

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

Vishay General Semiconductor

ELECTRICAL CHARACTERISTICS ($T_J = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	TEST CONDITIONS		SYMBOL	VALUE	UNIT
Maximum instantaneous forward voltage ⁽¹⁾	$I_F = 6.5\text{ A}$, $I_F = 6.5\text{ A}$	$T_J = 25\text{ }^{\circ}\text{C}$ $T_J = 125\text{ }^{\circ}\text{C}$	V_F	1.35 1.25	V
Maximum DC reverse current	V_{RWM}	$T_J = 25\text{ }^{\circ}\text{C}$ $T_J = 125\text{ }^{\circ}\text{C}$	I_R	250 1.0	μA mA
Maximum reverse recovery time	$I_F = 1.0\text{ A}$, $dI/dt = 50\text{ A}/\mu\text{s}$, $V_R = 30\text{ V}$		t_{rr}	220	ns
Maximum reverse recovery charge	$I_F = 2.0\text{ A}$, $dI/dt = 20\text{ A}/\mu\text{s}$, $V_R = 30\text{ V}$		Q_{rr}	0.95	μC
Maximum forward recovery time	$I_F = 6.5\text{ A}$, $dI/dt = 52\text{ A}/\mu\text{s}$, $V_R = 5\text{ V}$		t_{fr}	300	ns
Peak forward recovery overshoot voltage	$I_F = 6.5\text{ A}$, $dI/dt = 52\text{ A}/\mu\text{s}$		V_{FP}	27	V

Note:(1) Pulse test: 300 μs pulse width, 1 % duty cycle**THERMAL CHARACTERISTICS** ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	BYS459	BYS459F	BYS459B	UNIT
Typical thermal resistance from junction to case	$R_{\theta JC}$	2.0	4.0	2.0	$^{\circ}\text{C}/\text{W}$

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

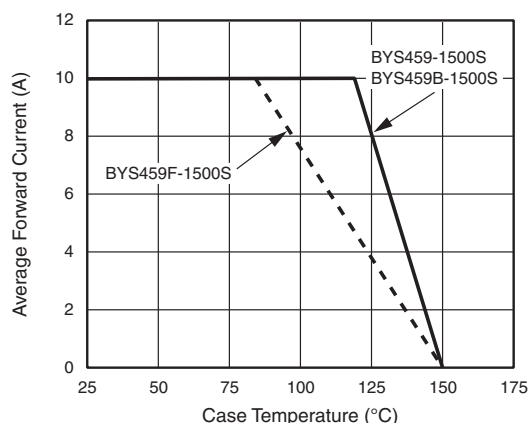
RATINGS AND CHARACTERISTICS CURVES($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Figure 1. Forward Current Derating Curve

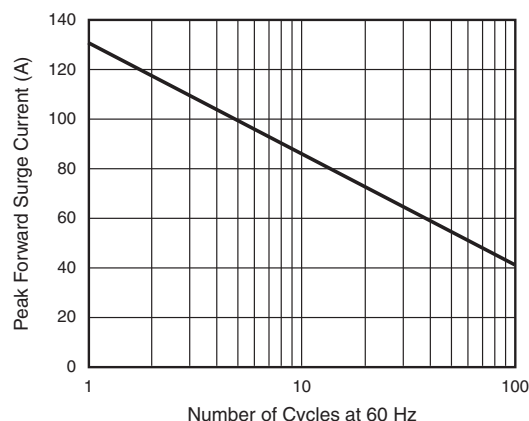


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current



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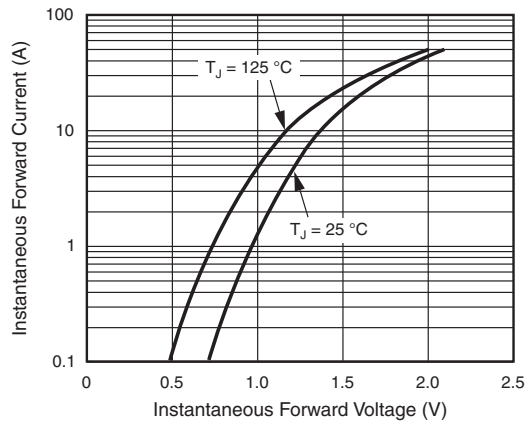


