

MUR10005CT
MUR10010CT
MUR10015CT
MUR10020CT

MUR10020CT is a
 Motorola Preferred Device

Advance Information

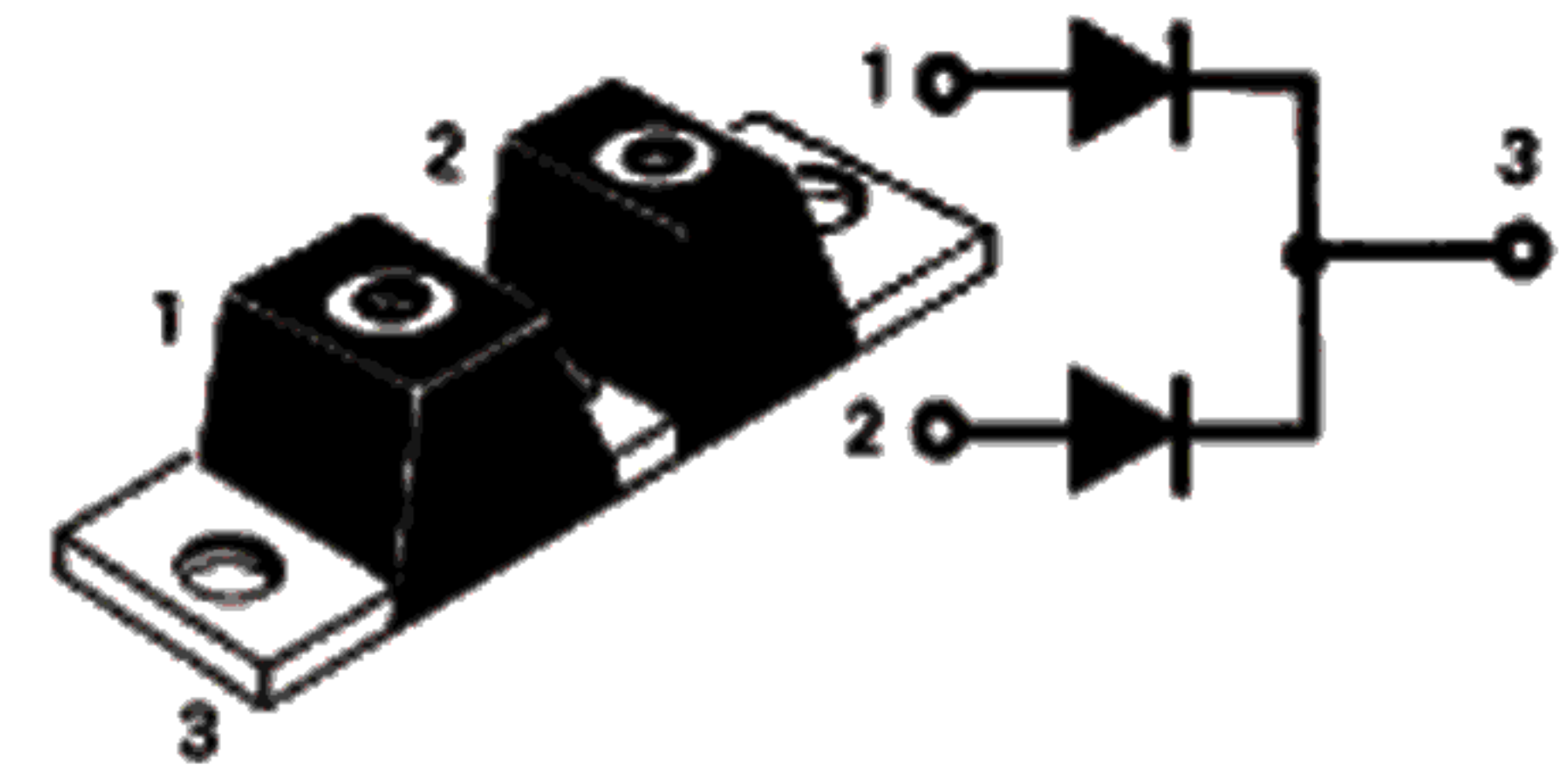
**ULTRAFAST
 SWITCHMODE POWER RECTIFIERS**

... designed for use in switching power supplies, inverters, and as free wheeling diodes. These state-of-the-art devices have the following features:

- Dual Diode Construction
- Low Leakage Current
- Low Forward Voltage
- 175°C Operating Junction Temperature
- Labor Saving POWERTAP Package

