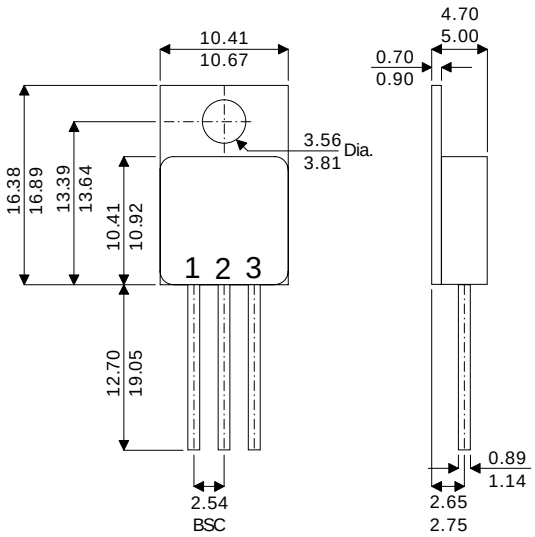
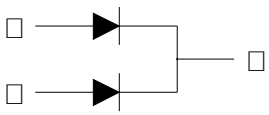
BYT08-400-220M

MECHANICAL DATA
Dimensions in mm



TO220 METAL PACKAGE

Common Cathode



1 = A_1 Anode 1
2 = K Cathode
3 = A_2 Anode 2

DUAL FAST RECOVERY RECTIFIER IN TO220 METAL PACKAGE FOR HI–REL APPLICATIONS

FEATURES

- **HERMETIC TO220 METAL PACKAGE**
- **ISOLATED CASE**

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{RRM}	Repetitive Peak Reverse Voltage		400V
V_{RSM}	Non Repetitive Peak Reverse Voltage		440V
I_{FRM}	Repetitive Peak Forward Current	$t_p \leq 10\mu s$	130A
$I_{F(RMS)}$	RMS Forward Current		16A
$I_{F(AV)}$	Average Forward Current	δ = 0.5 , T_{case} = 105°C	8A
I_{FSM}	Non Repetitive Surge Forward Current	t_p = 10 ms (sinusoidal)	100A
P	Power Dissipation	T_{case} = 80°C	20W
T_j , T_{stg}	Storage and Junction Temperature Range		–40 to 150°C
$R_{\theta JC}$	Thermal Resistance Junction to Case		3.5°C / W

CAUTION — Electrostatic Sensitive Devices. Anti-Static Procedures Must Be Followed.

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ELECTRICAL CHARACTERISTICS (T_{amb} = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
STATIC CHARACTERISTICS							
V_F	Forward Voltage	I_F = 8A	T_j = 25°C			1.5	V
		I_F = 8A	T_j = 100°C			1.4	
I_R	Reverse Current	$V_R = V_{RRM}$	T_j = 25°C			1.5	µA
		$V_R = V_{RRM}$	T_j = 100°C			2.5	mA
RECOVERY CHARACTERISTICS							
t_{rr}	Reverse Recovery Time	I_F = 1A, dI_F/dt = –15A/µs	V_R = 30V, T_j = 25°C			75	ns
		I_F = 0.5A, I_{rr} = 0.25A	I_R = 1A, T_j = 25°C			35	
TURN–OFF SWITCHING CHARACTERISTICS (Without Series Inductance)							
t_{IRM}	See figure 1	V_{CC} = 200V, I_F = 0.5A, $L_P \leq 0.05\mu H$, T_j = 100°C	dI_F/dt = –32A/µs			75	ns
			dI_F/dt = –64A/µs		50		
I_{RM}	See figure 2		dI_F/dt = –32A/µs			2.2	A
			dI_F/dt = –64A/µs		2.8		
TURN–OFF OVERVOLTAGE COEFFICIENT (With Series Inductance)							
$C = \frac{V_{RP}}{V_{CC}}$		V_{CC} = 120V, dI_F/dt = –8A/µs, L_P = 9µH	$I_F = I_{F(AV)}$, T_j = 100°C, Note 1		3.3		—

Notes

1. To evaluate the conduction losses use the following equations:

$V_F = 1.1 + 0.024I_F$ $\qquad P = 1.1x\ I_{F(AV)} + 0.024I_F{}^2{}_{(RMS)}$

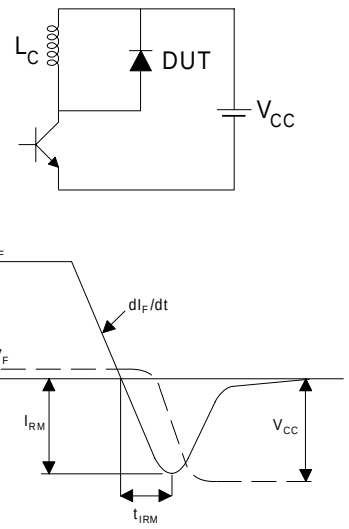

Figure 1: Turn off switching characteristics. (without series inductance)

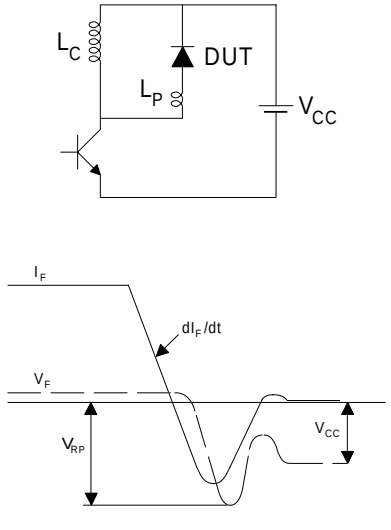

Figure 2: Turn off switching characteristics. (with series inductance)

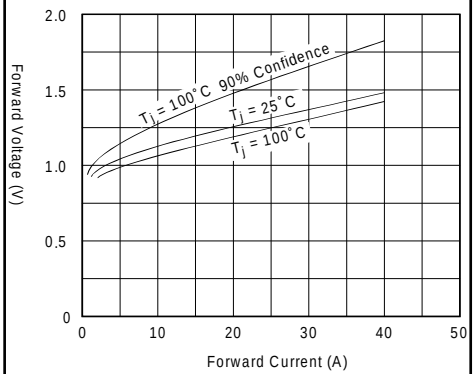

Figure 3: Voltage Drop versus Forward Current.