Figure 3. Typical Forward Voltage

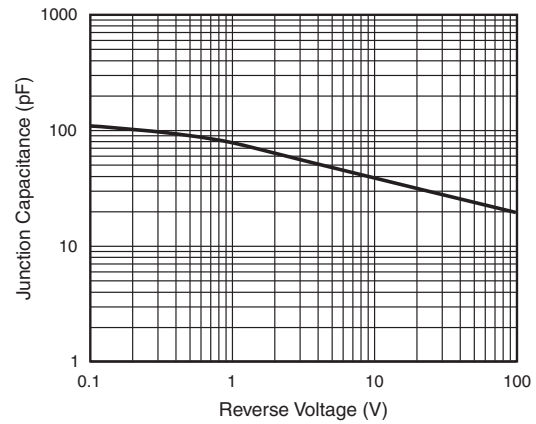


Figure 5. Typical Capacitance

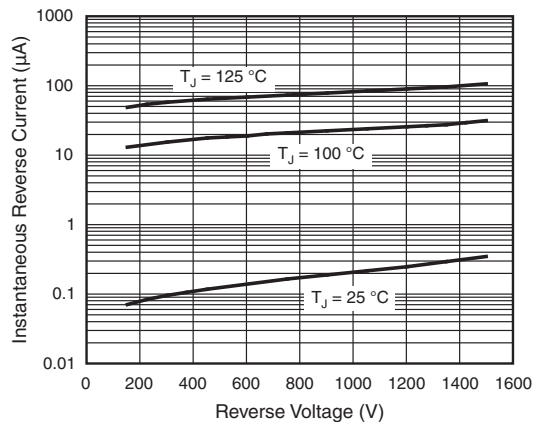


Figure 4. Typical Reverse Current

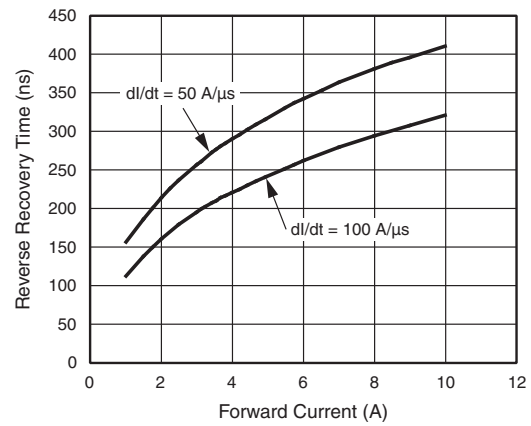


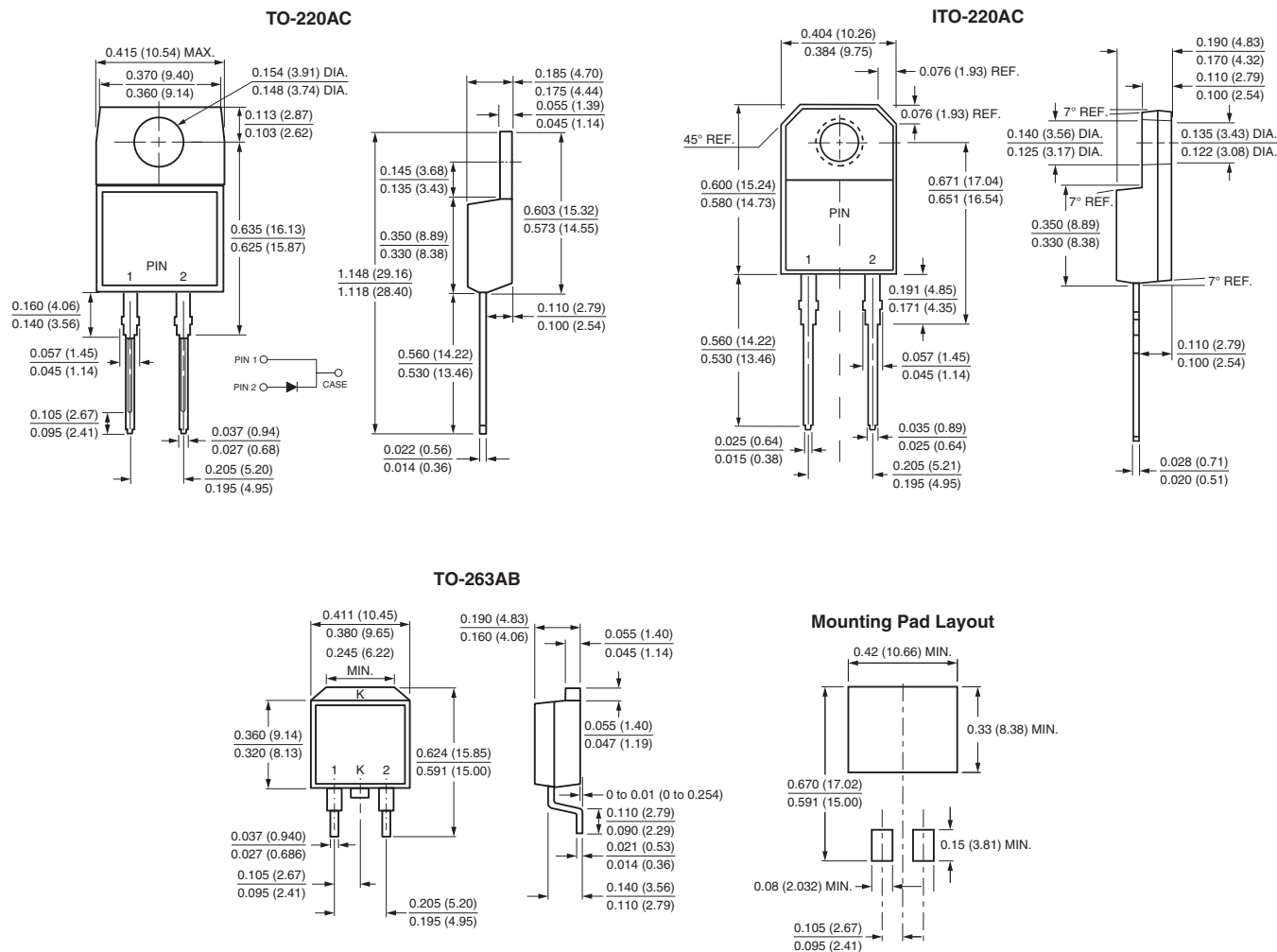
Figure 6. Typical Reverse Recovery Time

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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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