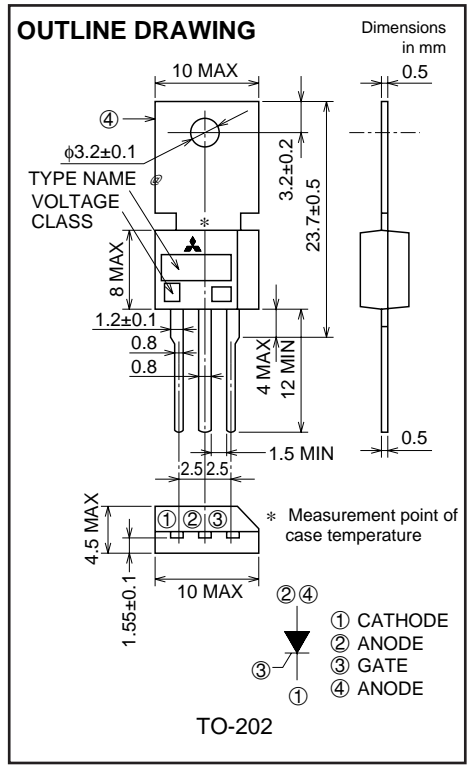
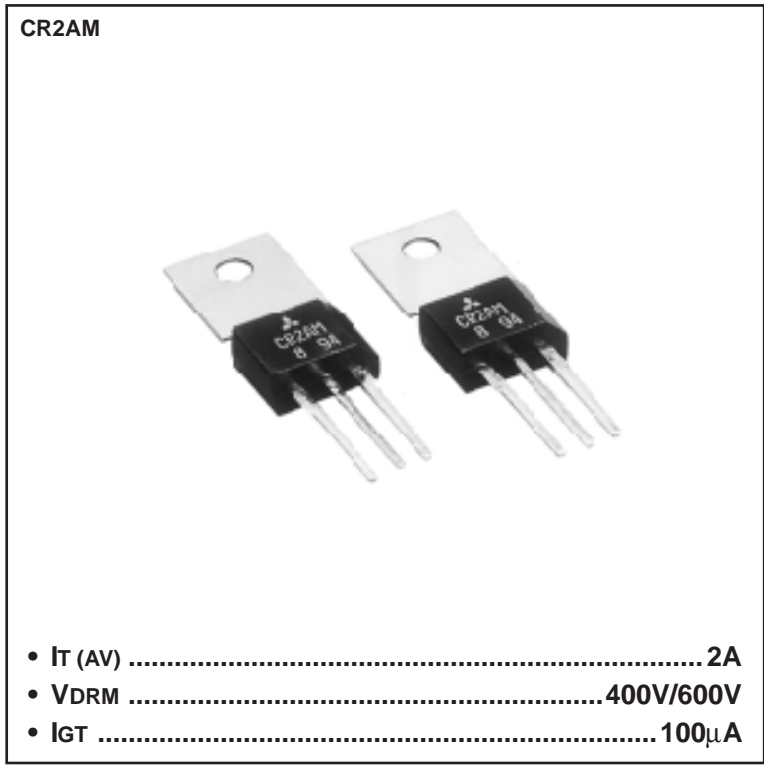


# CR2AM

LOW POWER USE  
NON-INSULATED TYPE, GLASS PASSIVATION TYPE



**APPLICATION**

Control of household equipment such as electric blandets, leakage protector, static switch, other general purpose control applications, ignitors

**MAXIMUM RATINGS**

Symbol	Parameter	Voltage class		Unit
		8	12	
VRRM	Repetitive peak reverse voltage	400	600	V
VRSM	Non-repetitive peak reverse voltage	500	720	V
VR (DC)	DC reverse voltage	320	480	V
VDRM	Repetitive peak off-state voltage *1	400	600	V
VD (DC)	DC off-state voltage *1	320	480	V