**ULTRAFAST
 RECTIFIERS**

**100 AMPERES
 50 TO 200 VOLTS**



CASE 357C-03

Terminal Penetration: 0.280 max
 Terminal Torque: 25-40 in-lb max
 Mounting Torque —
 Outside Holes:* 30-40 in-lb max
 *Center Hole Must be
 Torqued First: 8-10 in-lb max

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MAXIMUM RATINGS

Rating	Symbol	MUR				Unit
		10005CT	10010CT	10015CT	10020CT	
Peak Repetitive Reverse Voltage	VRRM	50	100	150	200	Volts
Working Peak Reverse Voltage	VRWM					
DC Blocking Voltage	VR					
Average Rectified Forward Current, (Rated VR), TC = 140°C Per Device Per Leg	IF(AV)		100 50			Amps
Peak Repetitive Forward Current, Per Leg, (Rated VR, Square Wave, 20 kHz), TC = 140°C	IFRM		100			Amps
Nonrepetitive Peak Surge Current Per Leg (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	IFSM		400			Amps
Operating Junction and Storage Temperature	TJ, Tstg	-65 to +175				°C

THERMAL CHARACTERISTICS PER LEG

Rating	Symbol	Max	Unit
Thermal Resistance, Junction to Case	RθJC	1.0	°C/W

ELECTRICAL CHARACTERISTICS PER LEG

Instantaneous Forward Voltage (1) (IF = 50 Amp, TC = 25°C)	vF	1.10	Volts
Instantaneous Reverse Current (1) (Rated dc Voltage, TC = 125°C) (Rated dc Voltage, TC = 25°C)	iR	250 25	μA
Maximum Reverse Recovery Time (IF = 1.0 Amps, di/dt = 50 Amps/μs)	trr	50	ns

(1) Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2.0%.

This document contains information on a new product. Specifications and information herein are subject to change without notice.

