

CR2AM

LOW POWER USE

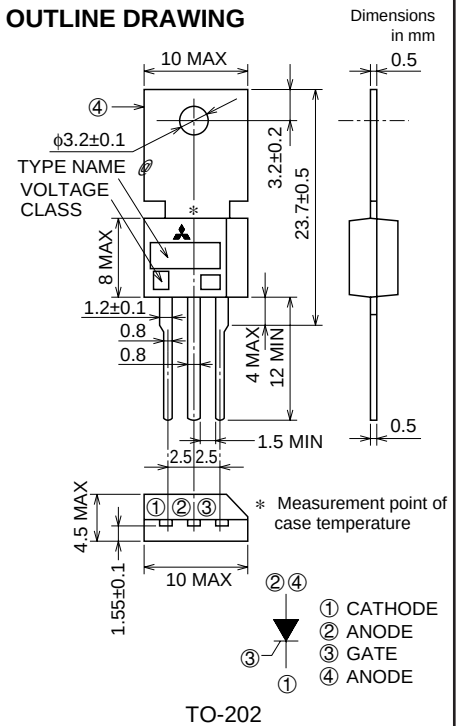
NON-INSULATED TYPE, GLASS PASSIVATION TYPE

CR2AM



- I_T (AV) 2A
- V_{DRM} 400V/600V
- I_{GT} 100 μ A

OUTLINE DRAWING



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	
V_{RRM}	Repetitive peak reverse voltage	400	600	V
V_{RSM}	Non-repetitive peak reverse voltage	500	720	V
V_R (DC)	DC reverse voltage	320	480	V
V_{DRM}	Repetitive peak off-state voltage *1	400	600	V
V_D (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 ² s
PGM	Peak gate power dissipation		0.5	W
PG (AV)	Average gate power dissipation		0.1	W
V_{FGM}	Peak gate forward voltage		6	V
V_{RGM}	Peak gate reverse voltage		6	V
I_{FGM}	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 $R_{GK}=1k\Omega$

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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}	μA
$R_{th(j-c)}$	Thermal resistance	Junction to case ^{*2}	—	—	10	$^{\circ}\text{C/W}$

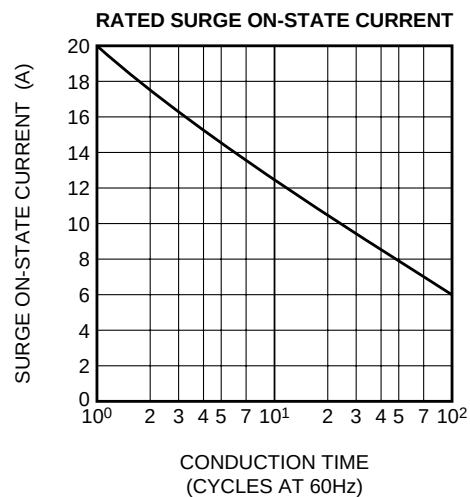
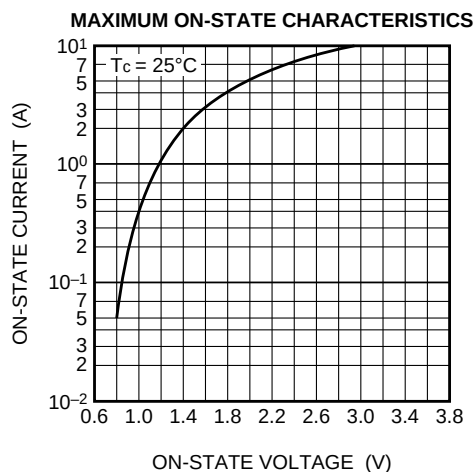
*2. The method point for case temperature is at the anode tab 1.5mm away from the molded case.

*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} (μA)	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