Symbol	Parameter	Conditions	Ratings	Unit
$I_T$ (RMS)	RMS on-state current		3.15	A
$I_T$ (AV)	Average on-state current	Commercial frequency, sine half wave, 180° conduction, $T_c=75^\circ\text{C}$	2.0	A
$I_{TSM}$	Surge on-state current	60Hz sine half wave 1 full cycle, peak value, non-repetitive	20	A
$I^2_t$	$I^2_t$ for fusing	Value corresponding to 1 cycle of half wave 60Hz, Surge on-state current	1.6	A <sup>2</sup> s
PGM	Peak gate power dissipation		0.5	W
PG (AV)	Average gate power dissipation		0.1	W
VFGM	Peak gate forward voltage		6	V
VRGM	Peak gate reverse voltage		6	V
IFGM	Peak gate forward current		0.3	A
$T_j$	Junction temperature		-40 ~ +125	°C
$T_{stg}$	Storage temperature		-40 ~ +125	°C
—	Weight	Typical value	1.6	g

\*1. With Gate-to-cathode resistance  $R_{GK}=1k\Omega$



**ELECTRICAL CHARACTERISTICS**

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
IRRM	Repetitive peak reverse current	$T_j=125^{\circ}\text{C}$ , $V_{RRM}$ applied	—	—	0.1	mA
IDRM	Repetitive peak off-state current	$T_j=125^{\circ}\text{C}$ , $V_{DRM}$ applied, $R_{GK}=1\text{k}\Omega$	—	—	0.1	mA
$V_{TM}$	On-state voltage	$T_c=25^{\circ}\text{C}$ , $I_{TM}=4\text{A}$ , Instantaneous value	—	—	1.8	V
$V_{GT}$	Gate trigger voltage	$T_j=25^{\circ}\text{C}$ , $V_D=6\text{V}$ , $I_T=0.1\text{A}$	—	—	0.8	V
$V_{GD}$	Gate non-trigger voltage	$T_j=125^{\circ}\text{C}$ , $V_D=1/2V_{DRM}$ , $R_{GK}=1\text{k}\Omega$	0.2	—	—	V
$I_{GT}$	Gate trigger current	$T_j=25^{\circ}\text{C}$ , $V_D=6\text{V}$ , $I_T=0.1\text{A}$	1	—	100*3	$\mu\text{A}$
$R_{th(j-c)}$	Thermal resistance	Junction to case *2	—	—	10	$^{\circ}\text{C/W}$

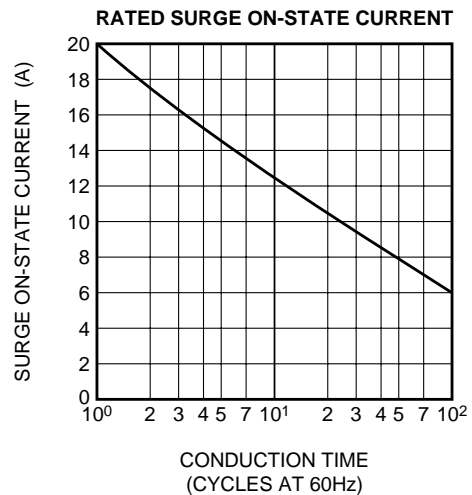
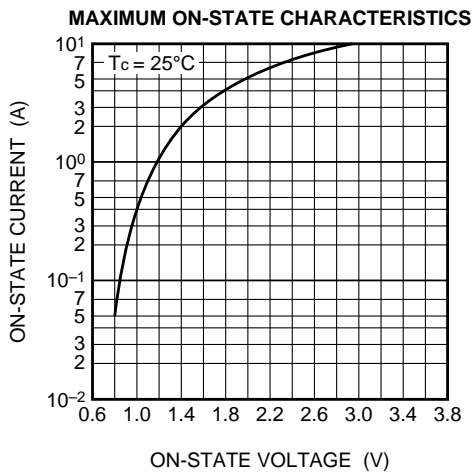
\*2. The method point for case temperature is at the anode tab 1.5mm away from the molded case.