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FIGURE 1 — FORWARD VOLTAGE

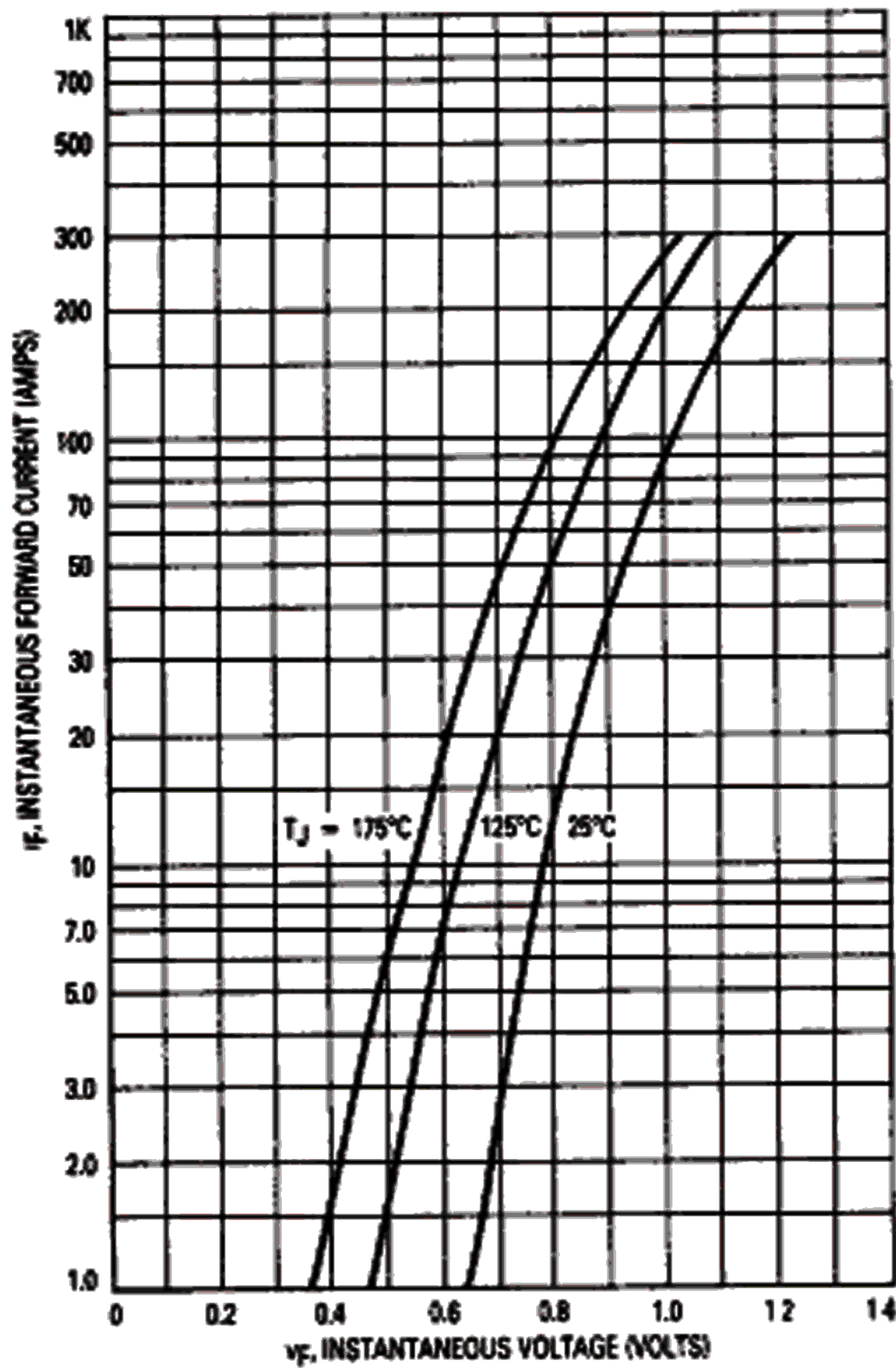
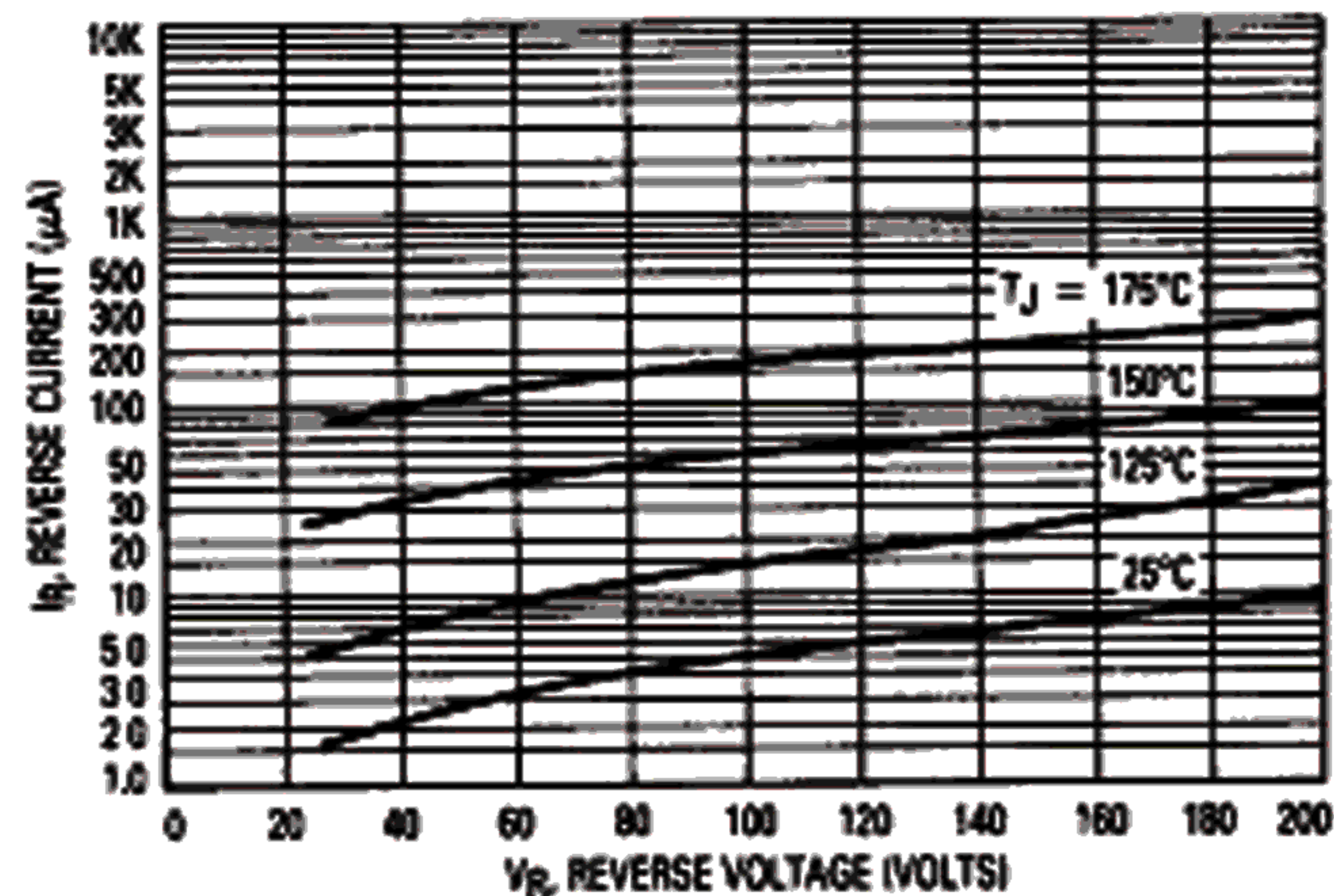


