

# BYS459-1500S, BYS459F-1500S & BYS459B-1500S



Vishay General Semiconductor

ELECTRICAL CHARACTERISTICS (T <sub>J</sub> = 25 °C unless otherwise noted)					
PARAMETER	TEST CONDITIONS		SYMBOL	VALUE	UNIT
Maximum instantaneous forward voltage <sup>(1)</sup>	I <sub>F</sub> = 6.5 A, I <sub>F</sub> = 6.5 A,	T <sub>J</sub> = 25 °C T <sub>J</sub> = 125 °C	V <sub>F</sub>	1.35 1.25	V
Maximum DC reverse current	V <sub>RWM</sub>	T <sub>J</sub> = 25 °C T <sub>J</sub> = 125 °C	I <sub>R</sub>	250 1.0	μA mA
Maximum reverse recovery time	I <sub>F</sub> = 1.0 A, di/dt = 50 A/μs, V <sub>R</sub> = 30 V		t <sub>rr</sub>	220	ns
Maximum reverse recovery charge	I <sub>F</sub> = 2.0 A, di/dt = 20 A/μs, V <sub>R</sub> = 30 V		Q <sub>rr</sub>	0.95	μC
Maximum forward recovery time	I <sub>F</sub> = 6.5 A, di/dt = 52 A/μs, V <sub>R</sub> = 5 V		t <sub>fr</sub>	300	ns
Peak forward recovery overshoot voltage	I <sub>F</sub> = 6.5 A, di/dt = 52 A/μs		V <sub>FP</sub>	27	V

**Note:**

(1) Pulse test: 300 μs pulse width, 1 % duty cycle

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	BYS459	BYS459F	BYS459B	UNIT
Typical thermal resistance from junction to case	R <sub>θJC</sub>	2.0	4.0	2.0	°C/W

ORDERING INFORMATION (Example)					
PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
TO-220AC	BYS459-1500S-E3/45	1.80	45	50/tube	Tube
ITO-220AC	BYS459F-1500S-E3/45	1.95	45	50/tube	Tube
TO-263AB	BYS459B-1500S-E3/45	1.77	45	50/tube	Tube
TO-263AB	BYS459B-1500S-E3/81	1.77	81	800/reel	Tape and reel

## RATINGS AND CHARACTERISTICS CURVES

(T<sub>A</sub> = 25 °C unless otherwise noted)

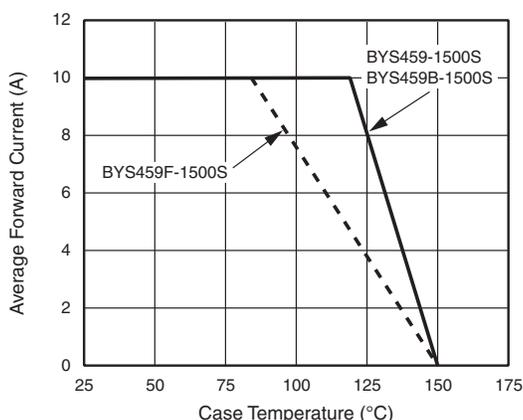


Figure 1. Forward Current Derating Curve

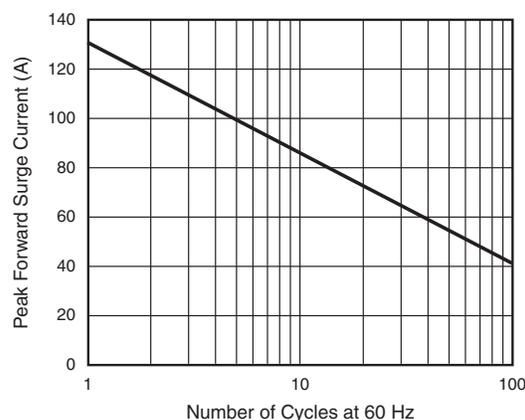


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current



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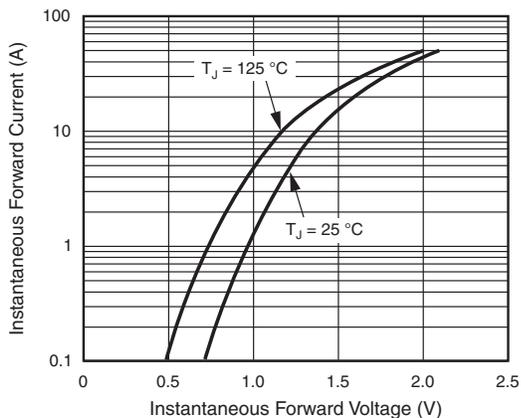