\*3. If special values of  $I_{GT}$  are required, choose at least two items from those listed in the table below. (Example: AB, BC)

Item	A	B	C
$I_{GT}$ ( $\mu\text{A}$ )	1 ~ 30	20 ~ 50	40 ~ 100

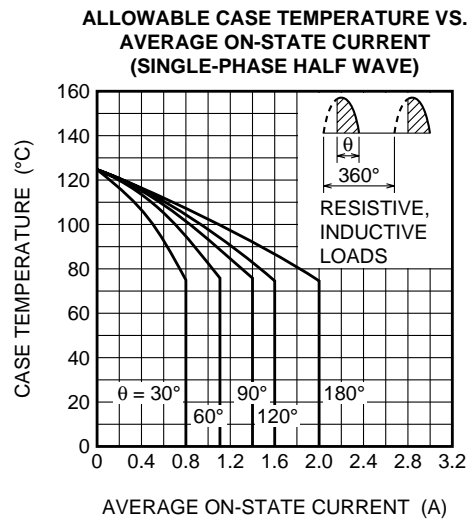
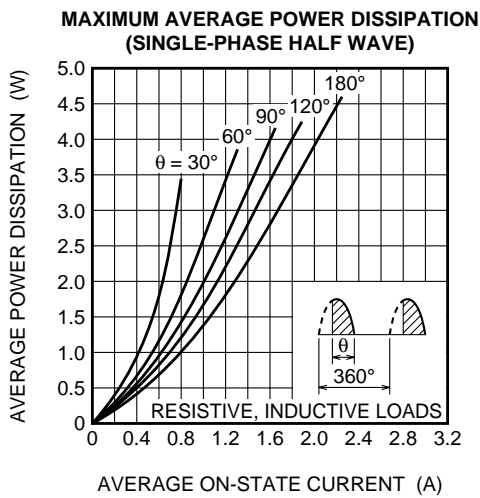
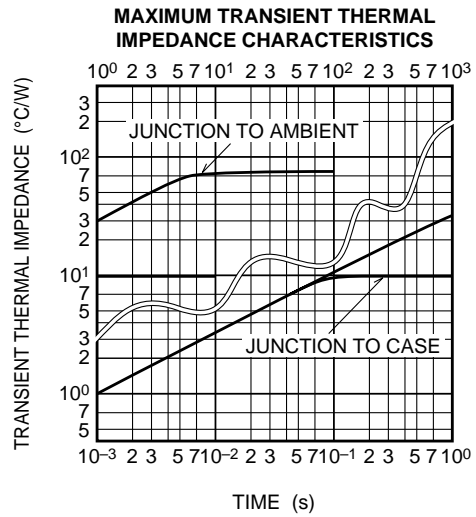
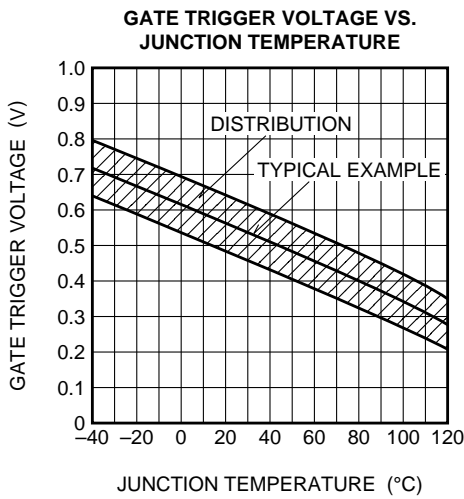
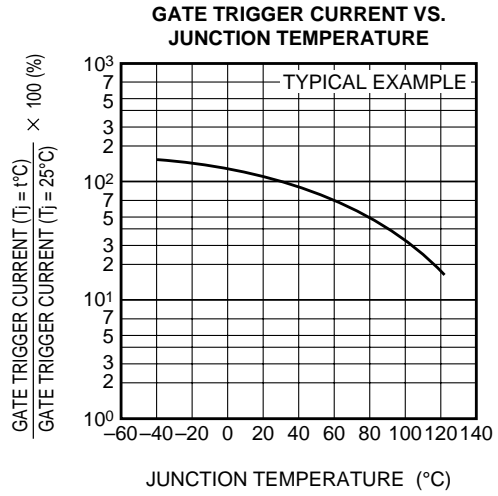
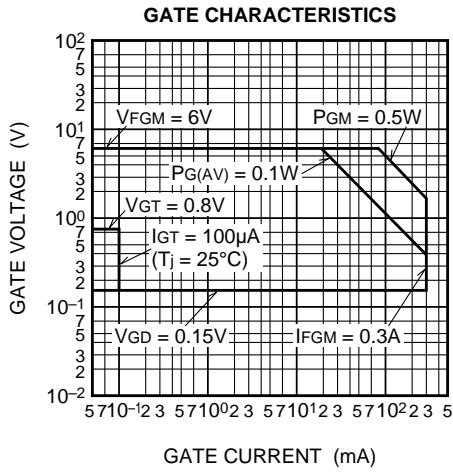
The above values do not include the current flowing through the  $1\text{k}\Omega$  resistance between the gate and cathode.