FIGURE 2 — TYPICAL REVERSE CURRENT*



*The curves shown are typical for the highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these same curves, if V_R is sufficiently below rated V_R .

FIGURE 3 — CURRENT DERATING (PER LEG)

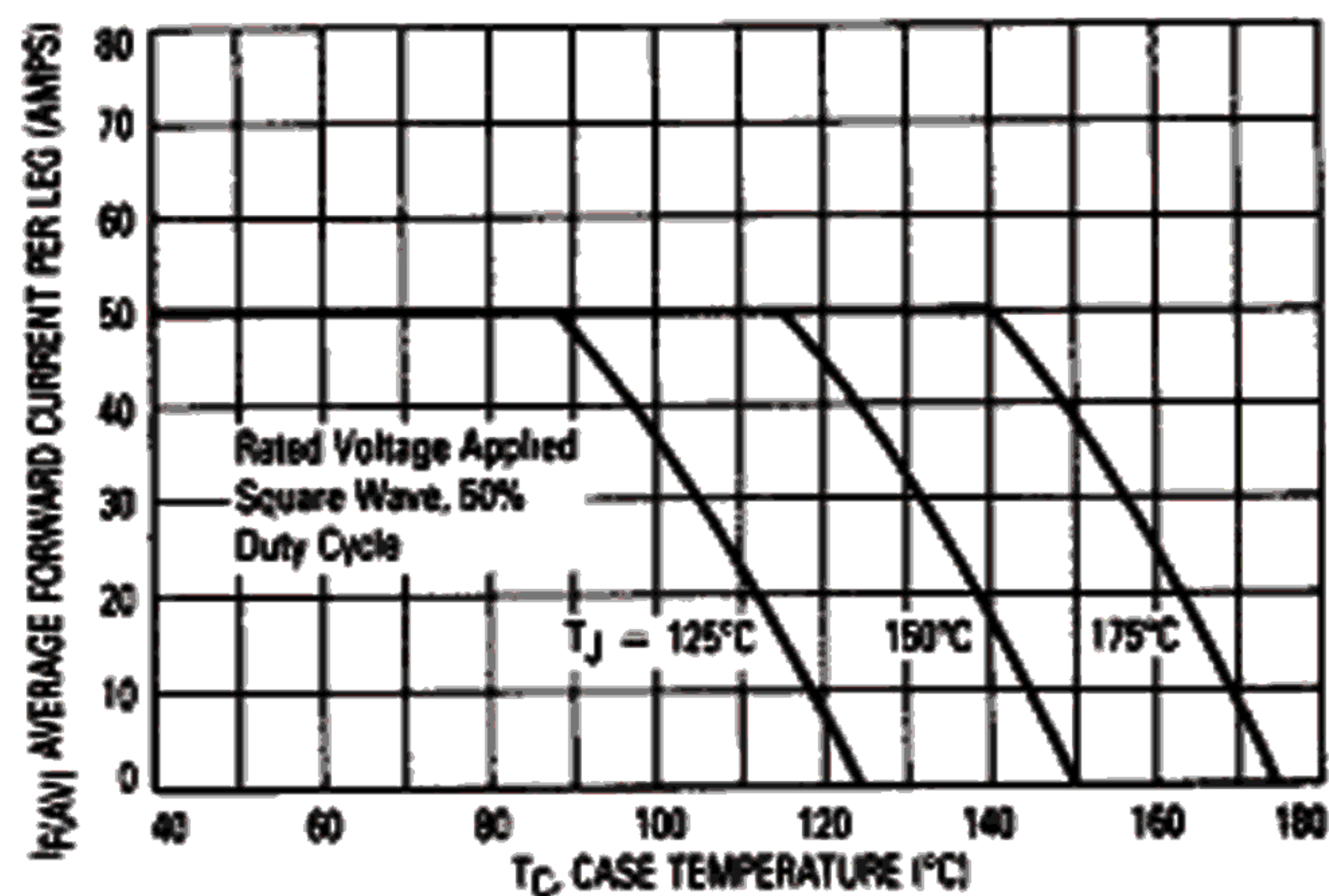


FIGURE 4 — POWER DISSIPATION (PER LEG)

