



T-25-13  
T-25-15  
T-25-17



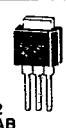
# QUADRAC's® —(1.6-15 Amp)

IT RMS	Part Number		VDRM	IDRM			VTM	Trigger Diac Specifications					
	Isolated	Non-Isolated		Repetitive Peak Blocking Voltage (1)	Peak Off-State Current Gate Open VDRM = Max Rated Value (1)	Peak On-State Voltage at Max Rated RMS Current T <sub>C</sub> = 25°C (1) (3)		ΔV(B0)	VBO	[ΔV±]	I <sub>B0</sub>	C <sub>T</sub>	
RMS On-State Current Conduction Angle of 360° (5)			Volts	mA-Max			Volts	Volts	Volts	Volts	Volts	μA	μF
Amps	MT1 THERMOTAB TO-220AB	MT2 TO-202											
MAX	FOR DIMENSIONAL OUTLINE AND PACKAGE VARIATIONS SEE PAGE 81		MIN	T <sub>C</sub> = 25°C	T <sub>C</sub> = 100°C	T <sub>C</sub> = 125°C	MAX	MAX	MIN	MAX	MIN	MAX	MAX
1.6 Amps	Q2001LT		200	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
	Q4001LT		400	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
3.0 Amps	Q2003LT		200	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
	Q4003LT		400	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
4.0 Amps	Q2004LT	Q2004FT1	200	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
	Q4004LT	Q4004FT1	400	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
	Q5004LT	Q5004FT1	500	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
	Q6004LT	Q6004FT1	600	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
10.0 Amps	Q2010LT	Q2010FT1	200	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
	Q4010LT	Q4010FT1	400	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
	Q5010LT	Q5010FT1	500	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
	Q6010LT	Q6010FT1	600	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
15.0 Amps	Q2015LT		200	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
	Q4015LT		400	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
	Q5015LT		500	.05	0.5	2.0	1.6	3	30	45	5	200	0.1
	Q6015LT		600	.05	0.5	2.0	1.6	3	30	45	5	200	0.1

**GENERAL NOTES**


- All measurements are made at 60 Hz with resistive load at an ambient temperature of +25°C unless otherwise specified.
- Operating temperature range (T<sub>J</sub>) is -40°C to +125°C.
- Storage temperature range (T<sub>S</sub>) is -40°C to +125°C. TO-202 is -40°C to +150°C.

- Lead solder temperature is a maximum of +230°C for 10 seconds maximum; ≥ 1/16" from case.
- The case temperature (T<sub>C</sub>) is measured as shown on dimensional outline drawings. See dimensional outline and package variations on page 81.

THERMAL RESISTANCE (STEADY STATE)			
R <sub>θJC</sub> R <sub>θJA</sub> , °C/W (TYP)			
TYPE			
	ISOLATED TO-220 AB	TYPE 1 TO-202 AB	TYPE 2 TO-202 AB
1.6 Amp	5.2/60		
3.0 Amp	4.4/50		
4.0 Amp	3.5	3.5/45	6.0/70
10.0 Amp	2.5	3.5	
15.0 Amp	2.0		

**ELECTRICAL ISOLATION**

All Teccor isolated Quadrac packages will withstand a minimum high potential test of 2500VAC (RMS) from leads to case, over the operating temperature range of the device. See isolation table for standard and optional isolation ratings.

ELECTRICAL ISOLATION FROM LEADS TO CASE	
U.L. RECOGNIZED FILE #E71639	
TYPE	
VAC (RMS)	TO-220 AB
1600	
2500	STANDARD
4000	OPTIONAL