**PERFORMANCE CURVES**



# CR2AM

LOW POWER USE  
NON-INSULATED TYPE, GLASS PASSIVATION TYPE

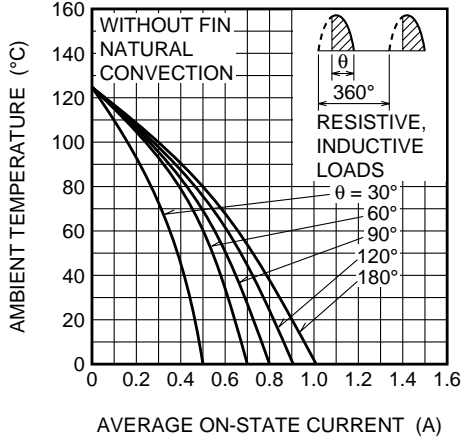


**CR2AM**

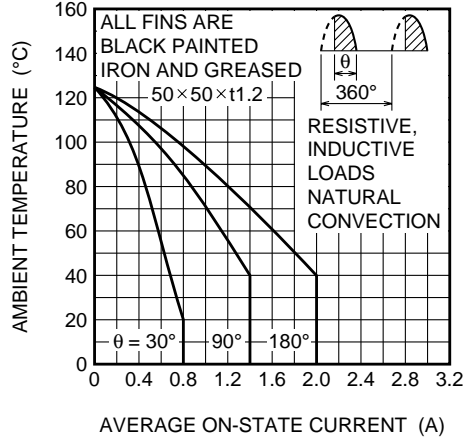
LOW POWER USE

NON-INSULATED TYPE, GLASS PASSIVATION TYPE

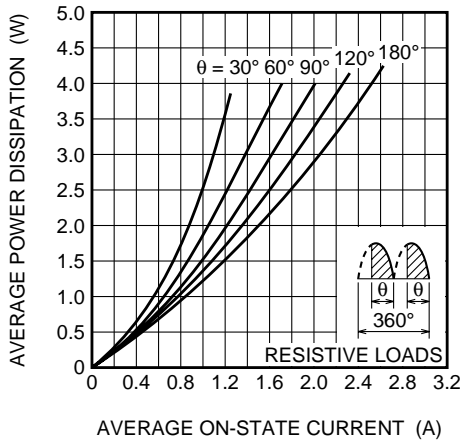
**ALLOWABLE AMBIENT TEMPERATURE VS. AVERAGE ON-STATE CURRENT (SINGLE-PHASE HALF WAVE)**



