

Ultra Fast Recovery Silicon Power Diode

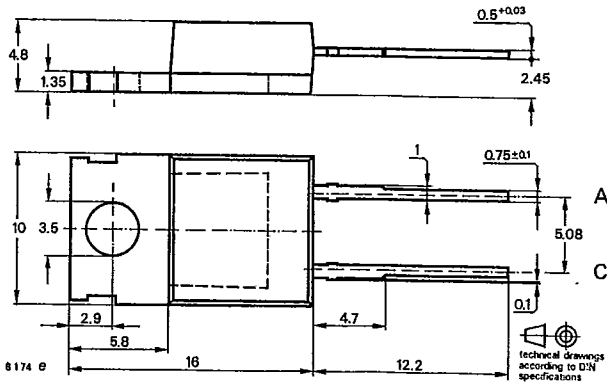
T-03-17

Application: Fast switched mode power supplies, freewheeling and snubber diode in motorcontrol circuits

Features:

- Multiple diffusion
- High voltage
- High current
- Glass passivated junction
- Fast forward recovery time
- Fast reverse recovery time

Dimensions in mm



Cathode connected with metallic surface
Plastic case
DO 220
Weight max. 2.5 g

Accessories: Isolating washer No. 564542

Absolute maximum ratings

BYT 86-600 BYT 86-800 BYT 86-1000

Reverse voltage,					
Repetitive peak reverse voltage	$V_{R'} V_{RRM}$	600	800	1000	V
Surge forward current	I_{FSM}		90		A
Repetitive peak current	I_{FRM}		25		A
Average forward current	I_{FAV}		8		A
Junction temperature	T_j		150		°C
Storage temperature range	T_{stg}		- 65 ... + 150		°C

Maximum thermal resistance

Junction case	R_{thJC}		2.4		K/W
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T-03-17

Characteristics	Min.	Typ.	Max.
$T_j = 25^\circ\text{C}$, unless otherwise specified			
Forward voltage			
$I_F = 8\text{ A}$	V_F		1.8 V
$I_F = 8\text{ A}, T_j = 100^\circ\text{C}$	V_F		1.8 V
Reverse current			
$V_R = V_{RRM}$	I_R		10 μA
$V_R = V_{RRM}, T_j = 100^\circ\text{C}$	I_R		0.2 mA
Forward recovery time			
$I_F = 8\text{ A}, \frac{dI_F}{dt} \leq 50\text{ A}/\mu\text{s}$	t_{fr}	350	ns
Turn ON transient peak voltage, Fig. 1			
	V_{FP}	7	V
Turn OFF switching characteristic Fig. 2			
$I_F = 8\text{ A}, \frac{dI_F}{dt} = -100\text{ A}/\mu\text{s}, V_{Batt} = 200\text{ V}$			
Reverse recovery current			
	I_{RM}	12	A
Reverse recovery time			
	t_{rr}	150	ns
	t_{IRM}	110	ns
$I_F = 0.5\text{ A}, I_R = 1\text{ A}, i_r = 0.25\text{ A}$	t_{rr}		80 ns

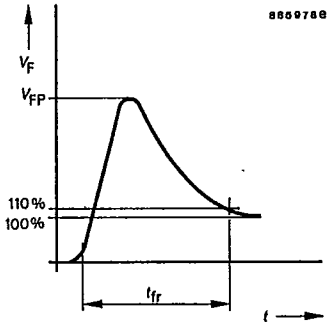


Fig. 1 Turn ON transient peak voltage

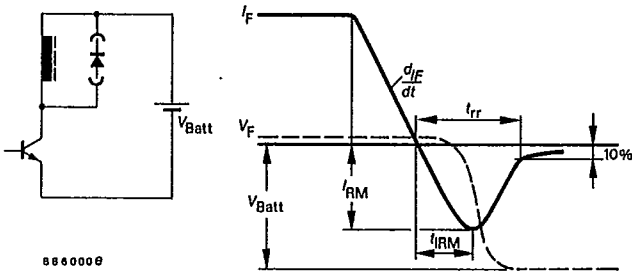


Fig. 2 Test circuit

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T-03-17