\*FOR 4000 V ISOLATION USE "V" SUFFIX

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# Electrical Specifications

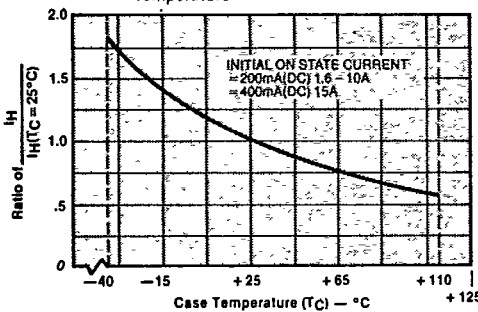
I <sub>H</sub>	I <sub>TSM</sub>		dv/dt (c)	dv/dt		t <sub>gt</sub>	I <sub>T</sub>	I <sub>GTM</sub>	di/dt
	Amps			Volts/μs					
mA	60Hz	50Hz	MIN	T <sub>C</sub> = 100°C	T <sub>C</sub> = 125°C	MAX			
30	20	16.7	2	45	30	3	1.6	1.0	30
30	20	16.7	2	35	25	3	1.6	1.0	30
40	30	25	3	75	50	3	3.7	1.2	50
40	30	25	3	75	50	3	3.7	1.2	50
40	40	33	3	75	50	3	6.6	1.2	50
40	40	33	3	75	50	3	6.6	1.2	50
40	40	33	3	50	35	3	6.6	1.2	50
40	40	33	3	50	35	3	6.6	1.2	50
60	120	100	4	200	150	3	60	1.5	70
60	120	100	4	200	150	3	60	1.5	70
60	120	100	4	175	120	3	60	1.5	70
60	120	100	4	175	120	3	60	1.5	70
70	150	125	4	300	200	3	93	1.5	100
70	150	125	4	300	200	3	93	1.5	100
70	150	125	4	200	150	3	93	1.5	100
70	150	125	4	200	150	3	93	1.5	100

**NOTES TO ELECTRICAL SPECIFICATIONS**

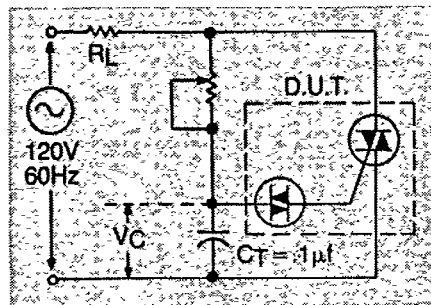
1. For either polarity of MT2 with reference to MT1.
2. See Figure 1 for I<sub>H</sub> vs T<sub>C</sub>.
3. See Figure 3A & 3B for I<sub>T</sub> vs V<sub>T</sub>.
4. See Figure 6 for surge ratings with specific durations.

5. See Figures 4, 5A & 5B for current rating at specific operating temperature.
6. See Figure 2A & 2B for test circuit.
7.  $\Delta V_{(BO)} = [+V_{(BO)}] - [-V_{(BO)}]$
8. See Figures 5A & 5B for maximum allowable case temperature @ maximum rated current.
9. Trigger firing capacitance = 0.1μf with 0.1μsec rise time.

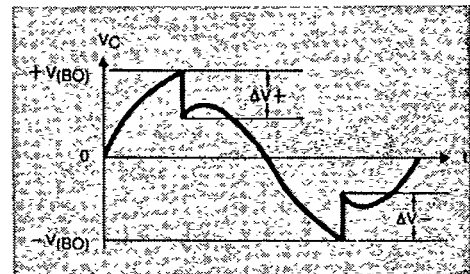
**FIGURE 1—Normalized DC Holding Current vs Case Temperature**



**FIGURE 2 -A — Test Circuit**



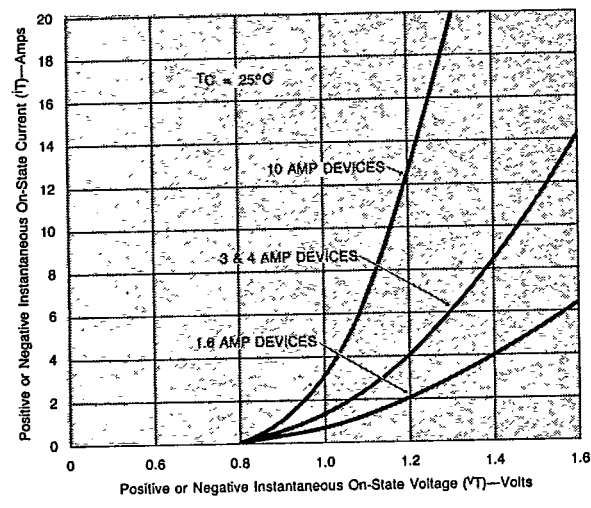
**FIGURE 2 -B — Test Circuit Waveforms**