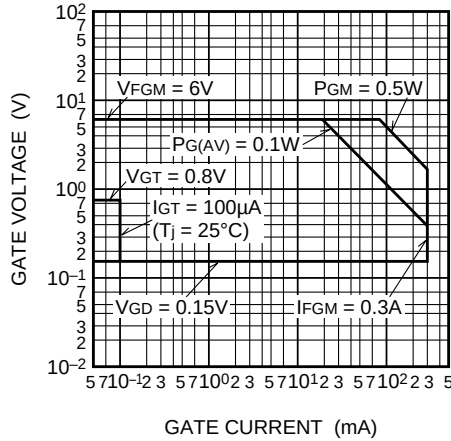


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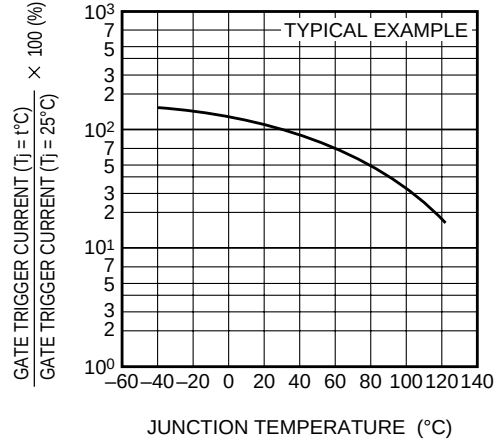
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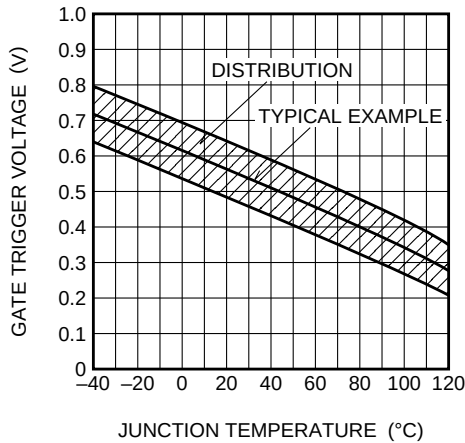
GATE CHARACTERISTICS



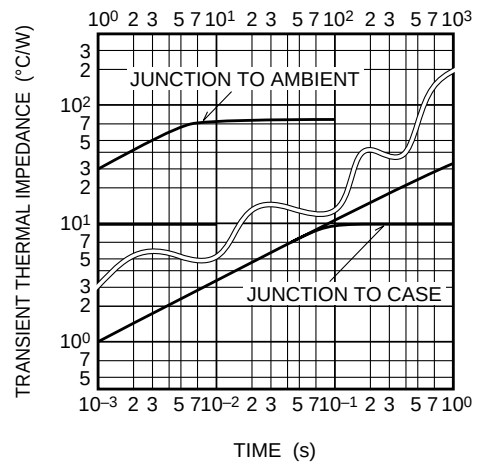
GATE TRIGGER CURRENT VS. JUNCTION TEMPERATURE



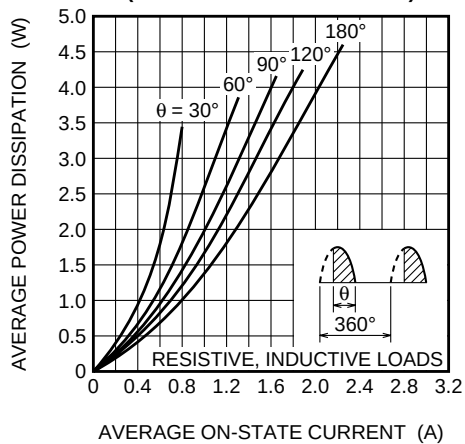
GATE TRIGGER VOLTAGE VS. JUNCTION TEMPERATURE



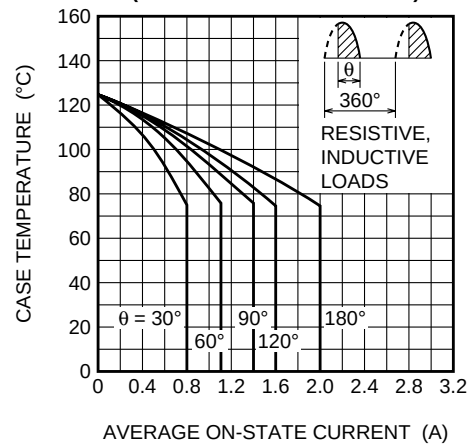
MAXIMUM TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS



MAXIMUM AVERAGE POWER DISSIPATION (SINGLE-PHASE HALF WAVE)



