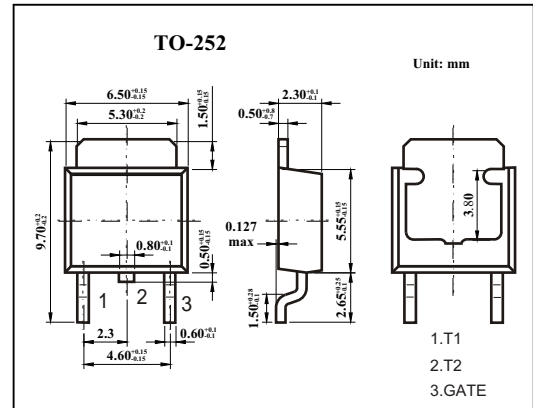
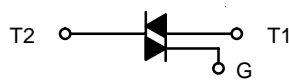


Silicon Bidirectional Thyristors

CR3AM

■ Features

- Blocking voltage to 400 V
- General purpose bidirectional switching

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Repetitive peak off-state voltages	V_{DRM}, V_{RRM}	400	V
RMS on-state current	$I_{T(RMS)}$	3	A
Non-repetitive peak on-state current	I_{TSM}	30	A
Circuit Fusing Considerations ($t = 8.3$ ms)	I^2t	3.7	A^2s
Peak Gate Voltage	V_{GM}	6	V
Average Gate Power	$P_{G(AV)}$	0.3	W
Peak Gate Power	P_{GM}	3	W
Peak Gate Current	I_{GM}	0.5	A
Operating Junction Temperature Range	T_J	-40 to 125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-40 to 150	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

