

electrical characteristics at 25°C case temperature (unless otherwise noted)

PARAMETER		TEST CONDITIONS			MIN	TYP	MAX	UNIT
I_{DRM}	Repetitive peak off-state current	$V_D = \text{rated } V_{DRM}$	$R_{GK} = 1 \text{ k}\Omega$	$T_C = 110^\circ\text{C}$			400	μA
I_{RRM}	Repetitive peak reverse current	$V_R = \text{rated } V_{RRM}$	$I_G = 0$	$T_C = 110^\circ\text{C}$			1	mA
I_{GT}	Gate trigger current	$V_{AA} = 12 \text{ V}$	$R_L = 100 \Omega$	$t_{p(g)} \geq 20 \mu\text{s}$		5	200	μA
V_{GT}	Gate trigger voltage	$V_{AA} = 12 \text{ V}$	$R_L = 100 \Omega$	$T_C = -40^\circ\text{C}$			1.2	V
		$t_{p(g)} \geq 20 \mu\text{s}$	$R_{GK} = 1 \text{ k}\Omega$					
		$V_{AA} = 12 \text{ V}$	$R_L = 100 \Omega$		0.4	0.6	1	
		$t_{p(g)} \geq 20 \mu\text{s}$	$R_{GK} = 1 \text{ k}\Omega$					
		$V_{AA} = 12 \text{ V}$	$R_L = 100 \Omega$	$T_C = 110^\circ\text{C}$	0.2			
		$t_{p(g)} \geq 20 \mu\text{s}$	$R_{GK} = 1 \text{ k}\Omega$					
I_H	Holding current	$V_{AA} = 12 \text{ V}$	$R_{GK} = 1 \text{ k}\Omega$	$T_C = -40^\circ\text{C}$			8	mA
		Initiating $I_T = 10 \text{ mA}$						
		$V_{AA} = 12 \text{ V}$	$R_{GK} = 1 \text{ k}\Omega$				5	
		Initiating $I_T = 10 \text{ mA}$						
V_T	Peak on-state voltage	$I_T = 5 \text{ A}$	(See Note 6)				1.7	V
dv/dt	Critical rate of rise of off-state voltage	$V_D = \text{rated } V_D$	$R_{GK} = 1 \text{ k}\Omega$	$T_C = 110^\circ\text{C}$		10		V/ μs

NOTE 6: This parameter must be measured using pulse techniques, $t_p = 300 \mu\text{s}$, duty cycle $\leq 2\%$. Voltage sensing-contacts, separate from the current carrying contacts, are located within 3.2 mm from the device body.

thermal characteristics

PARAMETER		MIN	TYP	MAX	UNIT
$R_{\theta JC}$	Junction to case thermal resistance			3.5	$^\circ\text{C/W}$
$R_{\theta JA}$	Junction to free air thermal resistance			62.5	$^\circ\text{C/W}$



THERMAL INFORMATION

AVERAGE ANODE ON-STATE CURRENT
DERATING CURVE

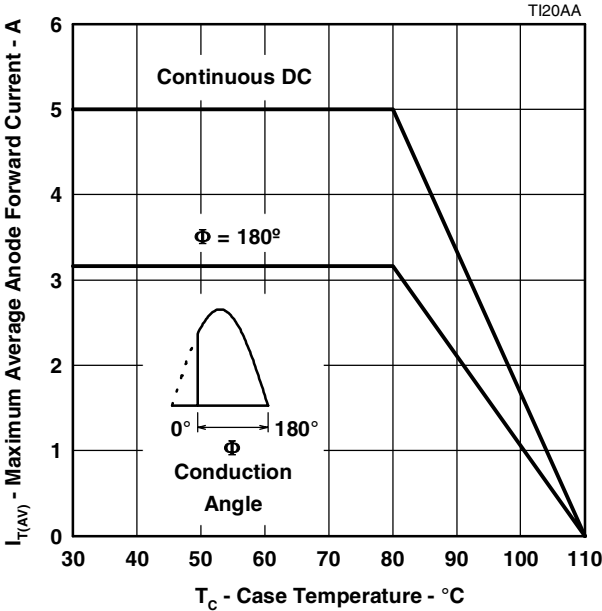


Figure 1.

