



ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT
Breakdown voltage	I <sub>R</sub> = 1.0 mA	T <sub>A</sub> = 25 °C	V <sub>BR</sub>	120 (min.)	-	V
Instantaneous forward voltage per diode <sup>(1)</sup>	I <sub>F</sub> = 5 A I <sub>F</sub> = 7.5 A I <sub>F</sub> = 15 A	T <sub>A</sub> = 25 °C	V <sub>F</sub>	0.56	-	V
				0.71	-	
				0.86	0.97	
	I <sub>F</sub> = 5 A I <sub>F</sub> = 7.5 A I <sub>F</sub> = 15 A	T <sub>A</sub> = 125 °C		0.50	-	
				0.60	-	
				0.68	0.76	
Reverse current per diode <sup>(2)</sup>	V <sub>R</sub> = 90 V	T <sub>A</sub> = 25 °C	I <sub>R</sub>	11	-	μA
		T <sub>A</sub> = 125 °C		8	-	mA
	V <sub>R</sub> = 120 V	T <sub>A</sub> = 25 °C		-	800	μA
		T <sub>A</sub> = 125 °C		17	50	mA

**Notes**

- (1) Pulse test: 300 μs pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width ≤ 40 ms

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	V30120C	VF30120C	VB30120C	VI30120C	UNIT
Typical thermal resistance per diode	R <sub>θJC</sub>	2.2	4.5	2.2	2.2	°C/W

ORDERING INFORMATION (Example)					
PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
TO-220AB	V30120C-E3/4W	1.89	4W	50/tube	Tube
ITO-220AB	VF30120C-E3/4W	1.75	4W	50/tube	Tube
TO-263AB	VB30120C-E3/4W	1.38	4W	50/tube	Tube
TO-263AB	VB30120C-E3/8W	1.38	8W	800/reel	Tape and reel
TO-262AA	VI30120C-E3/4W	1.46	4W	50/tube	Tube

**RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)**

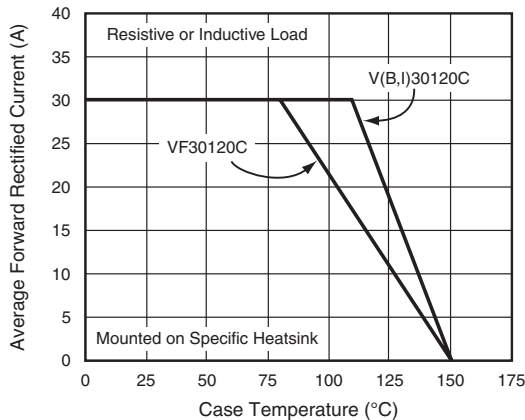


Fig. 1 - Maximum Forward Current Derating Curve

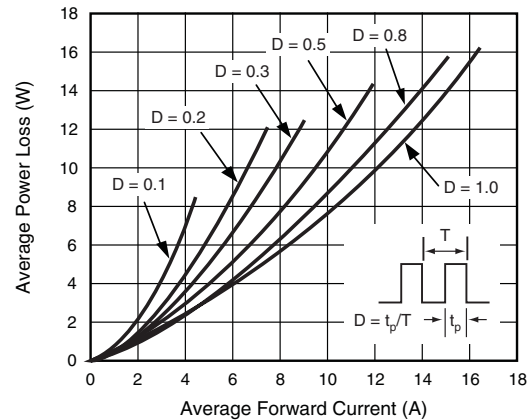


Fig. 2 - Forward Power Loss Characteristics Per Diode

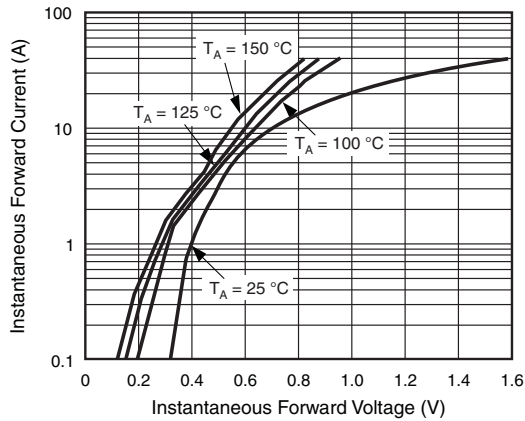


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

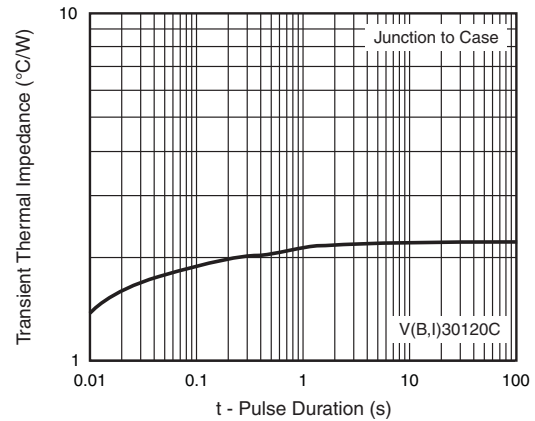


Fig. 6 - Typical Transient Thermal Impedance Per Diode

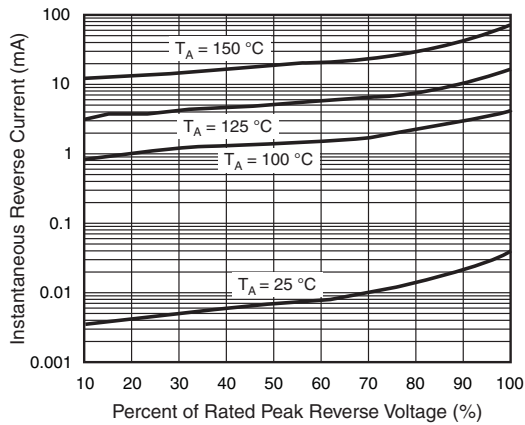


Fig. 4 - Typical Reverse Characteristics Per Diode

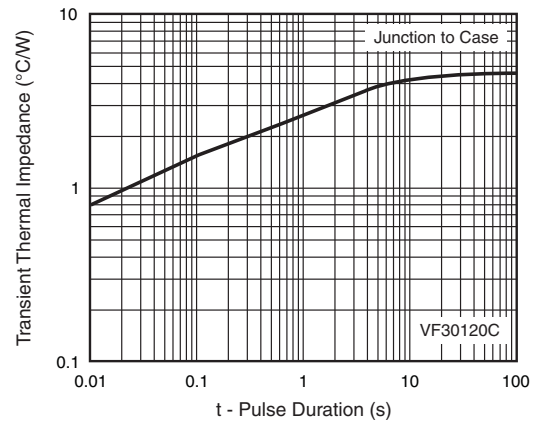


Fig. 7 - Typical Transient Thermal Impedance Per Diode

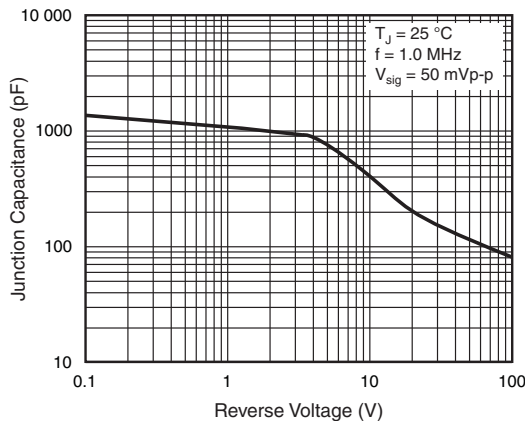
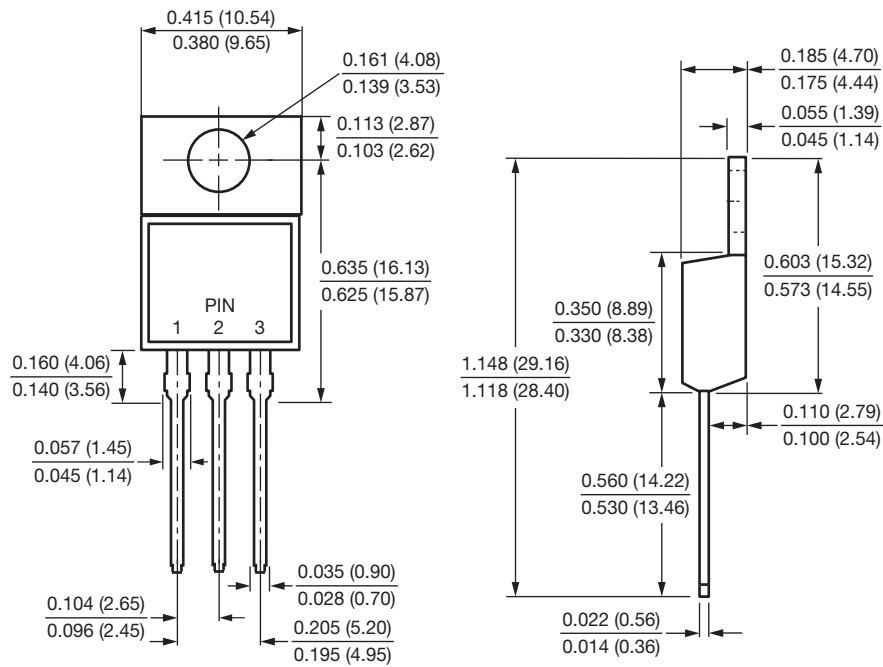


