

Silicon Diode

BYT108/400

400V / 40A

DATASHEET

OEM – Temic

Source: Temic Datasheet Paperware

Maximum thermal resistances

Junction case	R_{thJC}	2.4	K/W
Junction ambient	R_{thJA}	85	K/W

Characteristics

		Typ.	Max.
$T_J = 25^\circ\text{C}$, unless otherwise specified			
Forward voltage			
$I_F = 8\text{ A}$	V_F	1.3	V
$I_F = 8\text{ A}, T_J = 100^\circ\text{C}$	V_F	1.2	V
Reverse current			
$V_R = V_{RRM}$	I_R	5	μA
$V_R = V_{RRM}, T_J = 150^\circ\text{C}$	I_R	1	mA
Forward recovery time			
$I_F = 8\text{ A}, di_F/dt \leq 50\text{ A}/\mu\text{s}$	t_{fr}	350	ns
Turn ON transient peak voltage, Fig.1	V_{FP}	4	V
Turn OFF switching characteristic Fig.2			
$I_F = 8\text{ A}, di_F/dt \leq -50\text{ A}/\mu\text{s},$			
$V_{Batt} = 200\text{V}$			
Reverse recovery current	I_{RM}	5	A
Reverse recovery time	t_{IRM}	100	ns
$I_F = 0.5\text{A}, I_R = 1\text{A}, i_R = 0.25\text{A}$	t_{rr}	35	ns

Turn OFF switching characteristic Fig.2

$$I_F = 1 \text{ A, } di_F/dt \leq -50 \text{ A}/\mu\text{s,}$$

$$V_{\text{Batt}} = 200 \text{ V,}$$

	Typ.	Max.
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Reverse recovery current	I_{RM}	1.9	A
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Reverse recovery time	t_{rr}	58	ns
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$$i_R = 0,25 \times I_{\text{RM}}$$

