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

NOTE 6: This parameter must be measured using pulse techniques, t_p = 300 µs, duty cycle ≤ 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	°C/W
$R_{\theta JA}$	Junction to free air thermal resistance			62.5	°C/W

THERMAL INFORMATION

AVERAGE ANODE ON-STATE CURRENT DERATING CURVE

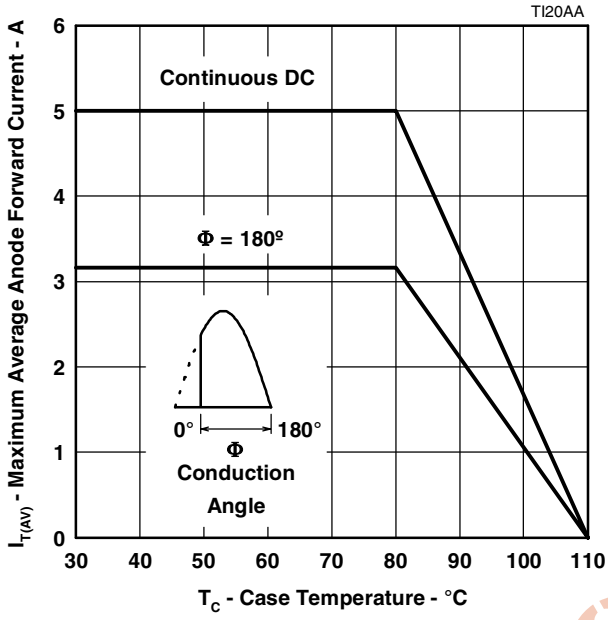

Figure 1.

ANODE POWER DISSIPATED vs ON-STATE CURRENT

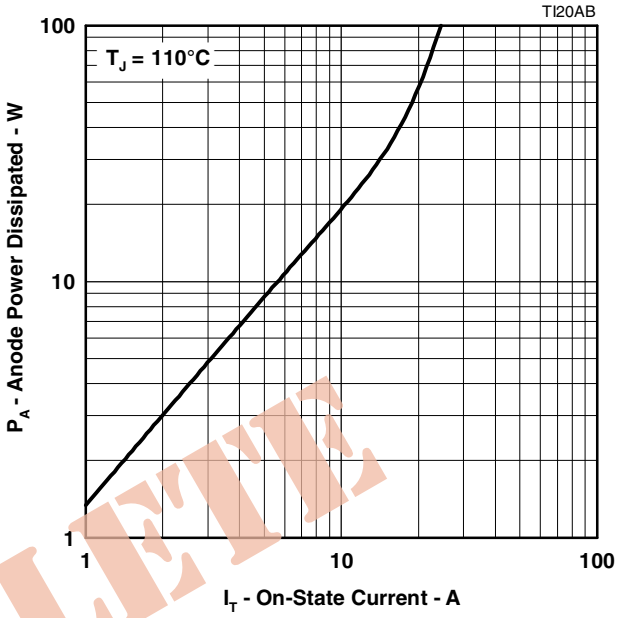

Figure 2.

SURGE ON-STATE CURRENT vs CYCLES OF CURRENT DURATION

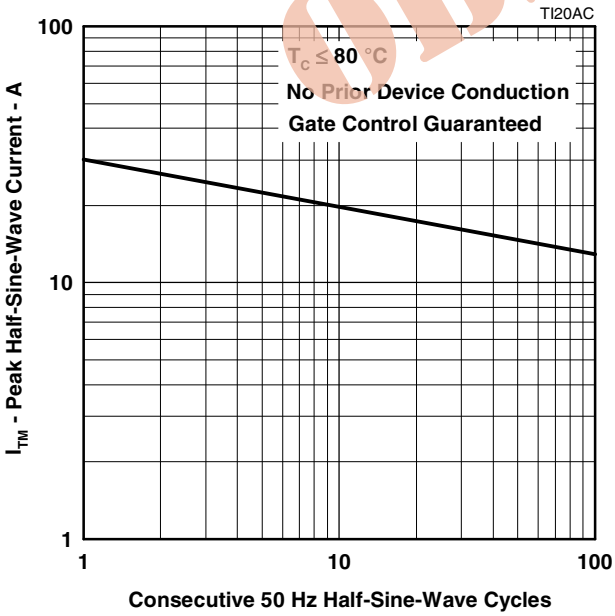

Figure 3.

