



ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT	
Breakdown voltage	I _R = 10 mA	T _A = 25 °C	V _{BR}	120 (minimum)	-	V	
Instantaneous forward voltage per diode	I _F = 5 A	T _A = 25 °C	V _F ⁽¹⁾	0.57	-	V	
				I _F = 10 A	0.71		-
				I _F = 20 A	0.99		1.12
	T _A = 125 °C	I _F = 5 A		0.50	-		
		I _F = 10 A		0.61	-		
		I _F = 20 A		0.73	0.81		
Reverse current per diode	V _R = 90 V	T _A = 25 °C	I _R ⁽²⁾	10	-	μA	
		T _A = 125 °C		6	-	mA	
	V _R = 120 V	T _A = 25 °C		-	300	μA	
		T _A = 125 °C		14	30	mA	

Notes

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

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	V20120S	VF20120S	VB20120S	VI20120S	UNIT
Typical thermal resistance	R _{θJC}	2	4	2	2	°C/W

ORDERING INFORMATION (Example)						
PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE	
TO-220AB	V20120S-E3/4W	1.88	4W	50/tube	Tube	
ITO-220AB	VF20120S-E3/4W	1.75	4W	50/tube	Tube	
TO-263AB	VB20120S-E3/4W	1.38	4W	50/tube	Tube	
TO-263AB	VB20120S-E3/8W	1.38	8W	800/reel	Tape and reel	
TO-262AA	VI20120S-E3/4W	1.45	4W	50/tube	Tube	

