

### BY428

# Damper Diode SOD-64

#### **FEATURES:**

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number
- Available Non-RoHS (standard) or RoHS compliant (add PBF suffix)

#### **MAXIMUM RATINGS**

Parameter	Symbol	Min	Max	Unit
Non-repetitive peak reverse voltage	$V_{RSM}$	-	1500	Volts
Repetitive peak reverse voltage	$V_{RRM}$	-	1500	Volts
Continuous reverse voltage	$V_R$	-	1400	Volts
Working peak forward current $T_{tp} = 80^{\circ}\text{C, lead length} = 10\text{mm}$	I <sub>FWM</sub>	-	4	Amps
Repetitive peak forward current	I <sub>FRM</sub>	-	8	Amps
Non-repetitive peak forward current $t = 10ms$ half sinewave, $T_J = T_{Jmax}$ prior to surge $V_R = V_{RRMmax}$	I <sub>FSM</sub>	-	50	Amps
Storage temperature		-65	+175	°C
Junction temperature	T <sub>J</sub>	-65	+150	°C
Thermal resistance, junction to tie-point Lead length = 10mm		-	25	KW
Thermal resistance, junction to ambient				
Device mounted on epoxy galss printed circuit board: 1.5mm thick; of Cu layer $\geq$ 40 $\mu$ m Mounted with additional printed circuit board for heat sink purposes	$R_{thj-a}$	-	75 40	K/W

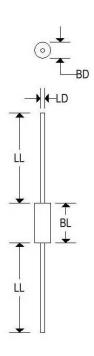
#### ELECTRICAL CHARACTERISTICS @ 25°C unless otherwise noted

Parameter	Symbol	Value	Unit
Maximum forward voltage $I_F = 4A, T_J = T_{Jmax}$ $I_F = 4A$	$V_{\scriptscriptstyle F}$	1.6 1.95	Volts
$\begin{aligned} & \textbf{Maximum reverse current} \\ & \textbf{V}_{R} = \textbf{V}_{Rmax}, \textbf{T}_{J} = \textbf{150}^{\circ}\textbf{C} \end{aligned}$	I <sub>R</sub>	150	μА
Maximum reverse recovery time $ When switched from \ I_F = 0.5A \ to \ I_R = 1A, \ measured \ at \ I_R = 0.25A $	t <sub>rr</sub>	250	ns
Maximum forward recovery time When switched to $I_F = 5A$ in 50ns, $T_J = T_{Jmax}$	t <sub>fr</sub>	250	ns



#### **MECHANICAL CHARACTERISTICS**

Case	SOD-64
Marking	Alpha-numeric
Polarity	Cathode band



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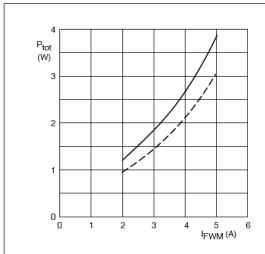
Damper Diode SOD-64

	SOD-64					
	Inches		Millimeters			
	Min	Max	Min	Max		
BD	0.169	0.250	4.300	6.350		
BL	1,51	0.300	- 15	7.620		
LD	0.048	0.053	1.219	1.350		
LL	1.024	1.102	26.000	28.000		



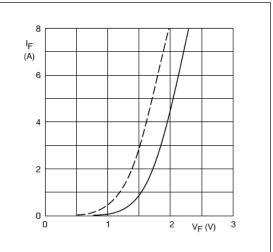
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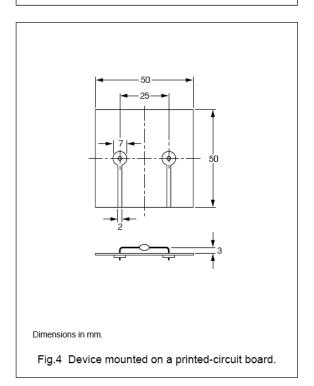
Solid line: basic high-voltage E/W modulator circuit; see Fig.8. Dotted line: basic conventional horizontal deflection circuit; see Fig.9. Curves include power dissipation due to switching losses.

Fig.2 Maximum total power dissipation as a function of working peak forward current.



Dotted line:  $T_j$  = 150 °C. Solid line:  $T_j$  = 25 °C.

Fig.3 Forward current as a function of forward voltage; maximum values.



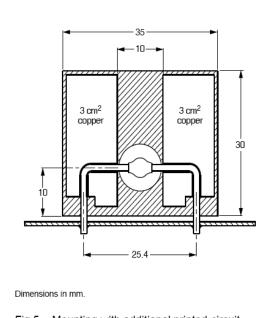
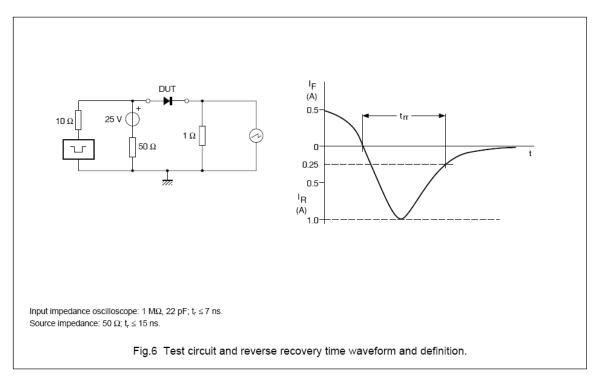


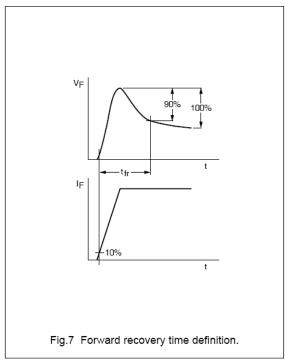
Fig.5 Mounting with additional printed-circuit board for heat sink purposes.



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