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

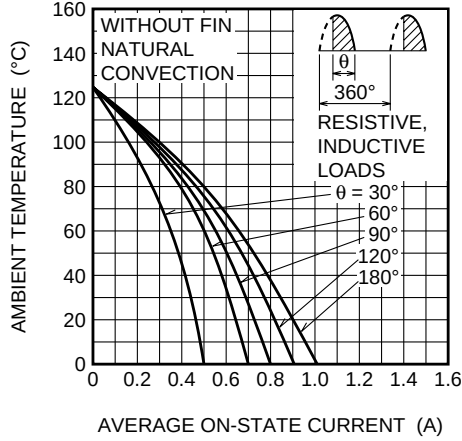


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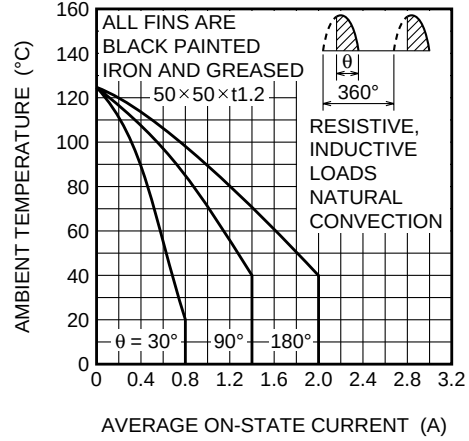
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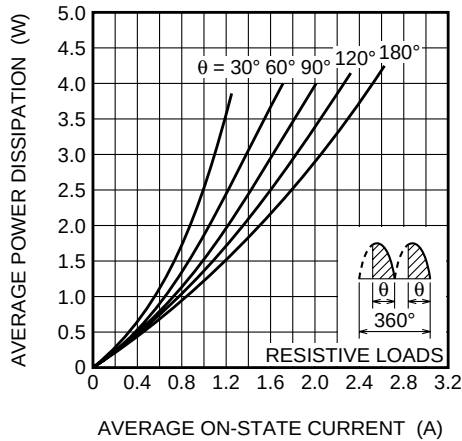
ALLOWABLE AMBIENT TEMPERATURE VS.
AVERAGE ON-STATE CURRENT
(SINGLE-PHASE HALF WAVE)



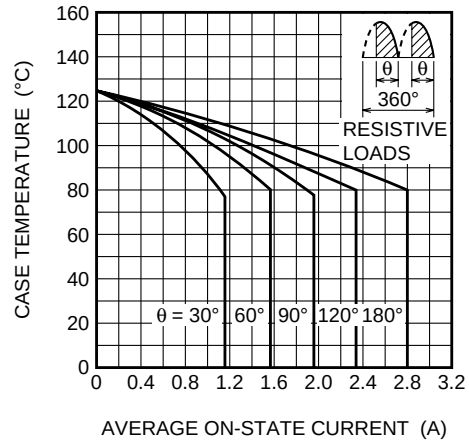
ALLOWABLE AMBIENT TEMPERATURE VS.
AVERAGE ON-STATE CURRENT
(SINGLE-PHASE HALF WAVE)



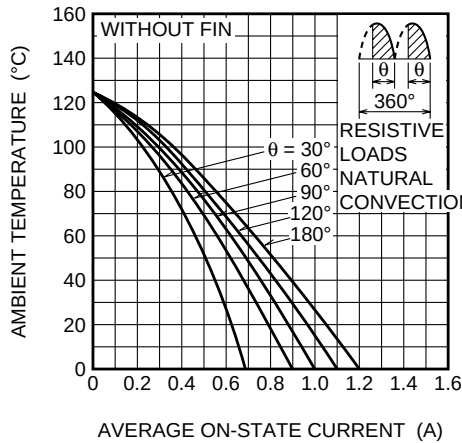
MAXIMUM AVERAGE POWER DISSIPATION
(SINGLE-PHASE FULL WAVE)



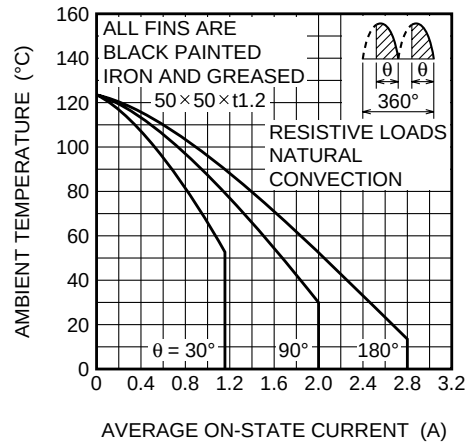
ALLOWABLE CASE TEMPERATURE VS.
AVERAGE ON-STATE CURRENT
(SINGLE-PHASE FULL WAVE)