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

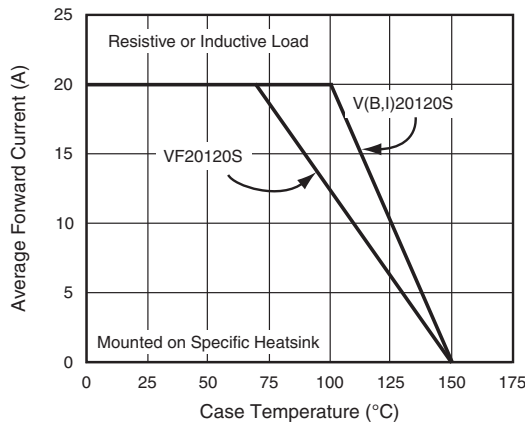


Fig. 1 - Maximum Forward Current Derating Curve

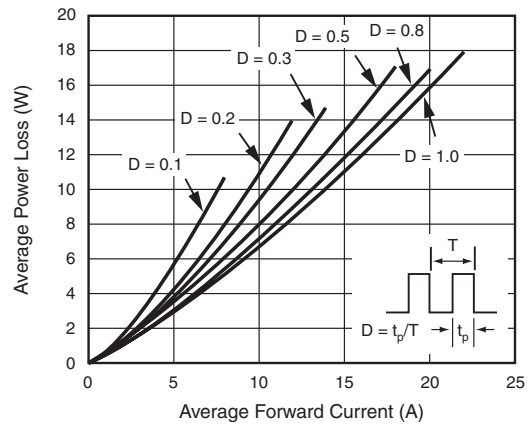


Fig. 2 - Forward Power Loss Characteristics

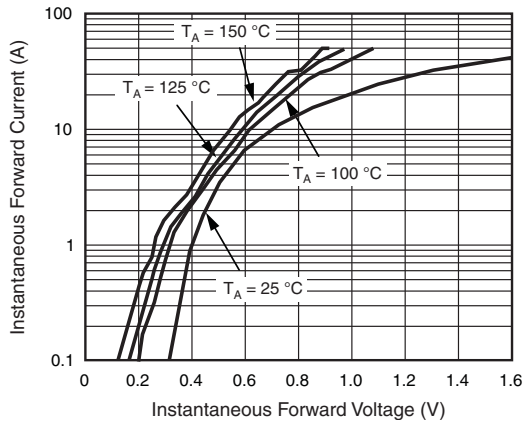


Fig. 3 - Typical Instantaneous Forward Characteristics

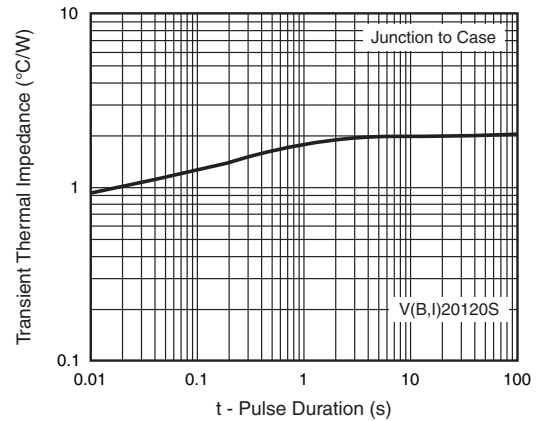


Fig. 6 - Typical Transient Thermal Impedance

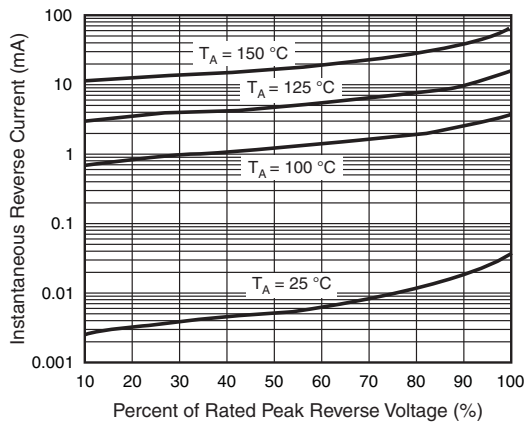


Fig. 4 - Typical Reverse Characteristics

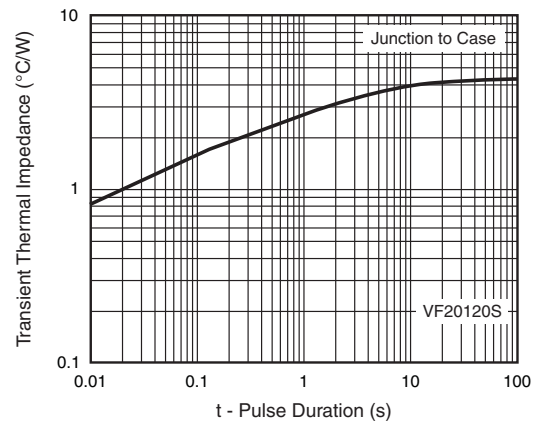


Fig. 7 - Typical Transient Thermal Impedance

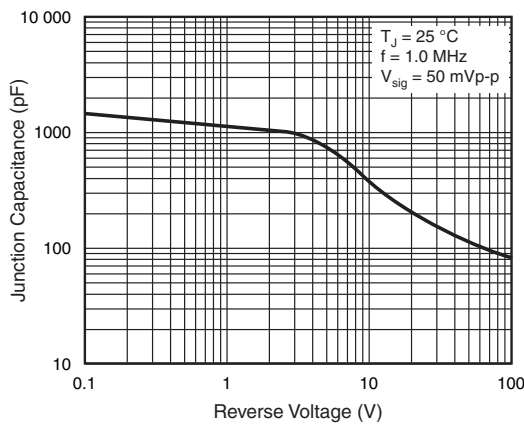
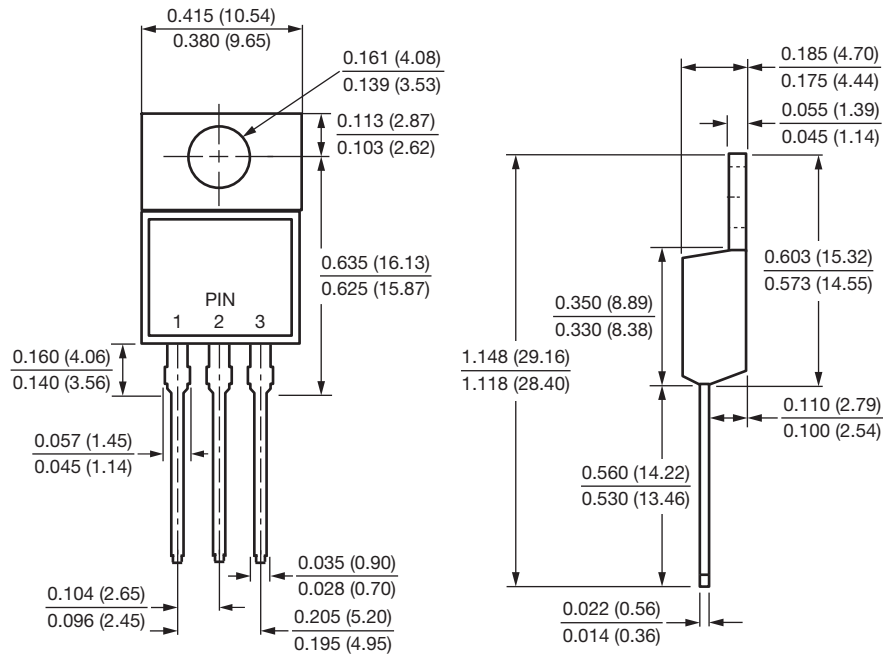