Fig. 5 - Typical Junction Capacitance Per Diode

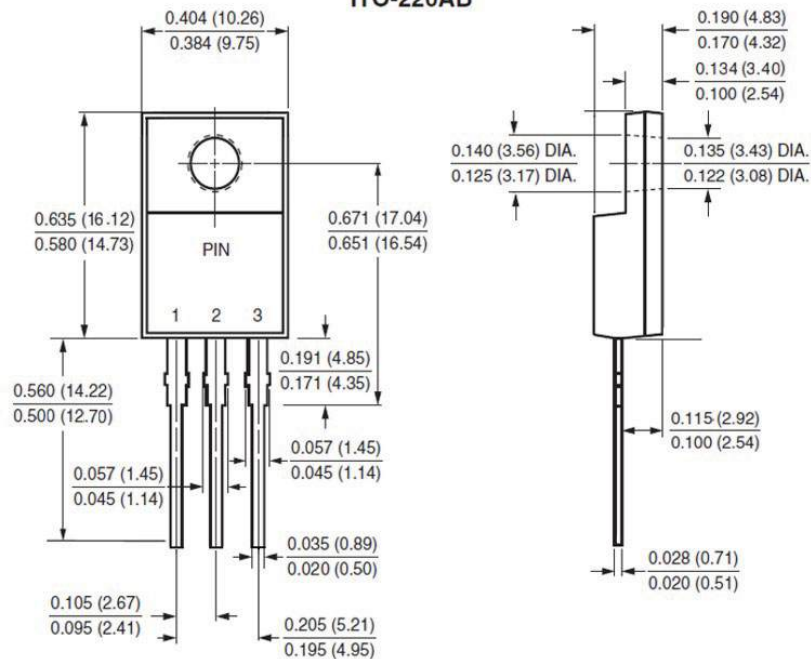


## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

### TO-220AB

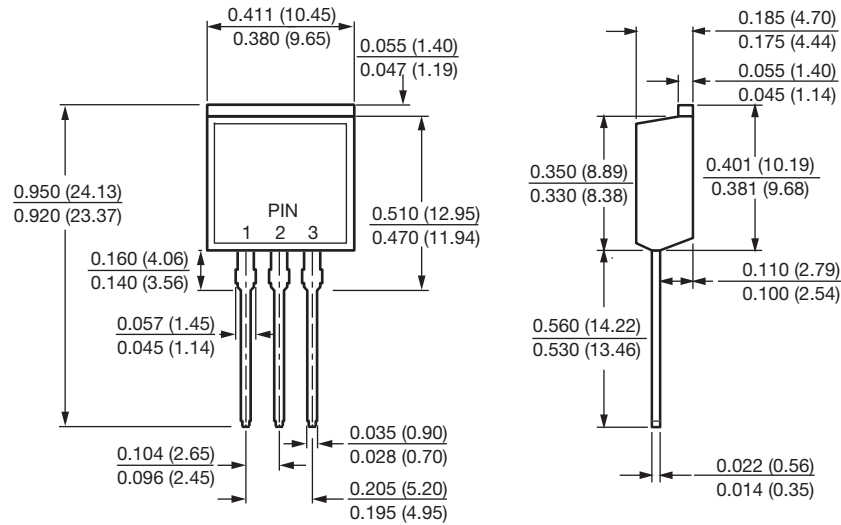


### ITO-220AB

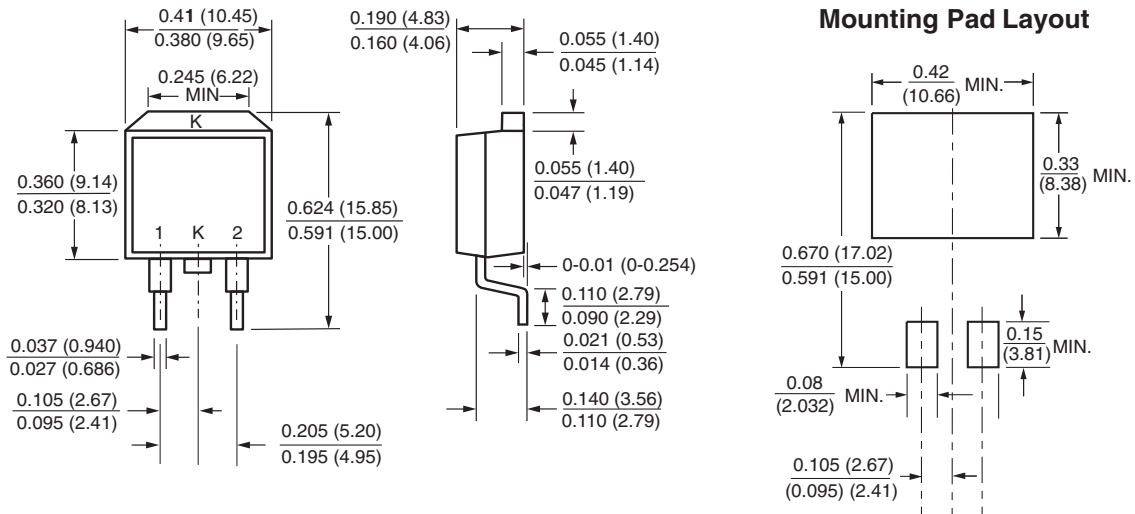




## TO-262AA



## D<sup>2</sup>PAK (TO-263AB)





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