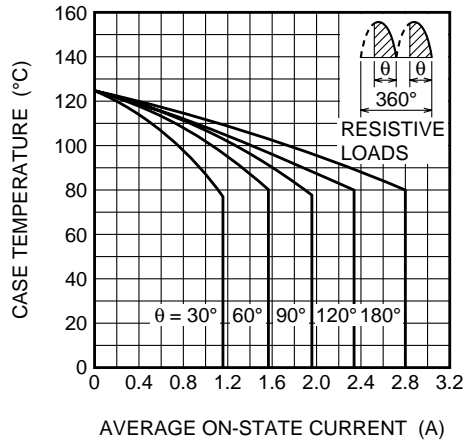
**ALLOWABLE AMBIENT TEMPERATURE VS. AVERAGE ON-STATE CURRENT (SINGLE-PHASE HALF WAVE)**



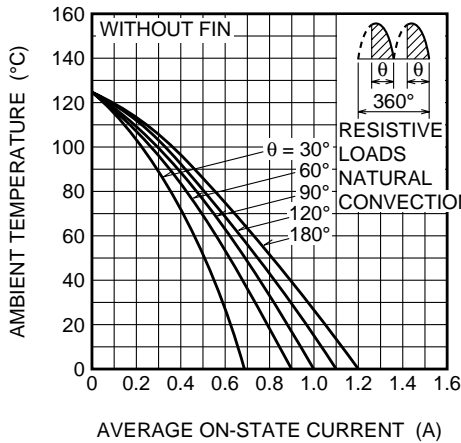
**MAXIMUM AVERAGE POWER DISSIPATION (SINGLE-PHASE FULL WAVE)**



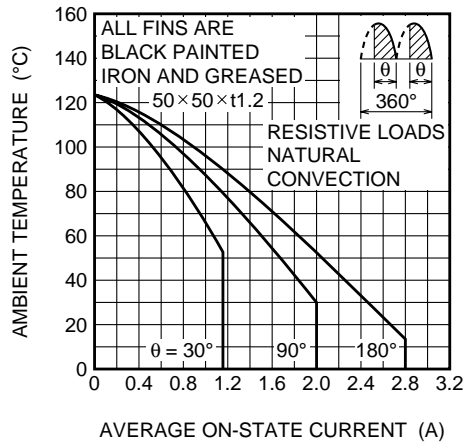
**ALLOWABLE CASE TEMPERATURE VS. AVERAGE ON-STATE CURRENT (SINGLE-PHASE FULL WAVE)**



