

**Sensitive Gate Triacs
Silicon Bidirectional Thyristors**

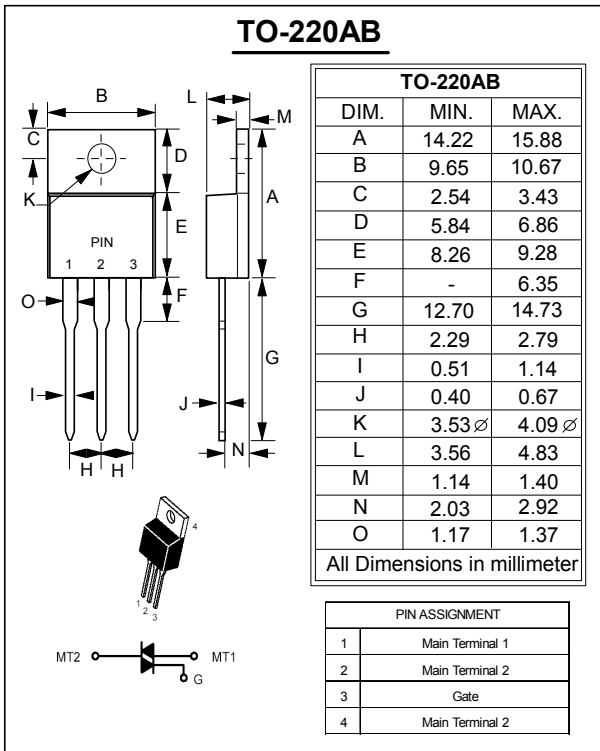
**TRIACS
16 AMPERES RMS
600 VOLTS**

FEATURES

- Blocking Voltage to 600 Volts
- All Diffused and Glass Passivated Junctions for Greater Parameter Uniformity and Stability
- Small, Rugged, Thermowatt Construction for Low Thermal Resistance, High Heat Dissipation and Durability
- Gate Triggering Guaranteed in Four Modes

MECHANICAL DATA

- Case: Molded plastic
- Weight: 0.07 ounces, 2.0 grams



MAXIMUM RATINGS (T_J= 25°C unless otherwise noticed)

Rating	Symbol	Value	Unit
Peak Repetitive Off- State Voltage (1) (T _J = -40 to 125°C, Sine Wave, 50 to 60 Hz; Gate Open)	V _{DRM} , V _{VRRM}	600	Volts
On-State RMS Current (T _c = +85°C) Full Cycle Sine Wave 50 to 60 Hz	I _{T(RMS)}	16	Amp
Peak Non-Repetitive Surge Current (One Full Cycle Sine Wave, 60 Hz, T _J = 25°C) Preceded and followed by rated current.	I _{TSM}	150	Amps
Circuit Fusing Consideration (t = 8.3 ms)	I ² t	93	A ² s
Peak Gate Power (T _c = +80°C, T _p ≤ 1.0 us)	P _{GM}	20	Watt
Average Gate Power (T _c = +80°C, t=8.3 ms)	P _{G(AV)}	0.5	Watt
Operating Junction Temperature Range	T _J	-40 to +125	°C
Storage Temperature Range	T _{stg}	-40 to +150	°C

Notice: (1) V_{DRM} and V_{VRRM} for all types can be applied on a continuous basis. Blocking voltages shall not be tested with a constant current source such that the voltage ratings of the devices are exceeded.

REV. 2, Mar-2010, KTXC32

THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Thermal Resistance - Junction to Case - Junction to Ambient	R _{thJC} R _{thJA}	2.5 62.5	°C/W
Maximum Lead Temperature for Soldering Purposes 1/8" from Case for 10 Seconds	TL	260	°C

ELECTRICAL CHARACTERISTICS (T_J=25°C unless otherwise noted, Electrical apply in both directions)

Characteristics	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Peak Repetitive Forward or Reverse Blocking Current (V _D =Rated V _{DRM} , V _{RRM} ; Gate Open)	T _J =25°C	I _{DRM}	---	---	10	uA
	T _J =125°C	I _{RRM}	---	---	2.0	mA