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



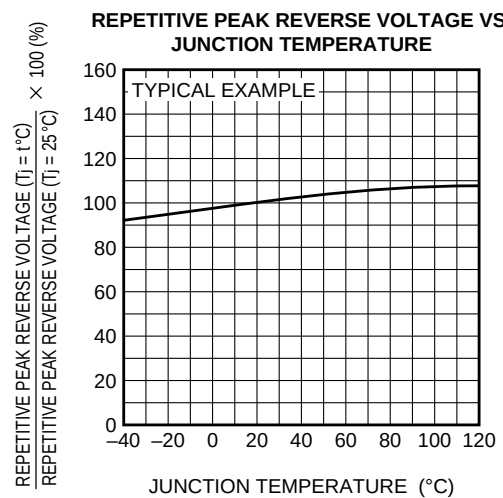
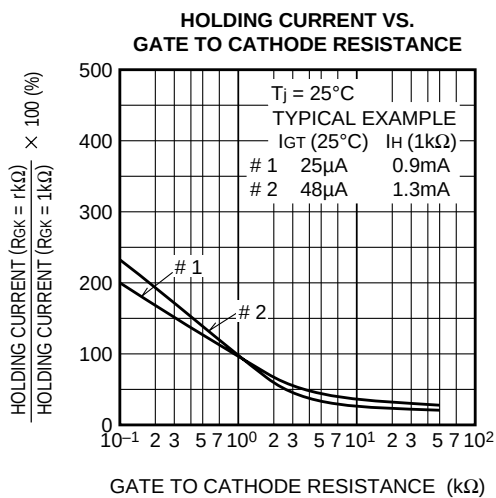
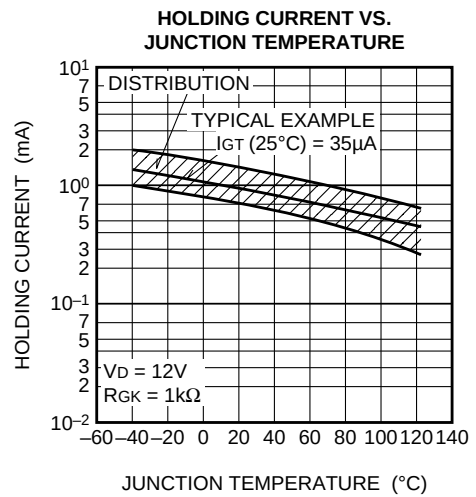
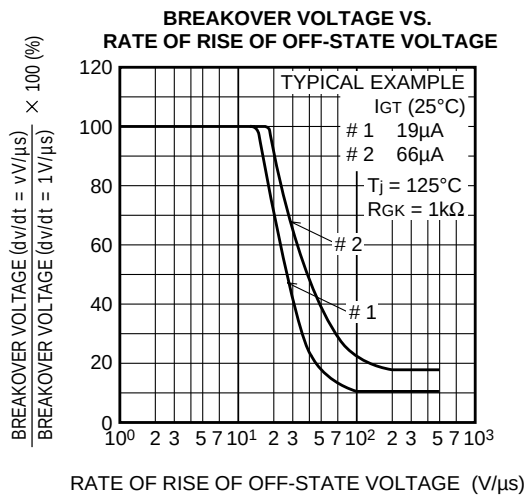
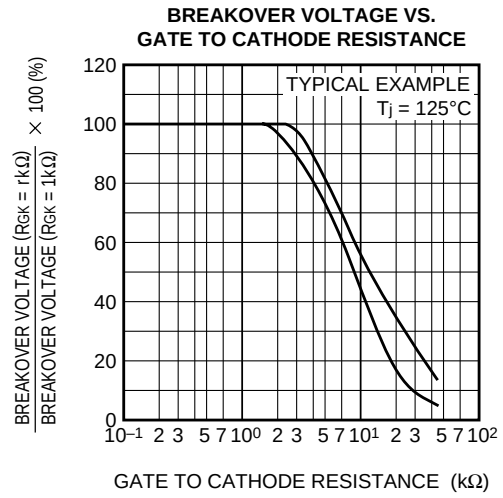
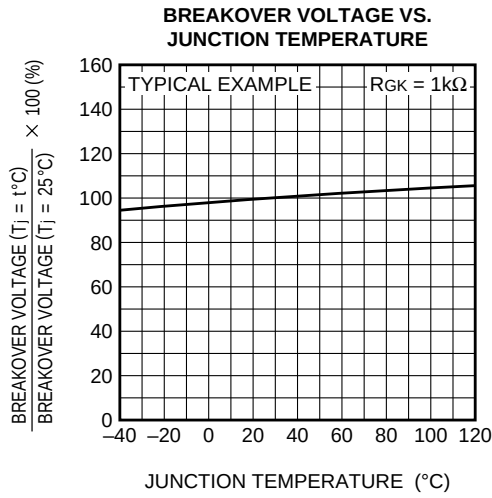
ALLOWABLE AMBIENT TEMPERATURE VS.
AVERAGE ON-STATE CURRENT
(SINGLE-PHASE FULL WAVE)



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