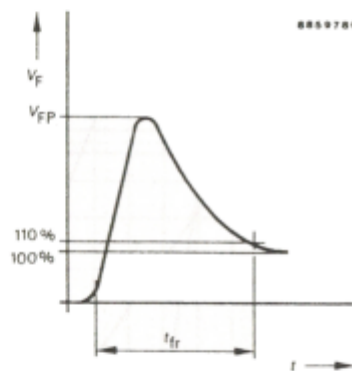


Fig. 1 Turn ON transient peak voltage

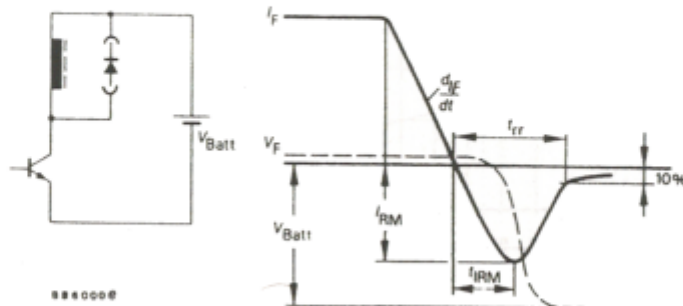
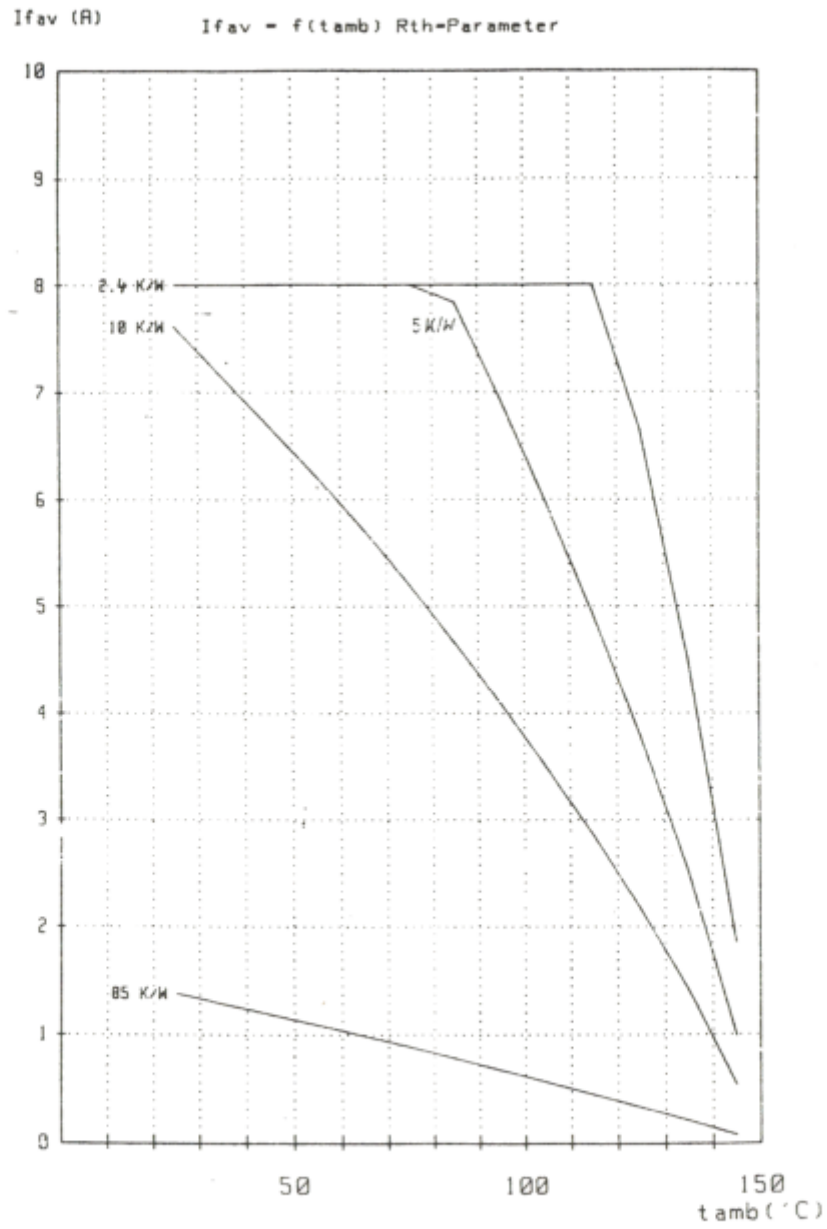
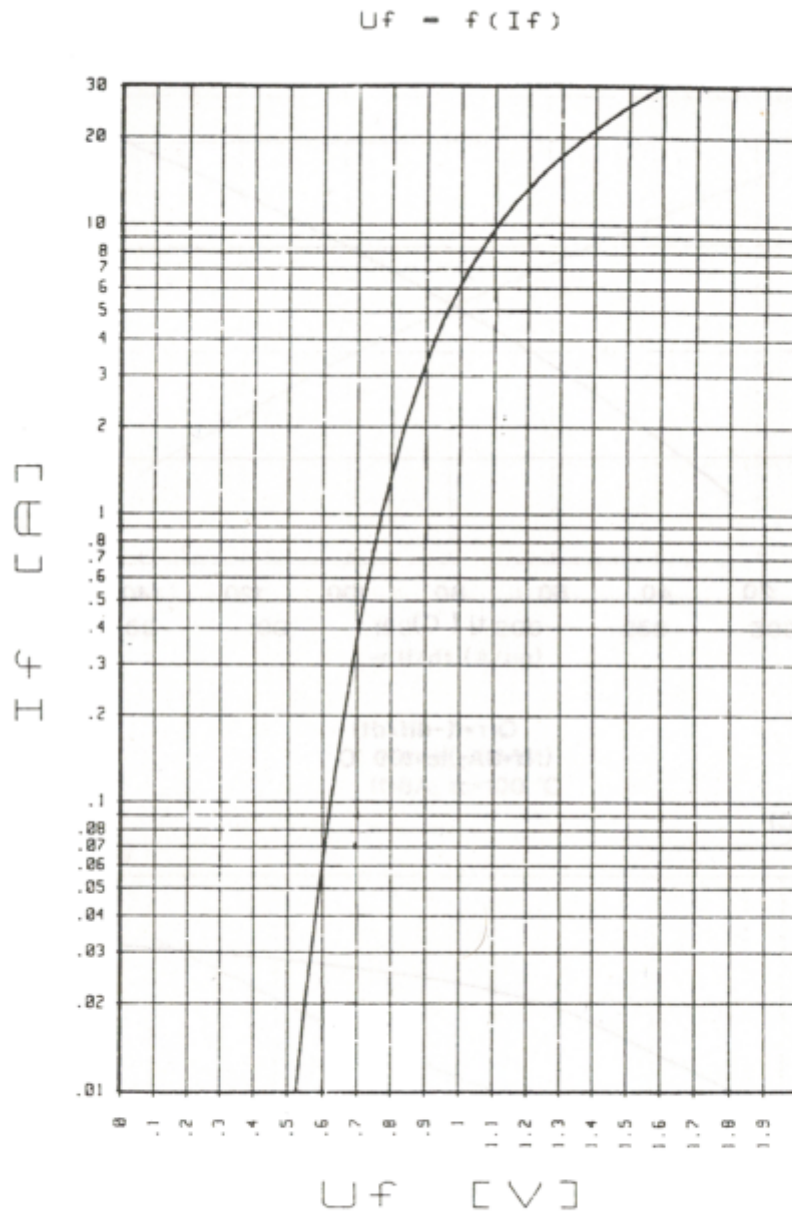