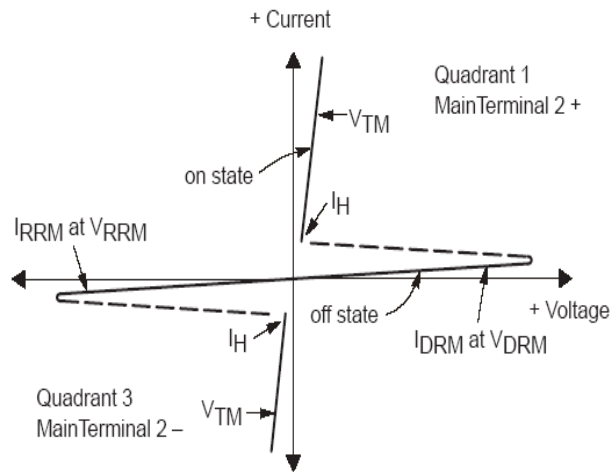
ON CHARACTERISTICS

Peak On-State Voltage (I _{TM} =± 21 A Peak @T _p ≤ 2.0 ms, Duty Cycle ≤ 2%)	V _{TM}	---	1.3	1.6	Volts
Gate Trigger Current (V _D = 12Vdc; R _L = 100 Ohms)	I _{GT1}	---	---	25	mA
	I _{GT2}	---	---	25	
	I _{GT3}	---	---	25	
	I _{GT4}	---	---	50	
Gate Trigger Voltage (V _D = 12 Vdc; R _L =100 Ohms)	V _{GT1}	---	1	2	Volts
	V _{GT2}	---	1	2	
	V _{GT3}	---	1	2	
	V _{GT4}	---	1.25	2.5	
Holding Current (V _D = 12 Vdc,R _L = 100 Ohms)	I _{H1}	---	---	30	mA
	I _{H2}	---	---	30	
	I _{H3}	---	---	30	
	I _{H4}	---	---	30	
Latching Current (V _D =12 Vdc,R _L = 100 Ohms)	I _{L1}	---	---	30	mA
	I _{L2}	---	---	60	
	I _{L3}	---	---	30	
	I _{L4}	---	---	30	