Figure 3. Typical Forward Voltage

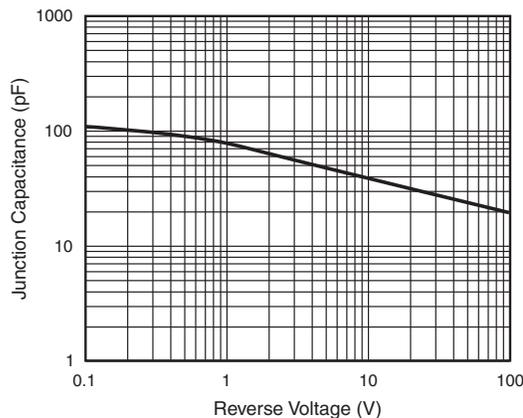


Figure 5. Typical Capacitance

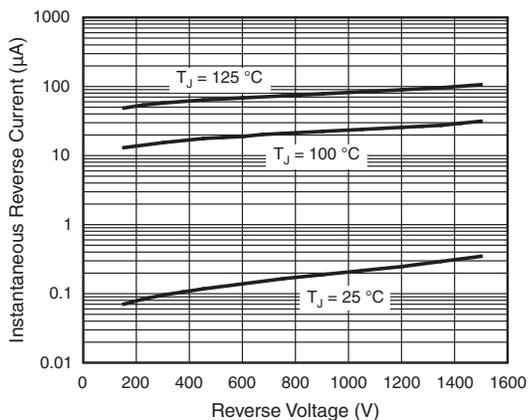


Figure 4. Typical Reverse Current

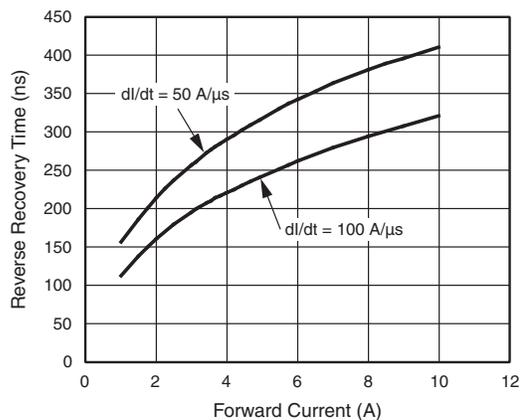


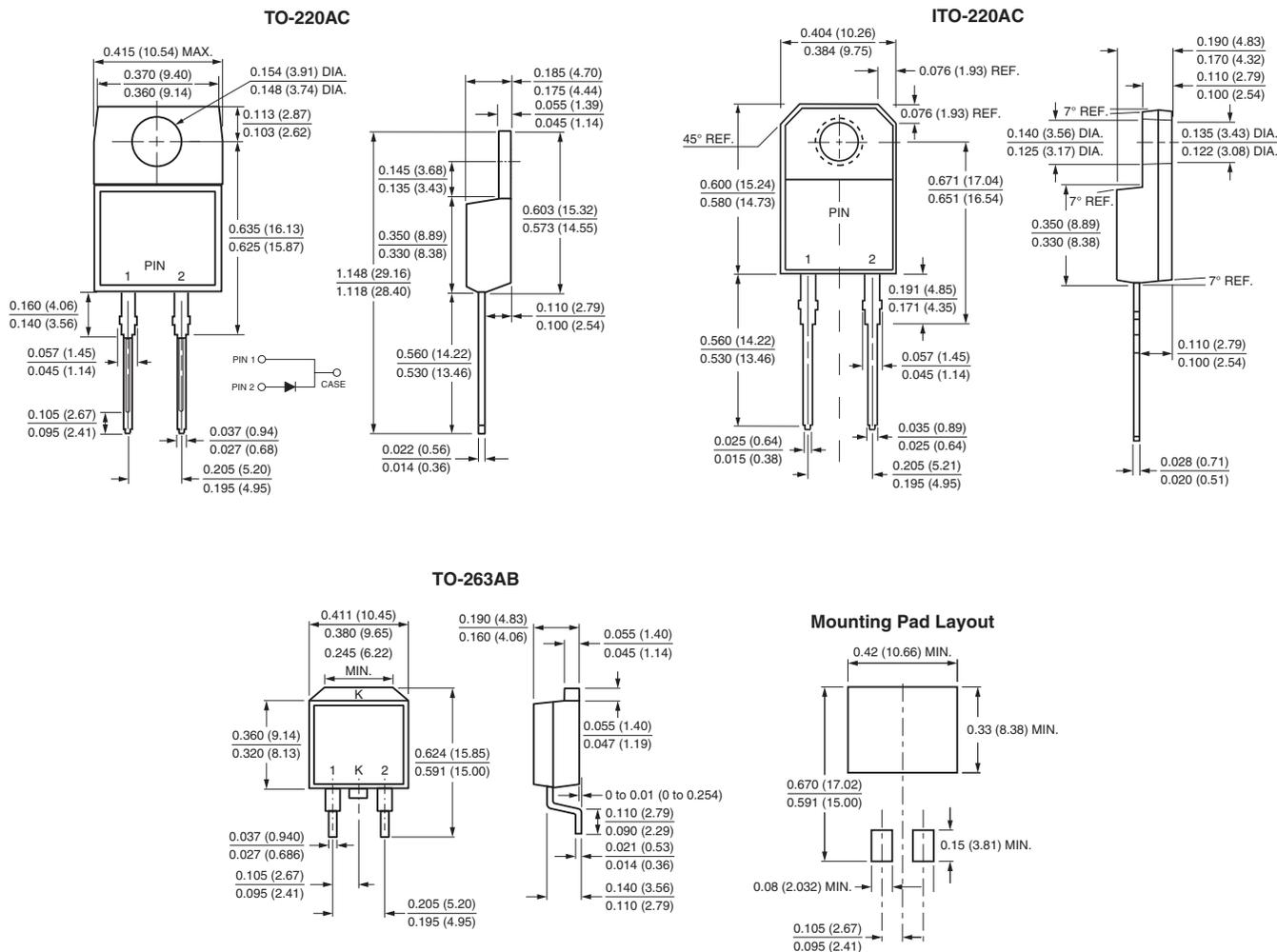
Figure 6. Typical Reverse Recovery Time

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## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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