ANODE POWER DISSIPATED
VS
ON-STATE CURRENT

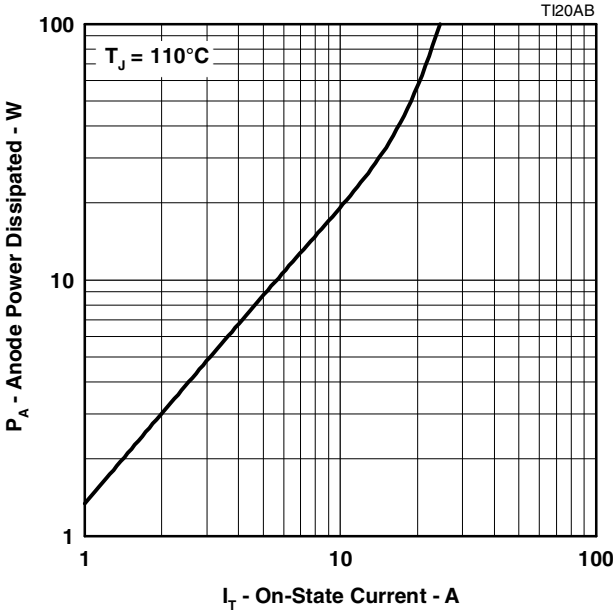


Figure 2.

SURGE ON-STATE CURRENT
VS
CYCLES OF CURRENT DURATION

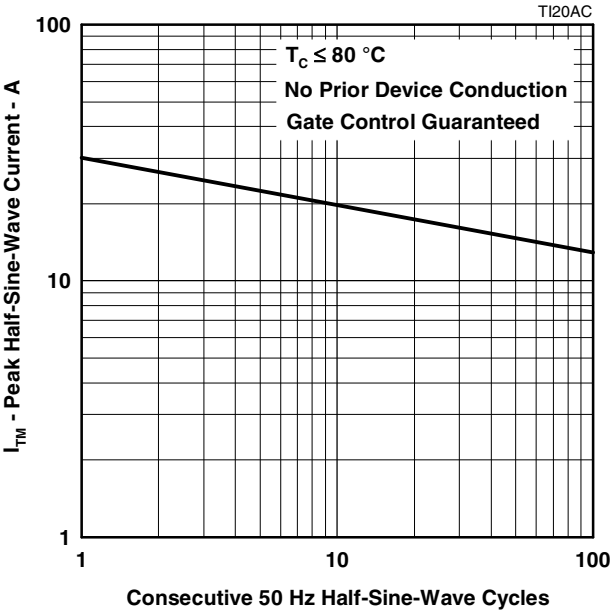


Figure 3.

TRANSIENT THERMAL RESISTANCE
VS
CYCLES OF CURRENT DURATION

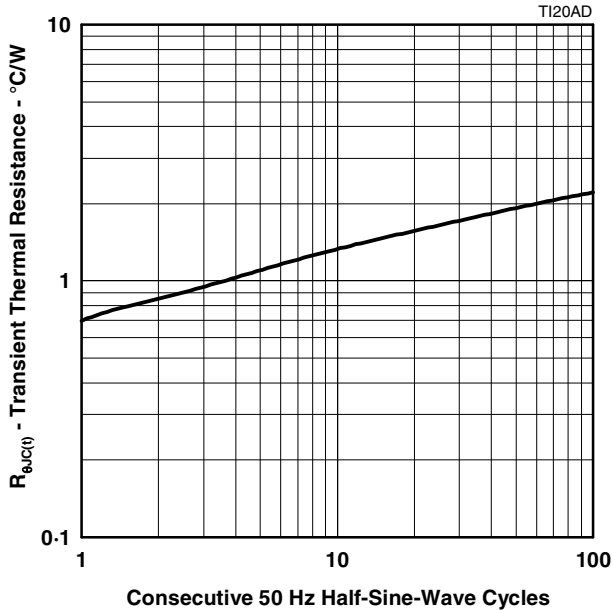


Figure 4.