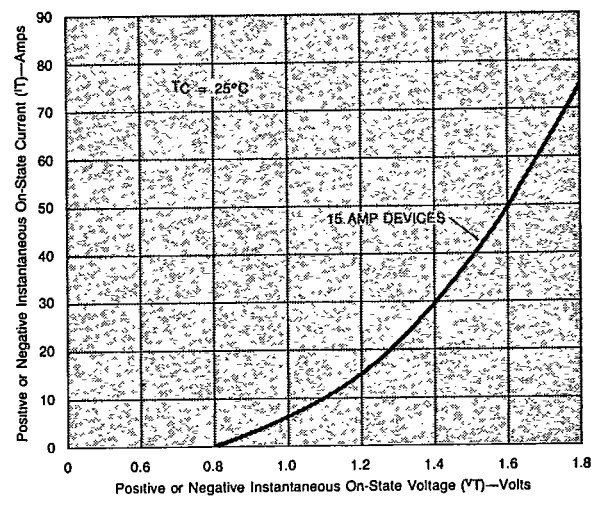
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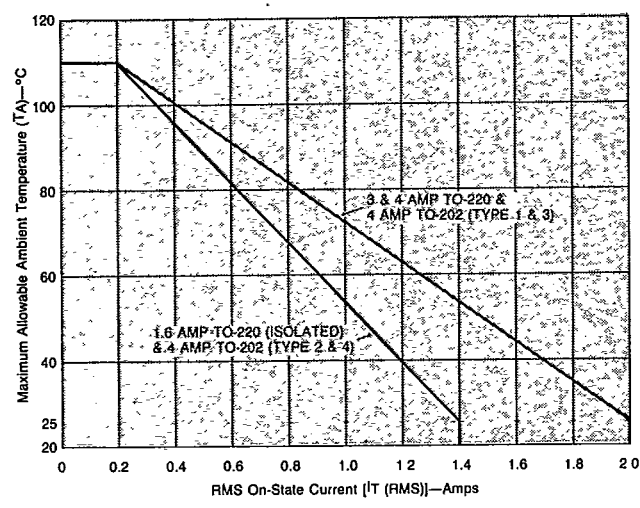
**FIGURE 3A — On-State Current vs On-State Voltage (Typical)**



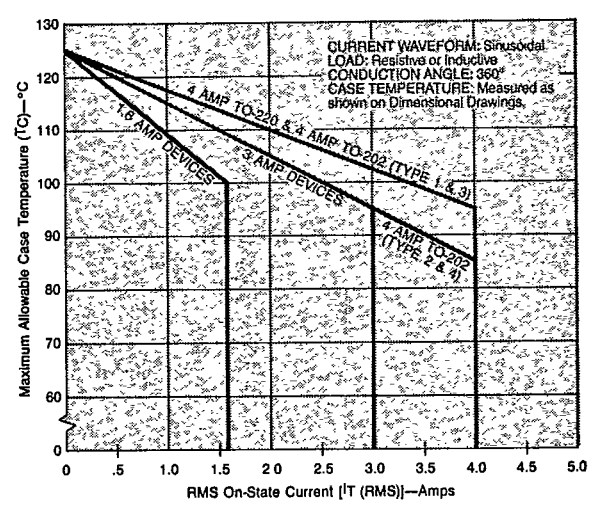
**FIGURE 3B — On-State Current vs On-State Voltage (Typical)**



**FIGURE 4 — Maximum Allowable Ambient Temperature vs. On-State Current**



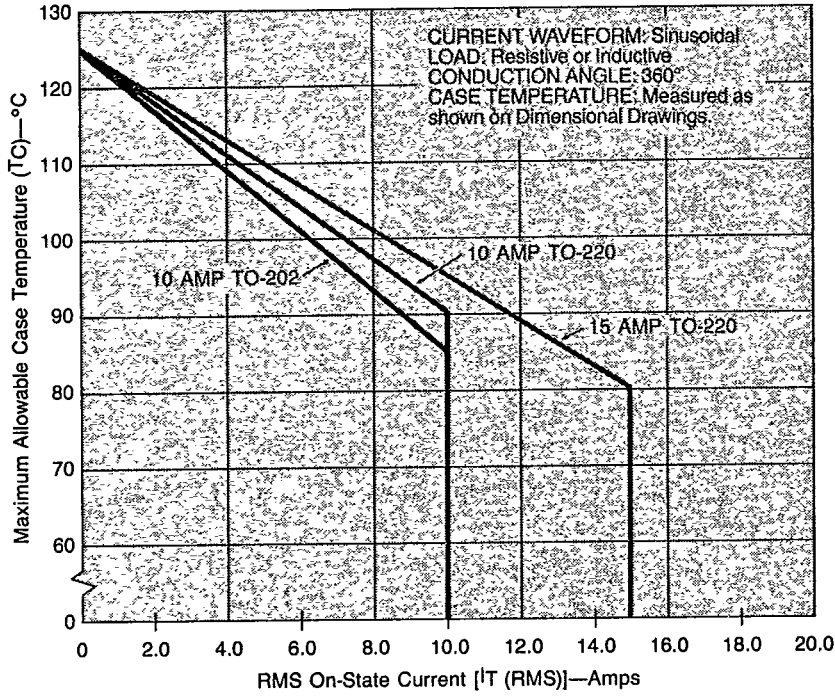
**FIGURE 5A — Maximum Allowable Case Temperature vs. On-State Current**



