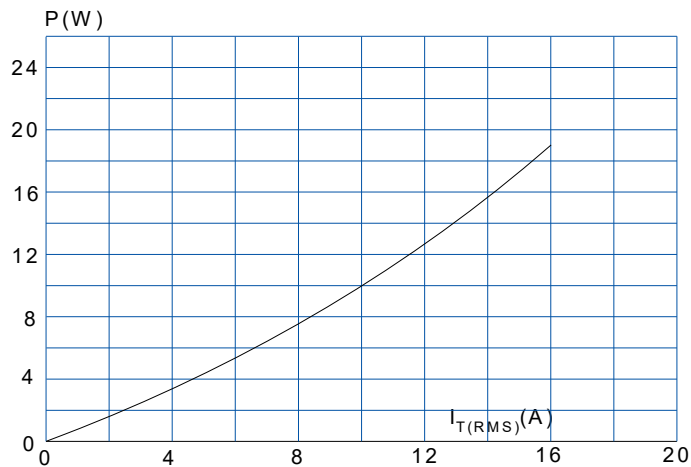


FIG.2: RMS on-state current versus case temperature

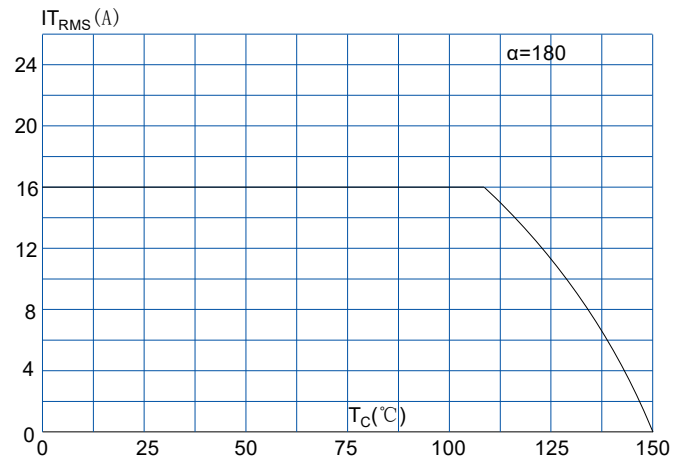


FIG.3: Surge peak on-state current versus number of cycles

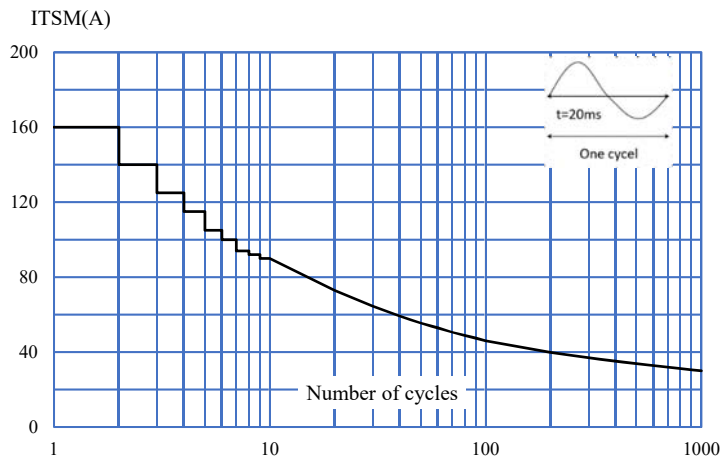


FIG.4: On-state characteristics (maximum values)

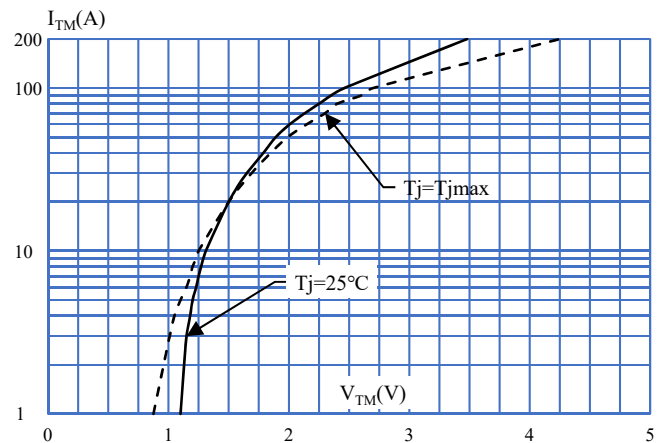


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20ms$, and corresponding value of $I_2 t$ ($dI/dt < 50A/\mu s$)