PRODUCT INFORMATION

TYPICAL CHARACTERISTICS

GATE TRIGGER VOLTAGE
vs

CASE TEMPERATURE

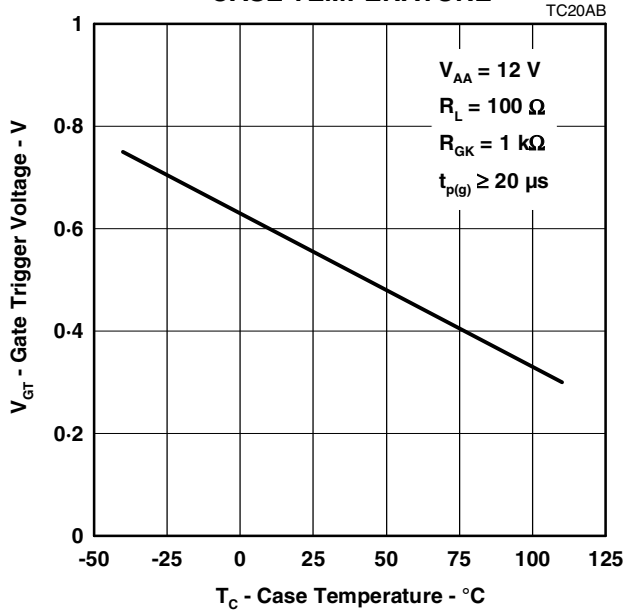


Figure 5.

HOLDING CURRENT
vs

CASE TEMPERATURE

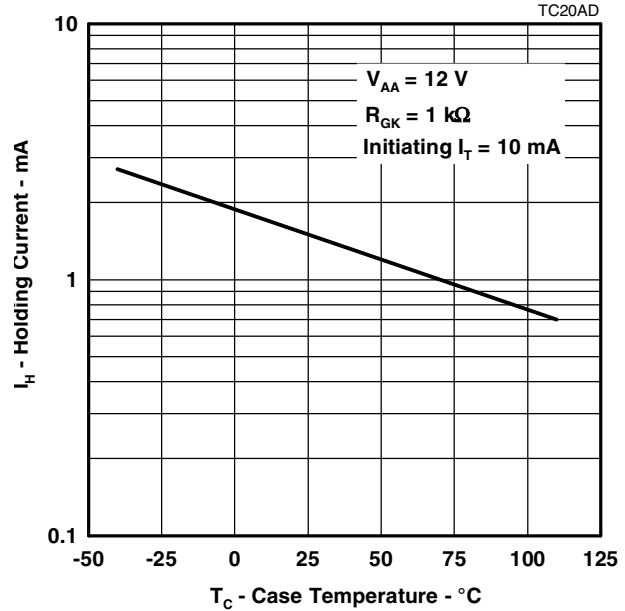


Figure 6.

PEAK ON-STATE VOLTAGE
vs
PEAK ON-STATE CURRENT

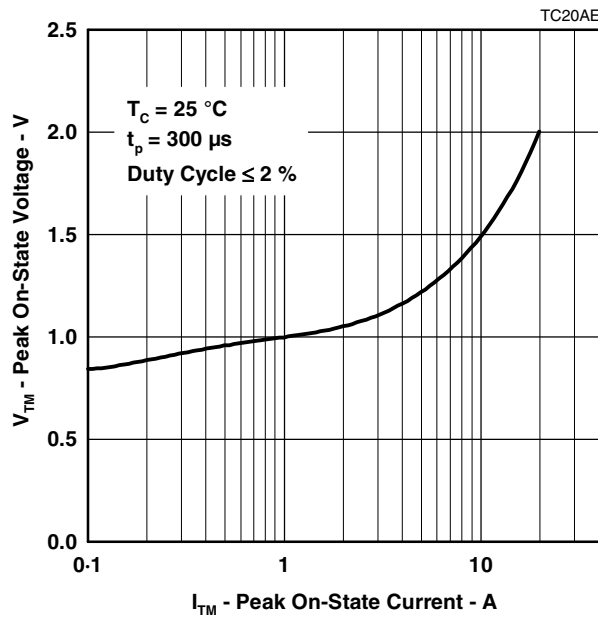


Figure 7.

PRODUCT INFORMATION

Mouser Electronics

Authorized Distributor

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