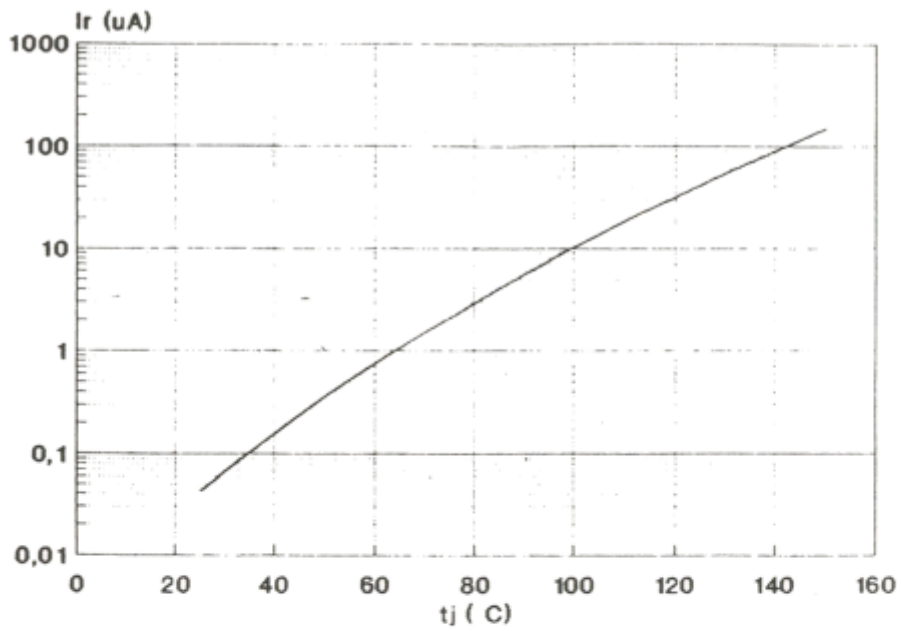
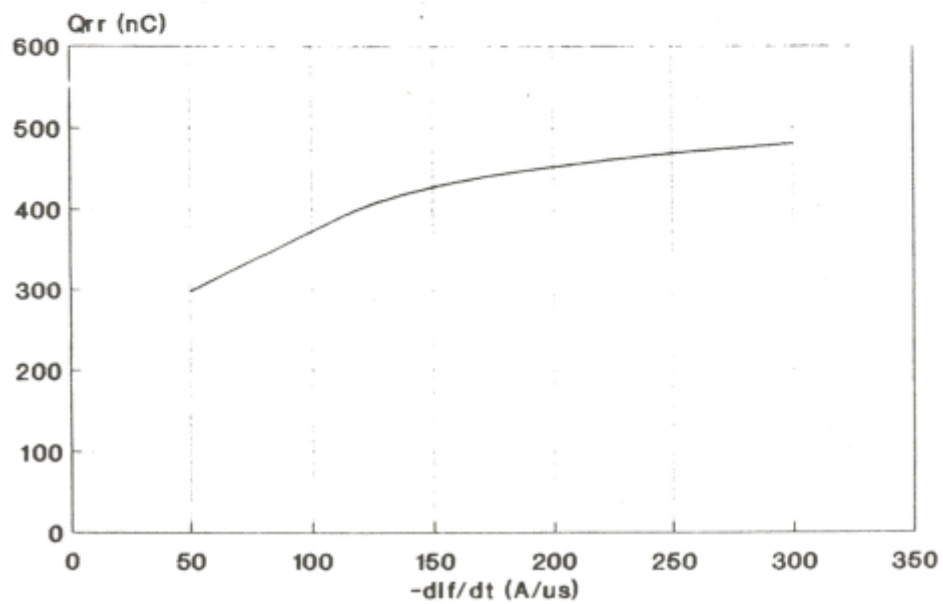