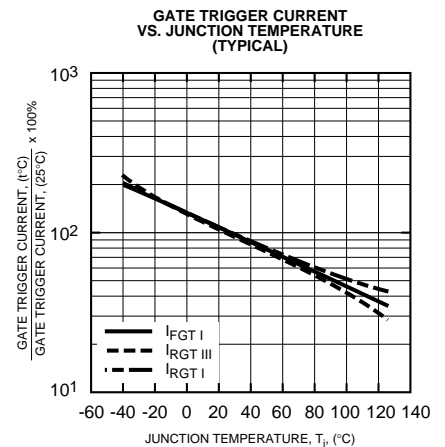
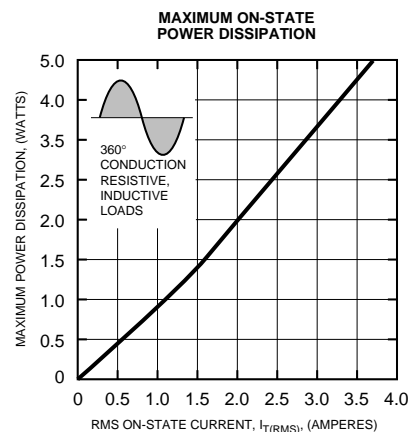
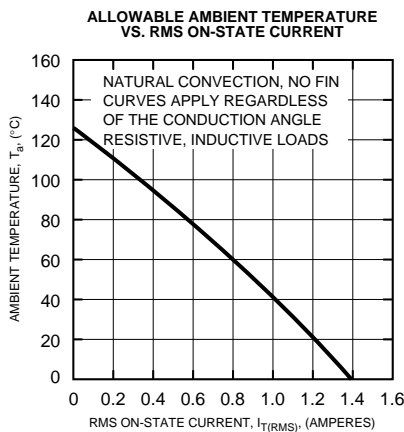
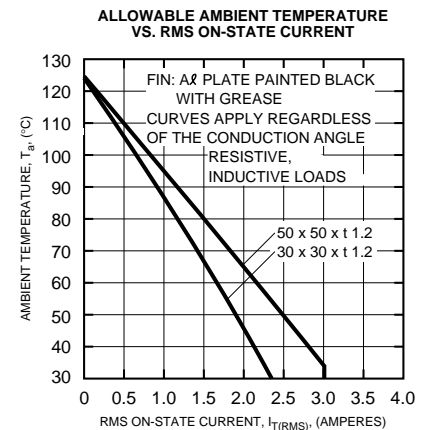
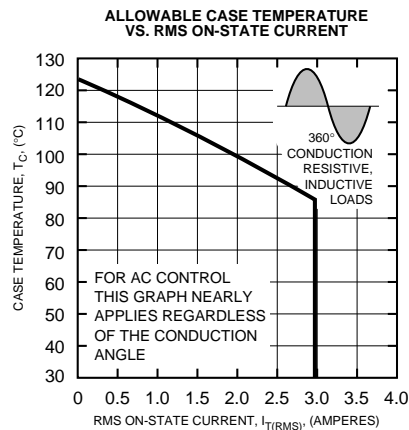
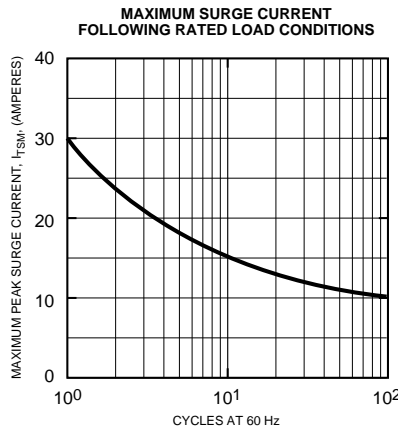
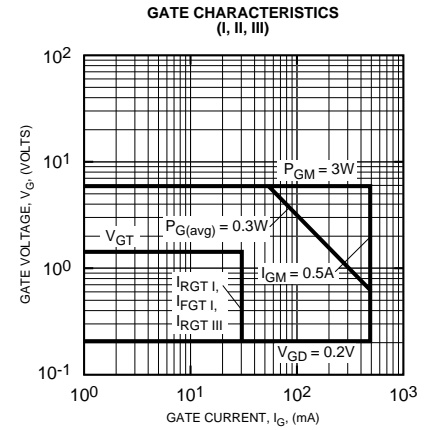
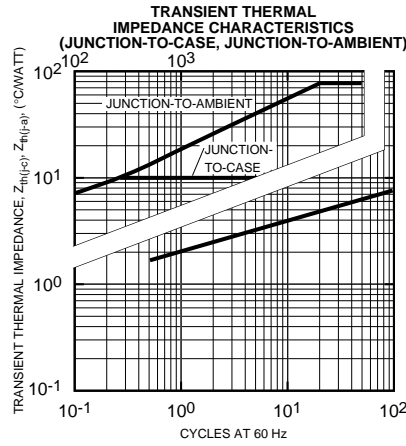
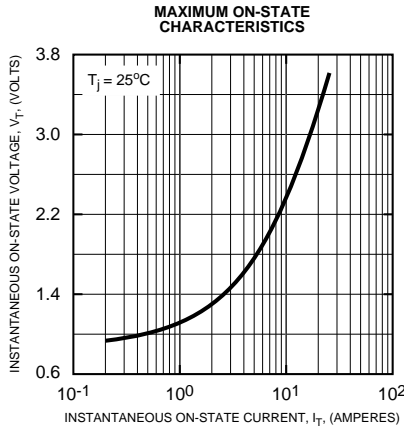
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Peak Repetitive Blocking Current	I_{DRM}, I_{RRM}	$V_D = \text{Rated } V_{DRM}, V_{RRM}; \text{Gate Open}$			2	mA
Peak On-State Voltage	V_{TM}	$I_T = 4.5$ A			1.5	V
Gate trigger current	I_{GT}	$T_2(+), G(+)$	$V_D = 6$ V, $R_L = 6 \Omega$ $R_G = 330 \Omega$		30	mA
		$T_2(+), G(-)$		30	mA	
		$T_2(-), G(-)$		30	mA	
		$T_2(-), G(+)$		-	mA	
Gate trigger voltage	V_{GT}	$T_2(+), G(+)$	$V_D = 6$ V, $R_L = 6 \Omega$ $R_G = 330 \Omega$		1.5	V
		$T_2(+), G(-)$		1.5	V	
		$T_2(-), G(-)$		1.5	V	
		$T_2(-), G(+)$		-	V	
DC Gate Non-trigger Voltage	V_{GD}	$V_D = 1/2 V_{DRM}$	0.2			V