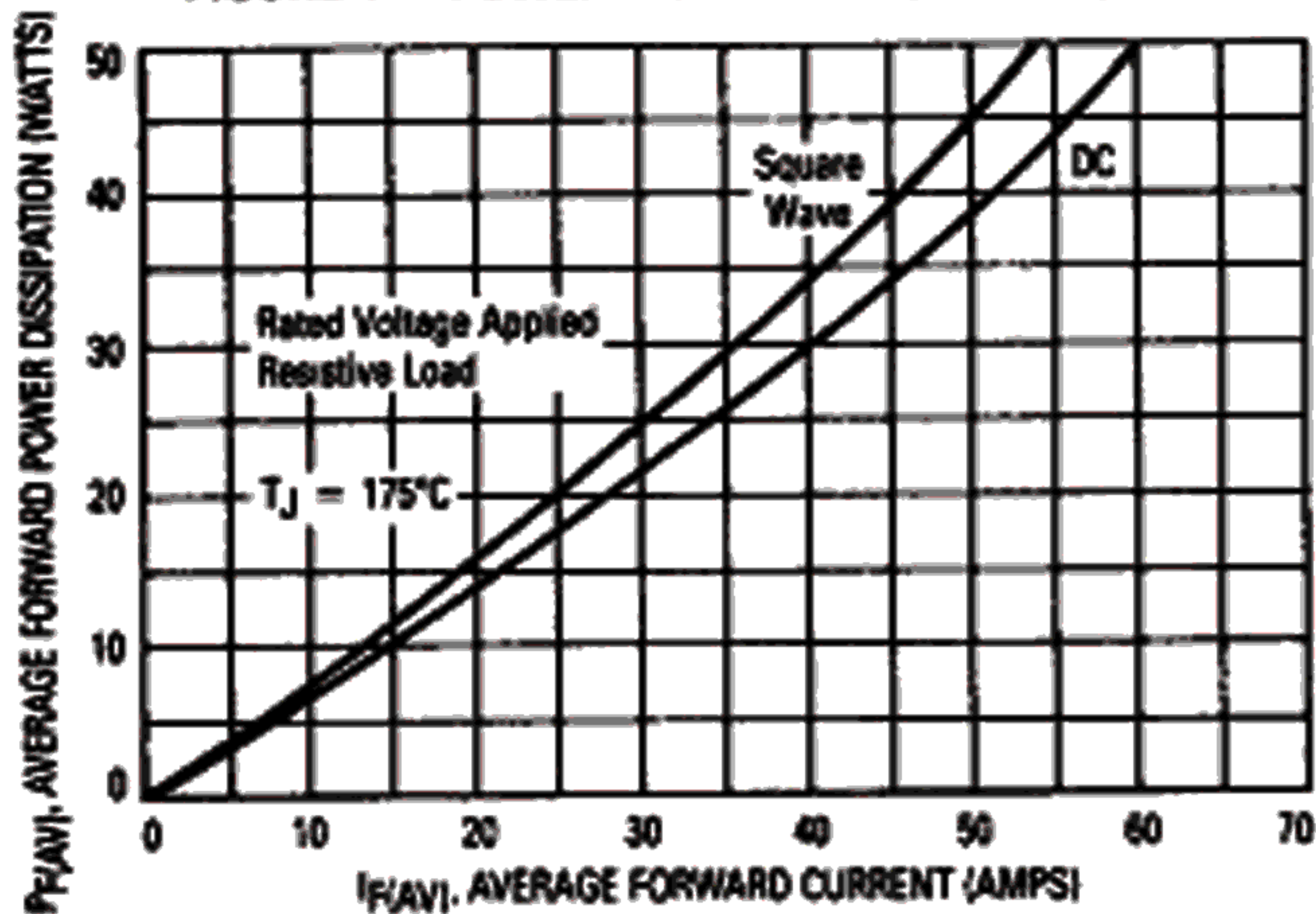


FIGURE 5 — CAPACITANCE (PER LEG)