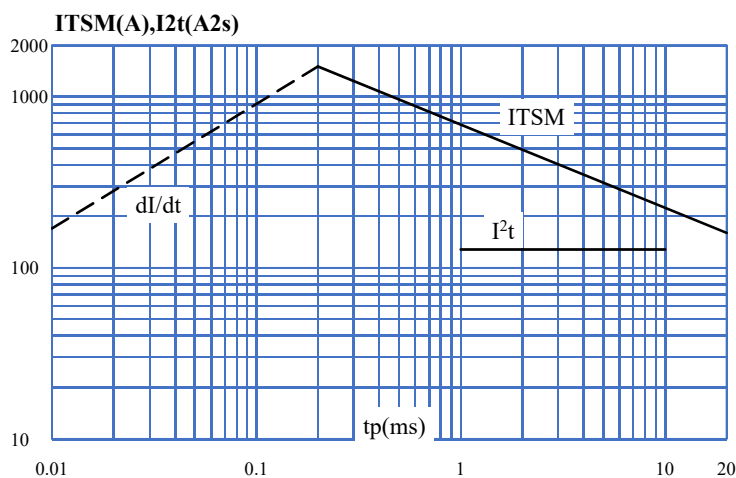
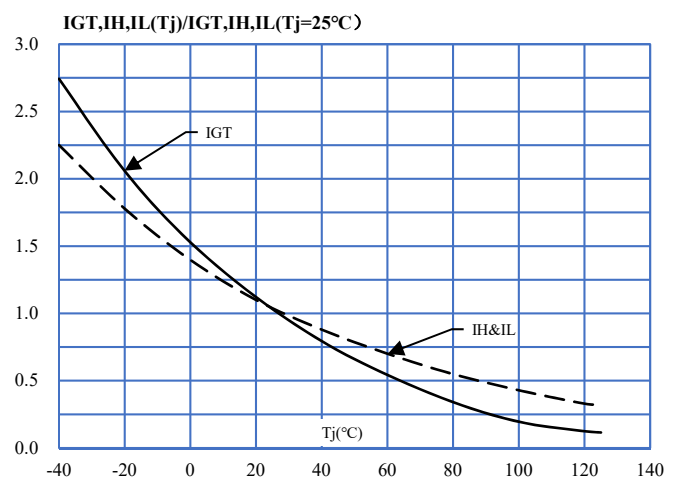


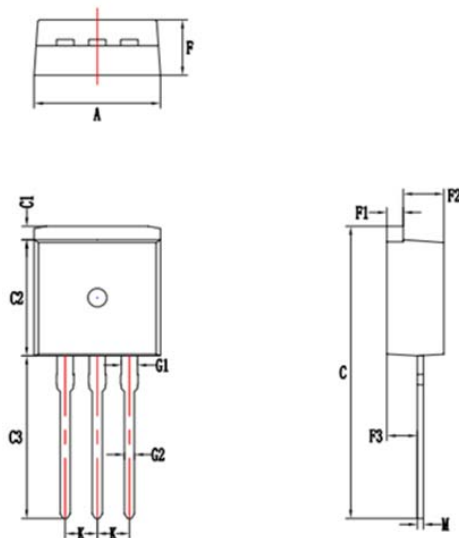
FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature





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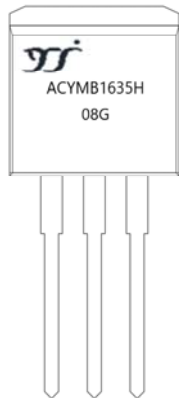
■ Outline Dimensions



TO-262-1

Symbol	Min.(mm)	Typ.(mm)	Max.(mm)
A	9.90		10.10
C	23.50		23.90
C1	1.10		1.20
C2	9.30		9.50
C3	13.00		13.30
F	4.40		4.60
F1	1.25		1.35
F2	3.10		3.30
F3	2.30		2.70
G1	1.22		1.32
G2	0.75		0.85
K	2.54		
M	0.45		0.55

■ Marking information



(TO-262-1 Package)



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