■ Marking

Marking	CR3AM

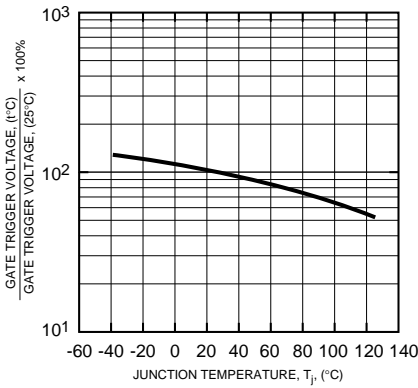
CR3AM

Typical Characteristics

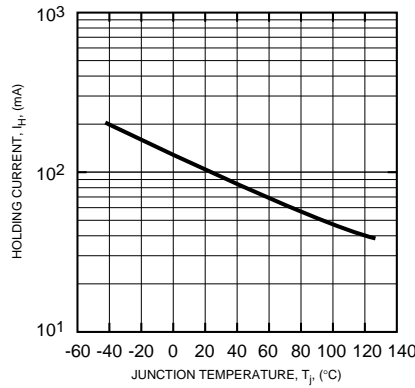


CR3AM

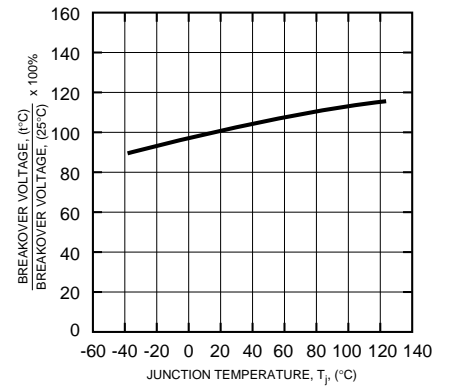
GATE TRIGGER VOLTAGE VS. JUNCTION TEMPERATURE (TYPICAL)



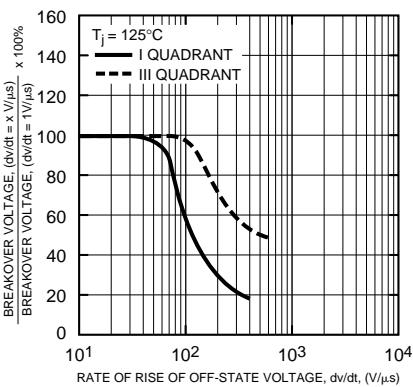
HOLDING CURRENT VS. JUNCTION TEMPERATURE (TYPICAL)



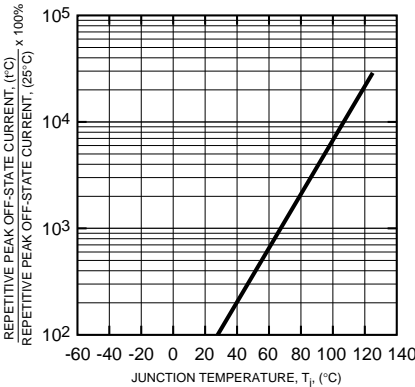
BREAKOVER VOLTAGE VS. JUNCTION TEMPERATURE (TYPICAL)



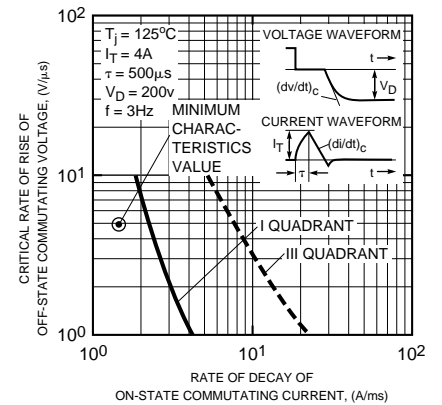
BREAKOVER VOLTAGE VS. RATE OF RISE OF OFF-STATE VOLTAGE (TYPICAL)



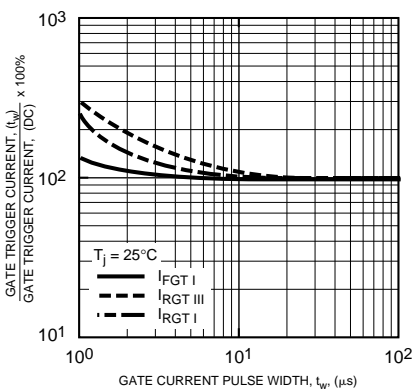
REPETITIVE PEAK OFF-STATE CURRENT VS. JUNCTION TEMPERATURE (TYPICAL)



COMMUTATION CHARACTERISTICS (TYPICAL)



GATE TRIGGER CURRENT VS. GATE CURRENT PULSE WIDTH (TYPICAL)



GATE TRIGGER CHARACTERISTICS TEST CIRCUITS