Fig. 5 - Typical Junction Capacitance

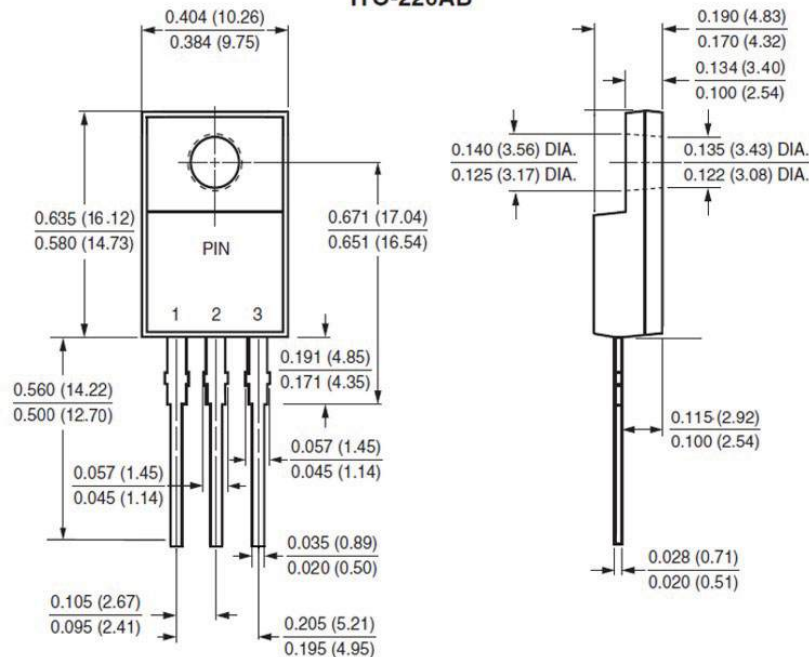


PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

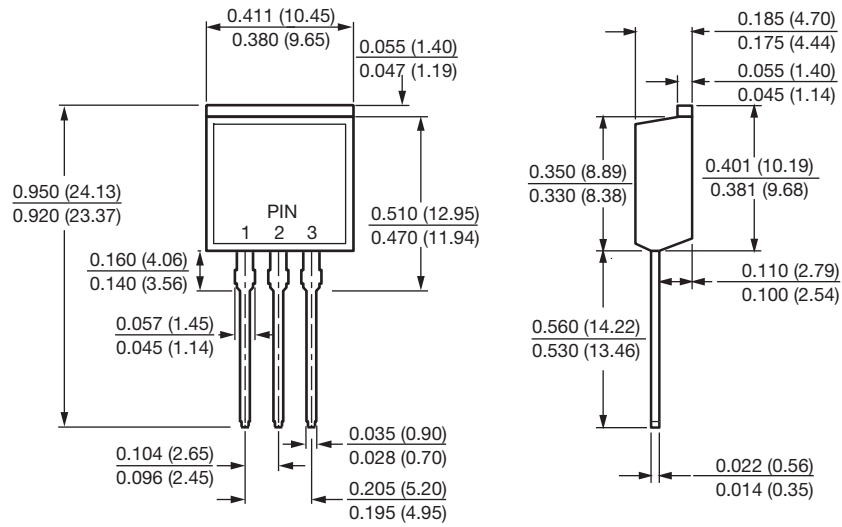
TO-220AB



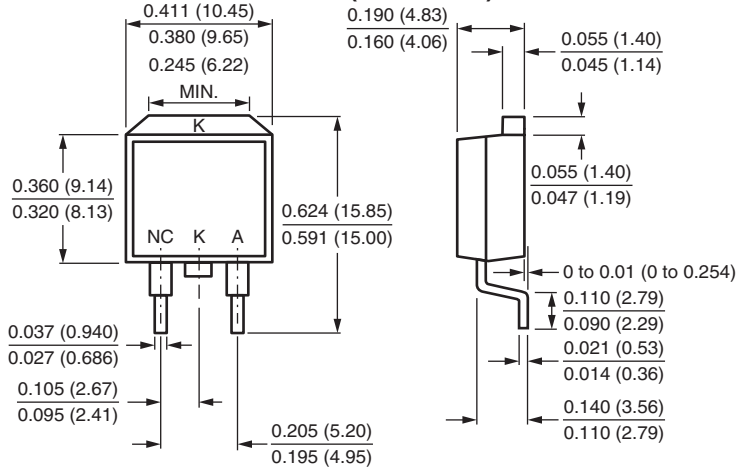
ITO-220AB



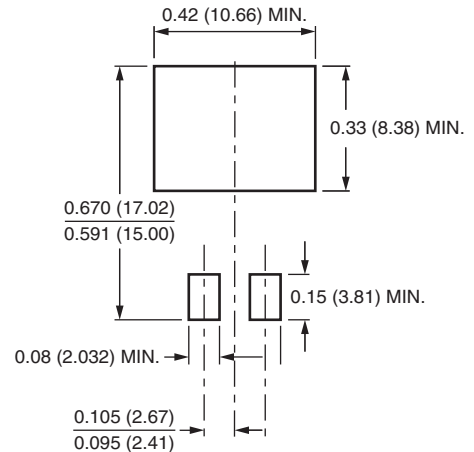
TO-262AA



D²PAK (TO-263AB)



Mounting Pad Layout





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