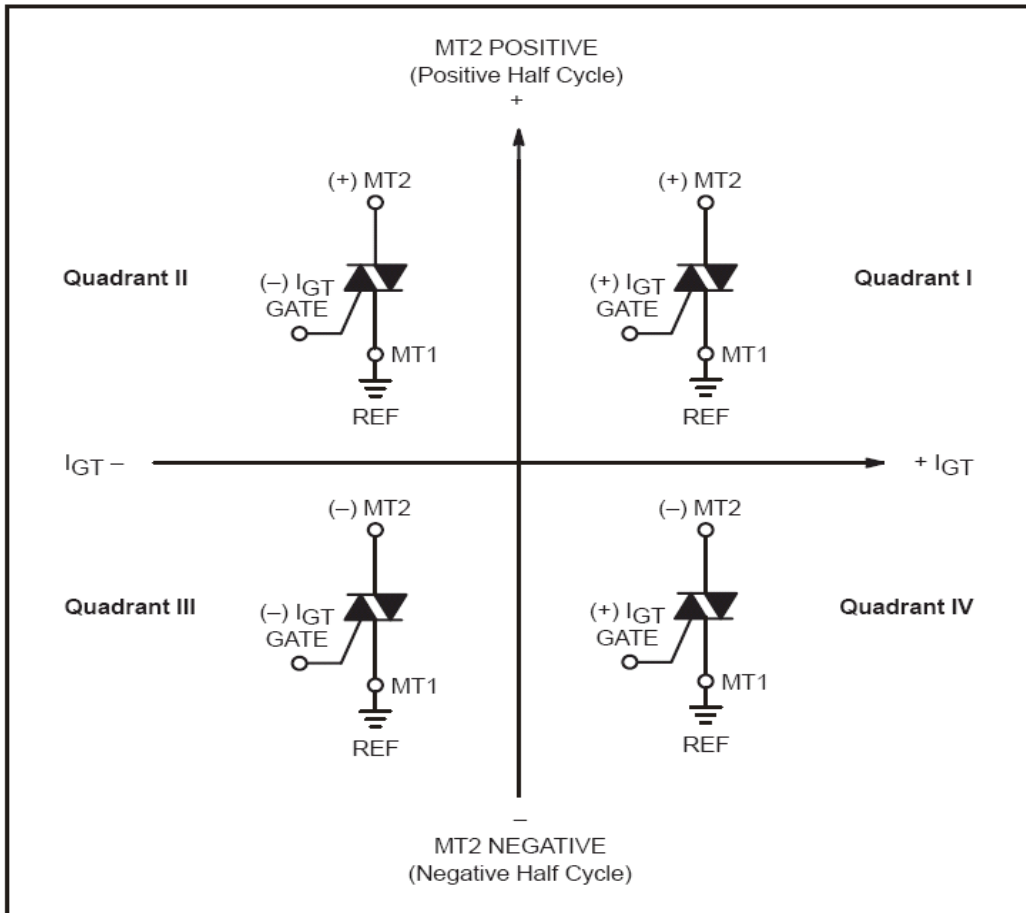
DYNAMIC CHARACTERISTICS

Critical Rate of Rise of off-state Voltage (V _D = 0.67% Rated V _{DRM} , Exponential Waveform ,T _J =125 °C, Gate Open)	dv/dt	250	---	---	V/us
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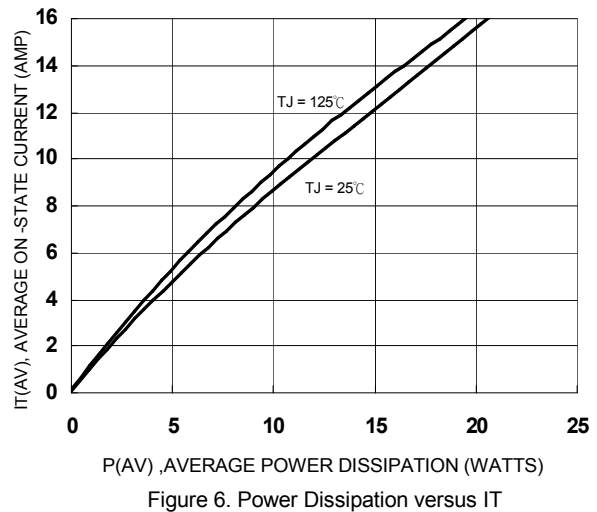
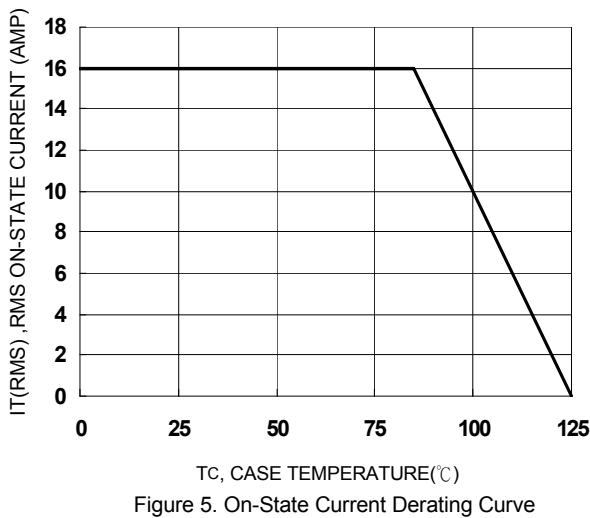
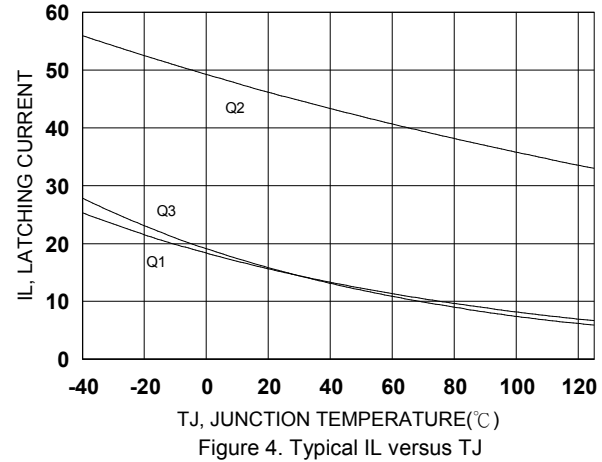
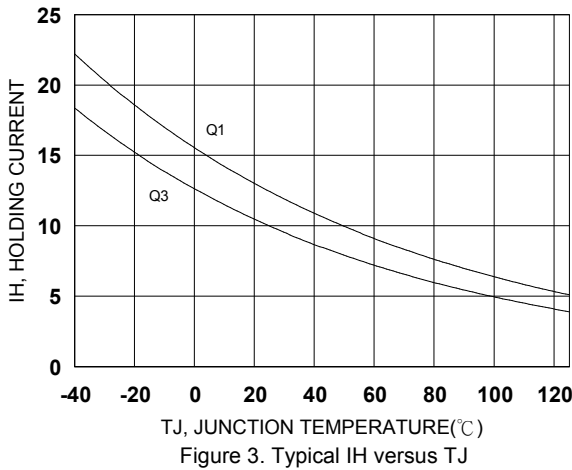
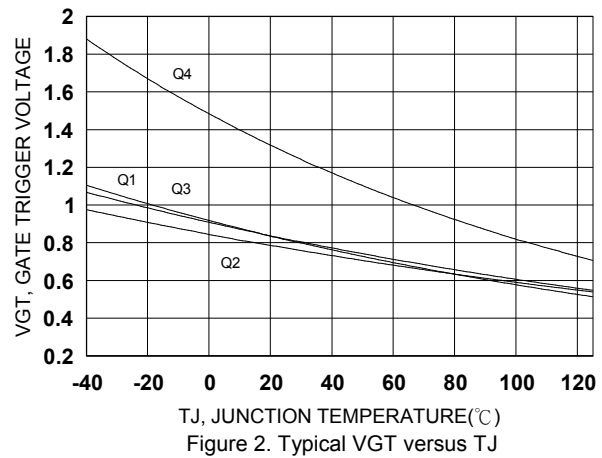
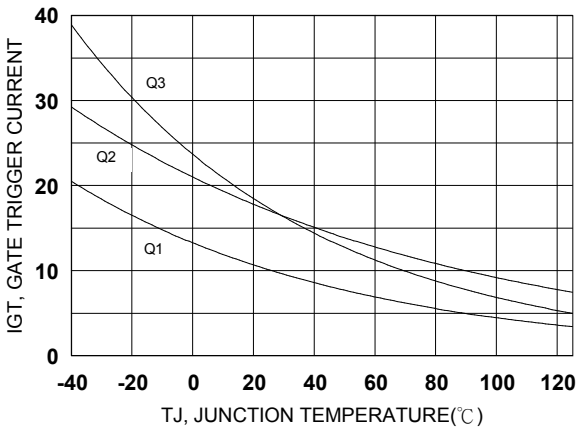
Symbol	Parameter
V_{DRM}	Peak Repetitive Forward Off State Voltage
I_{DRM}	Peak Forward Blocking Current
V_{RRM}	Peak Repetitive Reverse Off State Voltage
I_{RRM}	Peak Reverse Blocking Current
V_{TM}	Maximum On State Voltage
I_H	Holding Current