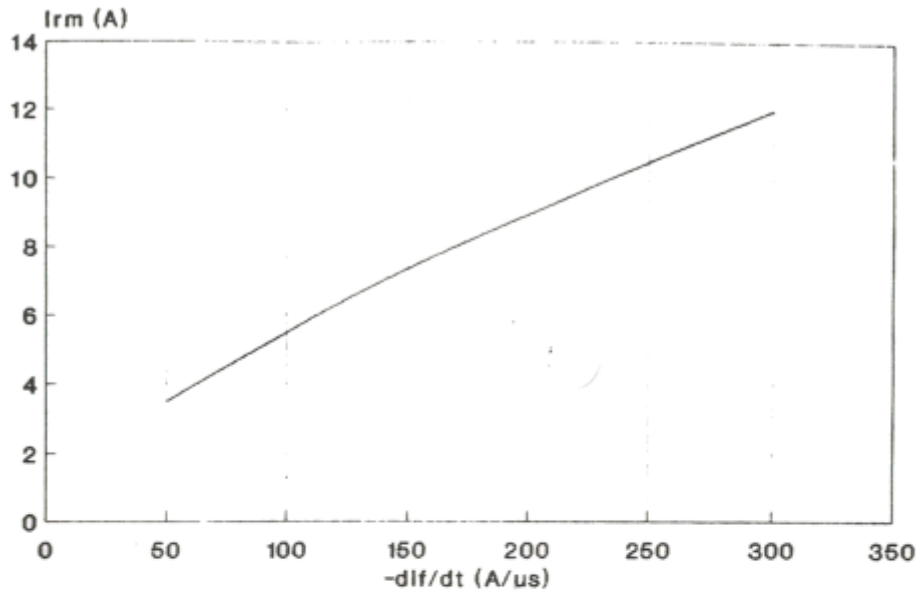
Fig. 2 Test circuit



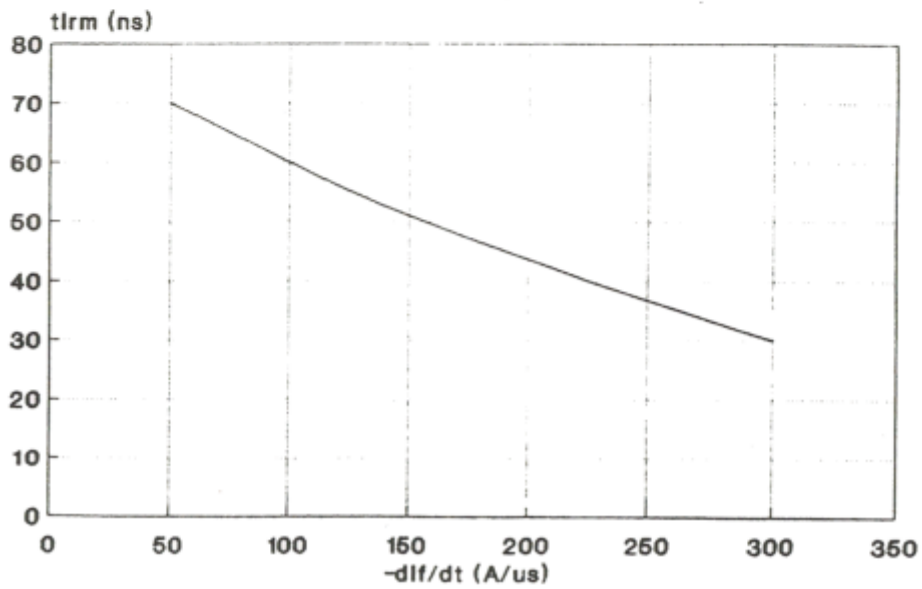


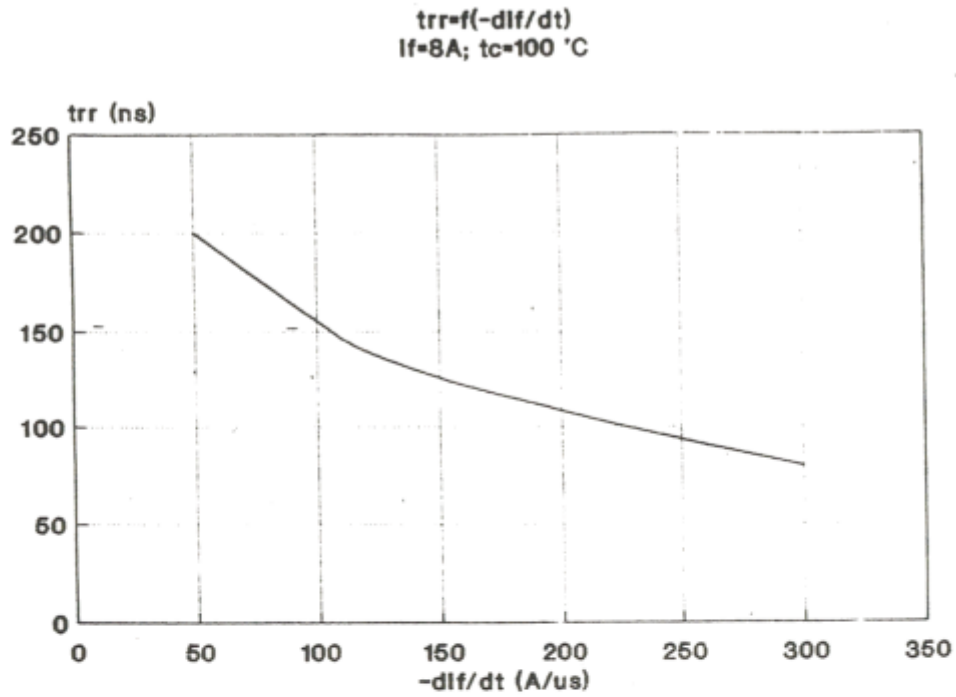
$I_r=f(t_j)$  $Q_{rr}=f(-di_f/dt)$
 $I_f=8\text{A}; t_c=100^{\circ}\text{C}$ 

$I_{rm} = f(-di/dt)$
 $I_f = 8A; t_c = 100^\circ C$



$t_{irm} = f(-di/dt)$
 $I_f = 8A; t_c = 100^\circ C$





We reserve the right to improve technical design
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