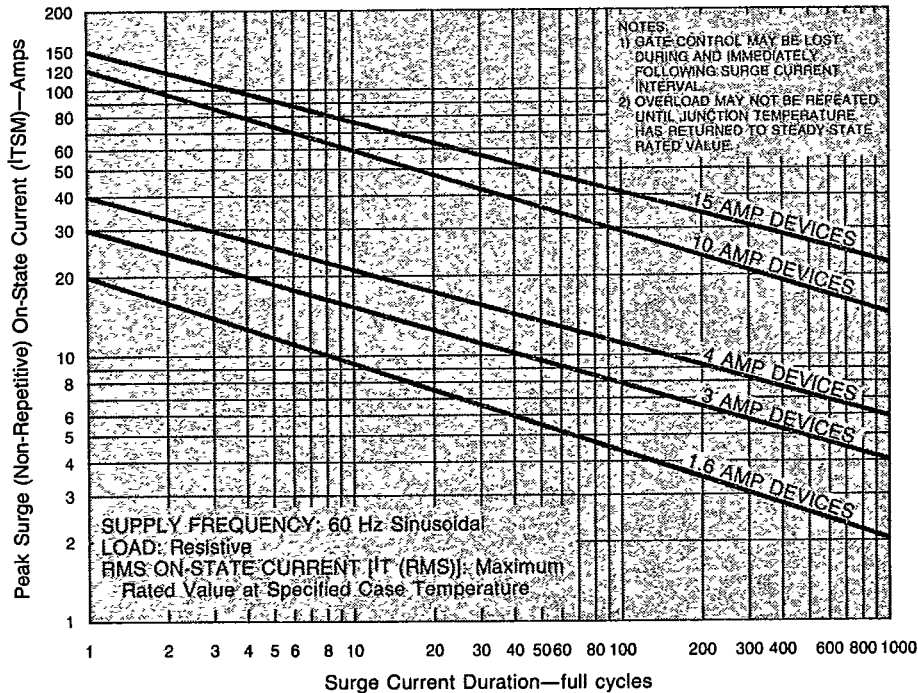
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**FIGURE 5B— Maximum Allowable Case Temperature vs. On-State Current**



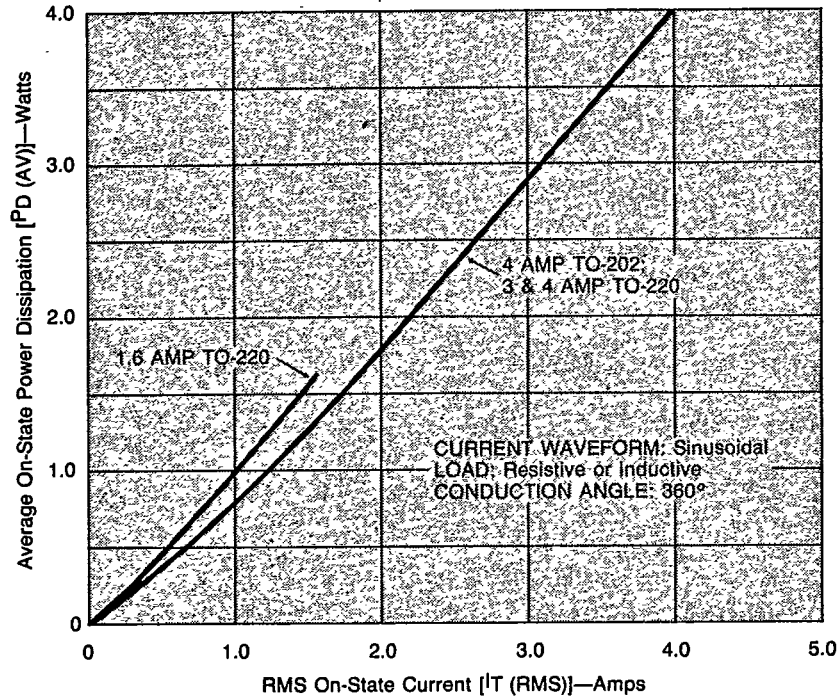
**FIGURE 6—Peak Surge Current vs Surge Current Duration**



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**FIGURE 7A — Power Dissipation (Typ.)  
vs. On-State Current**



**FIGURE 7B — Power Dissipation (Typ.)  
vs. On-State Current**