Quadrant Definitions



All polarities are referenced to MT1
 Which in -phase signal (using standard AC lines) quadrants I and III are used



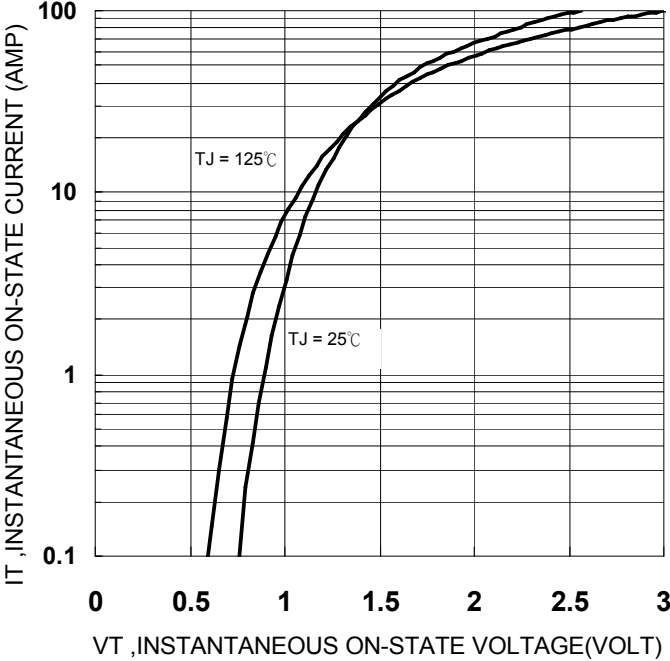


Figure 7. On-State Characteristics

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