

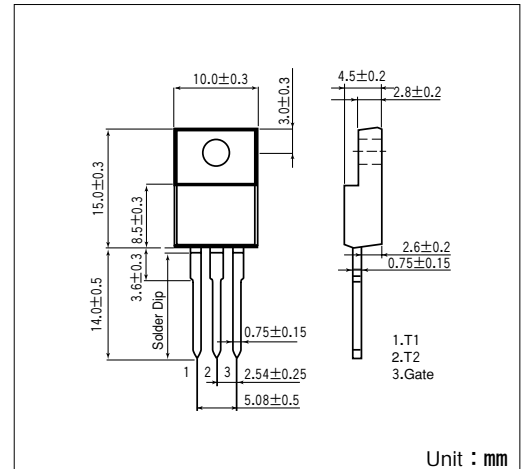
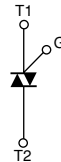
# TRIAC(ISOLATED TYPE)

# TMG16C60F

UL:E76102(M)

TMG16C40/60F are isolated mold triac suitable for wide range of applications like copier, microwave oven, solid state switch, motor control, light and heater control.

- I<sub>T(RMS)</sub> 16A
- High surge capability 170A
- Full molded isolated type



## Maximum Ratings

(T<sub>j</sub>=25°C unless otherwise specified)

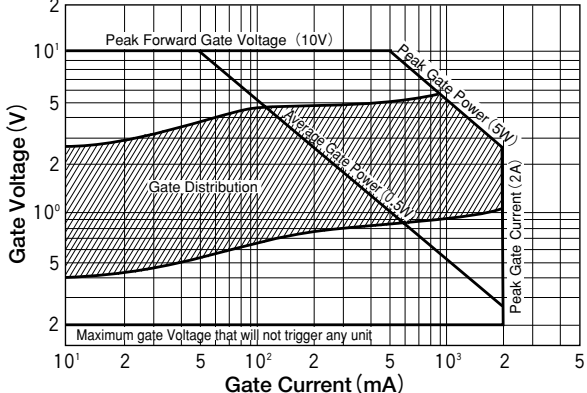
Symbol	Item	Ratings		Unit
		TMG16C40F	TMG16C60F	
V <sub>DRM</sub>	Repetitive Peak Off-State Voltage	400	600	V

Symbol	Item	Conditions	Ratings	Unit
I <sub>T(RMS)</sub>	R.M.S. On-State Current	T <sub>c</sub> =68°C	16	A
I <sub>TSM</sub>	Surge On-State Current	One cycle, 50Hz/60Hz, peak, non-repetitive	155/170	A
I <sup>2</sup> t	I <sup>2</sup> t		120	A <sup>2</sup> S
P <sub>GM</sub>	Peak Gate Power Dissipation		5	W
P <sub>G(AV)</sub>	Average Gate Power Dissipation		0.5	W
I <sub>GM</sub>	Peak Gate Current		2	A
V <sub>GM</sub>	Peak Gate Voltage		10	V
V <sub>ISO</sub>	Isolation Breakdown Voltage (R.M.S.)	A.C.1 minute	1500	V
T <sub>j</sub>	Operating Junction Temperature		-40 to +125	°C
T <sub>stg</sub>	Storage Temperature		-40 to +125	°C
	Mass		2	g

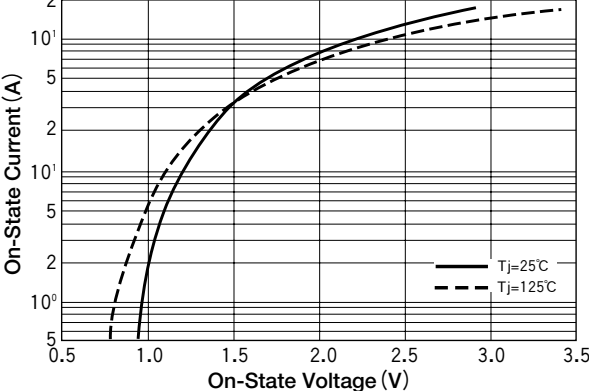
## Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I <sub>DRM</sub>	Reptitive Peak Off-State Current	V <sub>D</sub> =V <sub>DRM</sub> , Single phase, half wave, T <sub>j</sub> =125°C			2	mA
V <sub>TM</sub>	Peak On-State Voltage	I <sub>T</sub> =25A, Inst. measurement			1.4	V
I <sub>GT1</sub> <sup>+</sup>	Gate Trigger Current	V <sub>D</sub> =6V, R <sub>L</sub> =10Ω			30	mA
I <sub>GT1</sub> <sup>-</sup>					30	
I <sub>GT3</sub> <sup>+</sup>					—	
I <sub>GT3</sub> <sup>-</sup>					30	
V <sub>GT1</sub> <sup>+</sup>	Gate Trigger Voltage	V <sub>D</sub> =6V, R <sub>L</sub> =10Ω			1.5	V
V <sub>GT1</sub> <sup>-</sup>					1.5	
V <sub>GT3</sub> <sup>+</sup>					—	
V <sub>GT3</sub> <sup>-</sup>					1.5	
V <sub>GD</sub>	Non-Trigger Gate Voltage	T <sub>j</sub> =125°C, V <sub>D</sub> =1/2V <sub>DRM</sub>	0.2			V
[dv/dt] <sub>c</sub>	Critical Rate of Rise off-State Voltage at commutation	T <sub>j</sub> =125°C, [di/dt] <sub>c</sub> =-8A/ms, V <sub>D</sub> =2/3V <sub>DRM</sub>	10			V/μs
I <sub>H</sub>	Holding Current			25		mA
R <sub>th(j-c)</sub>	Thermal Impedance	Junction to case			3.0	°C/W