**ALLOWABLE AMBIENT TEMPERATURE VS. AVERAGE ON-STATE CURRENT (SINGLE-PHASE FULL WAVE)**



**ALLOWABLE AMBIENT TEMPERATURE VS. AVERAGE ON-STATE CURRENT (SINGLE-PHASE FULL WAVE)**

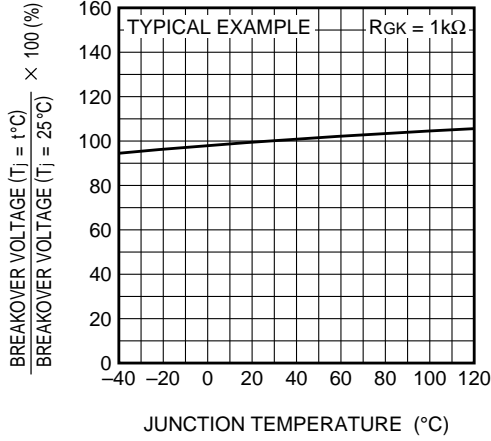


# CR2AM

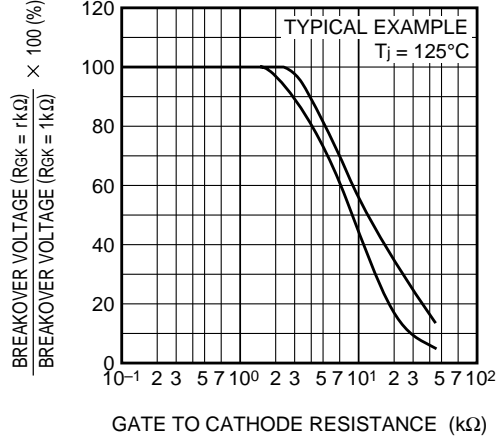
LOW POWER USE

NON-INSULATED TYPE, GLASS PASSIVATION TYPE

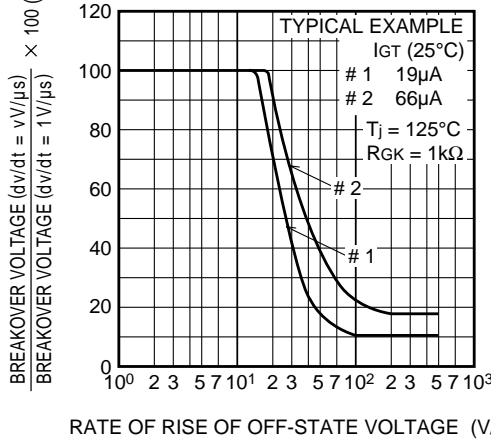
**BREAKOVER VOLTAGE VS. JUNCTION TEMPERATURE**



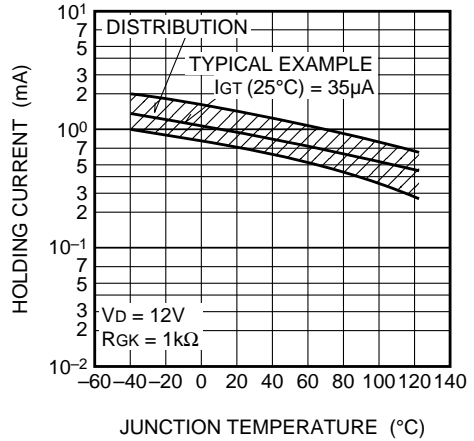
**BREAKOVER VOLTAGE VS. GATE TO CATHODE RESISTANCE**



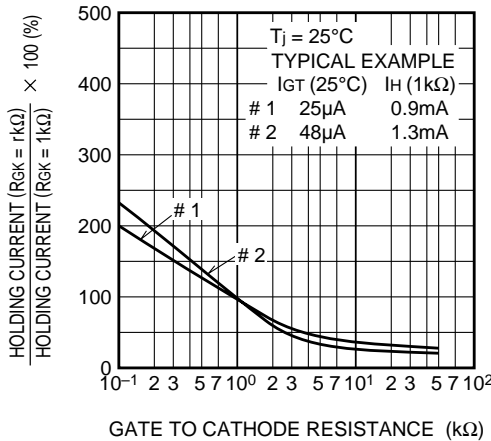
**BREAKOVER VOLTAGE VS. RATE OF RISE OF OFF-STATE VOLTAGE**



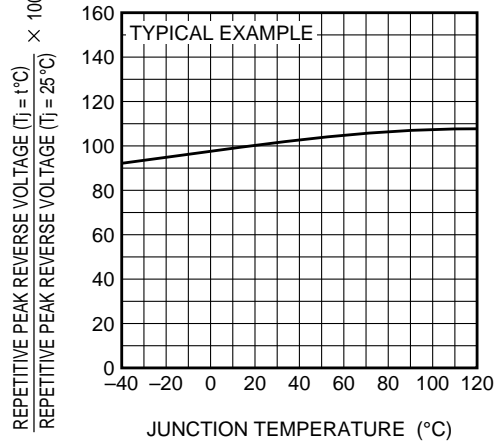
**HOLDING CURRENT VS. JUNCTION TEMPERATURE**



**HOLDING CURRENT VS. GATE TO CATHODE RESISTANCE**



**REPETITIVE PEAK REVERSE VOLTAGE VS. JUNCTION TEMPERATURE**



# CR2AM

LOW POWER USE  
NON-INSULATED TYPE, GLASS PASSIVATION TYPE