TRANSIENT THERMAL RESISTANCE vs CYCLES OF CURRENT DURATION

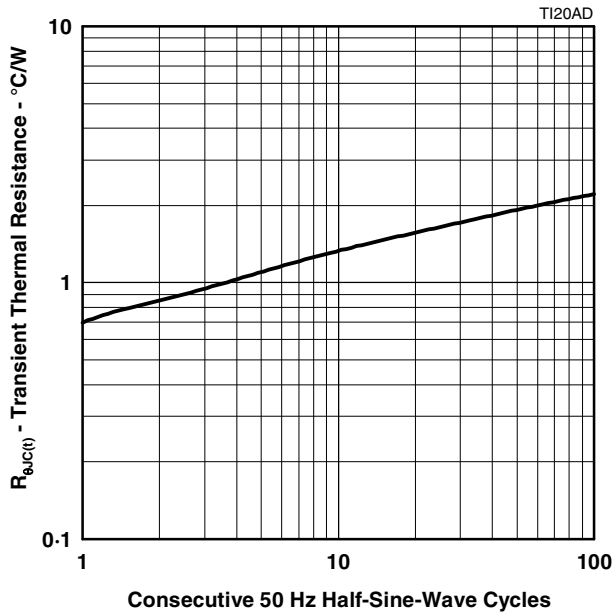

Figure 4.

TYPICAL CHARACTERISTICS

GATE TRIGGER VOLTAGE vs CASE TEMPERATURE

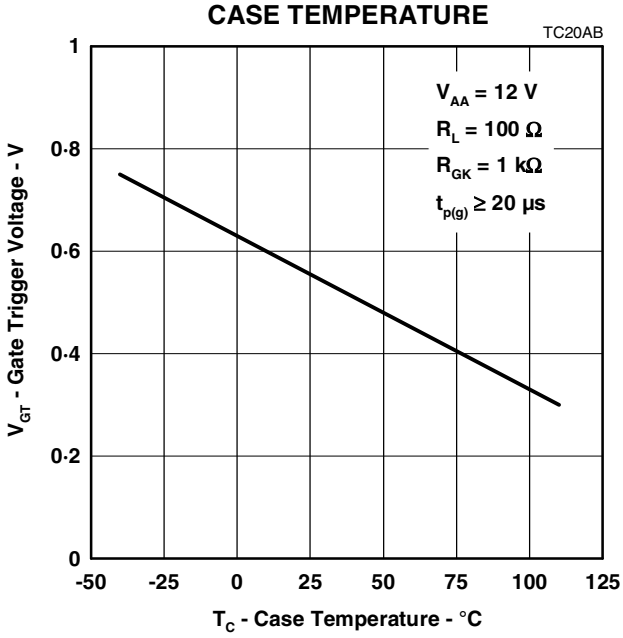

Figure 5.

HOLDING CURRENT vs CASE TEMPERATURE

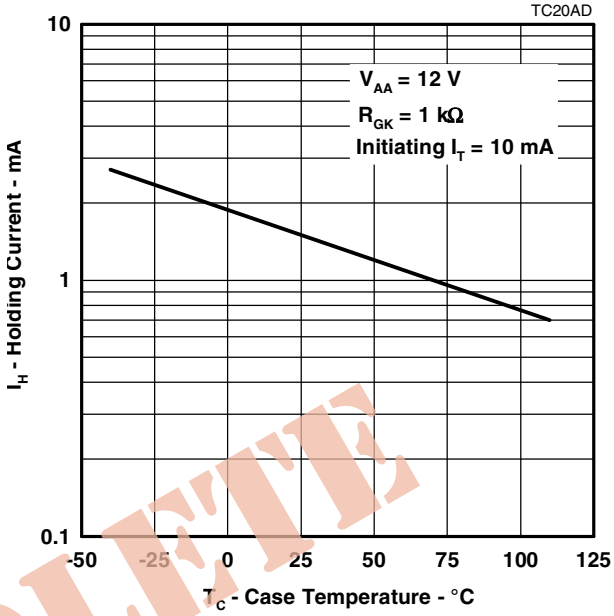

Figure 6.

PEAK ON-STATE VOLTAGE vs PEAK ON-STATE CURRENT

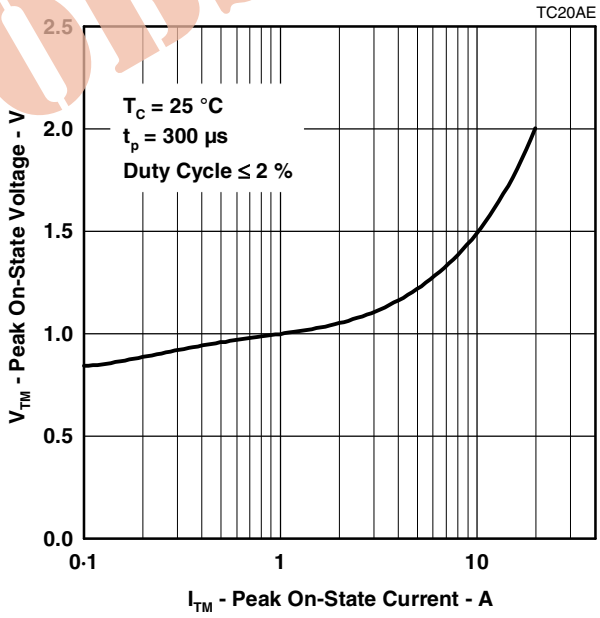

Figure 7.