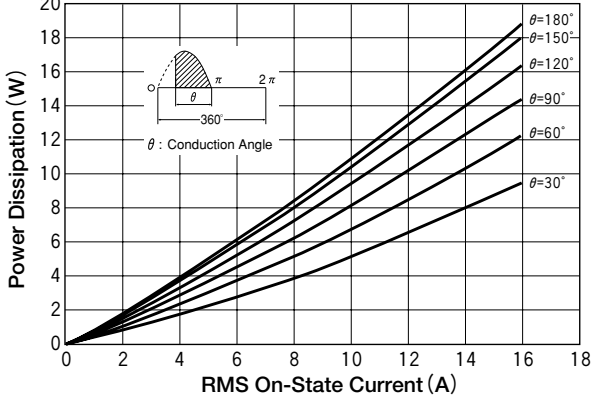
**Gate Characteristics**



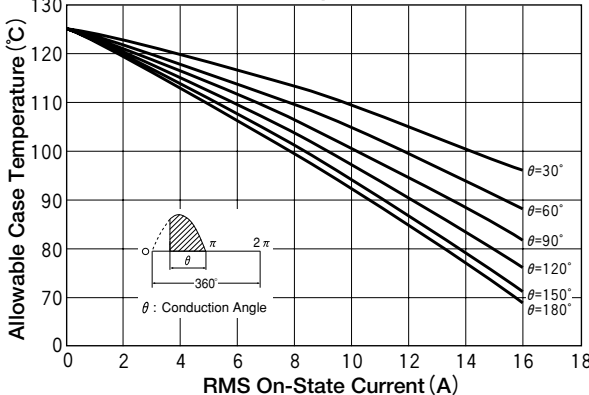
**On-State Voltage**



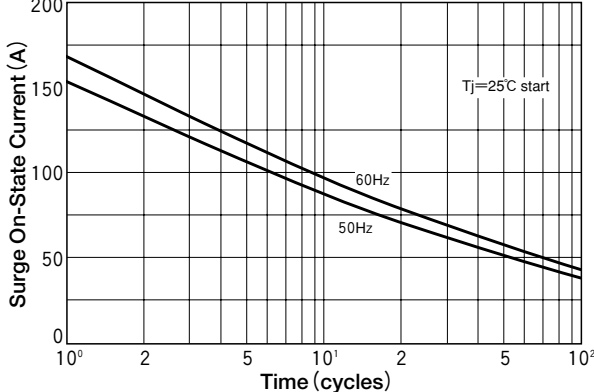
**On State Current vs. Maximum Power Dissipation**



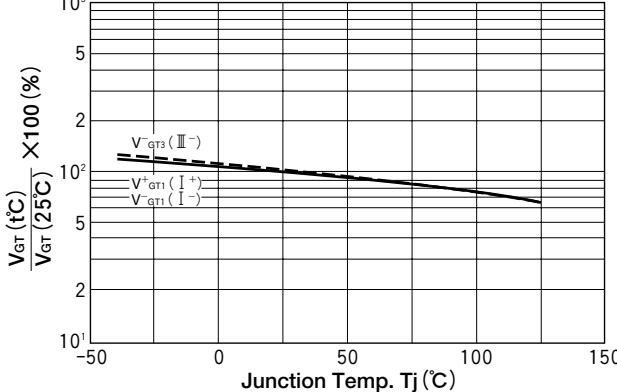
**On State Current vs. Allowable Case Temperature**



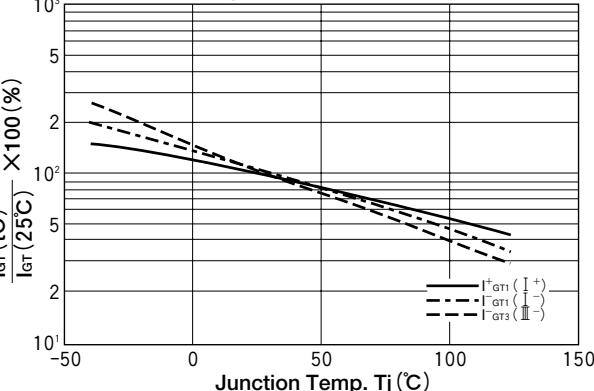
**Surge On-State Current Rating (Non-Repetitive)**



**Gate trigger voltage vs. Junction temperature**



**Gate trigger current vs. Junction temperature**



**Transient Thermal Impedance**

