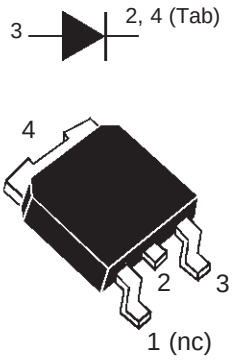
BYT3400B(-TR)

FAST RECOVERY RECTIFIER DIODE

MAIN PRODUCT CHARACTERISTICS

$I_{F(AV)}$	3 A
V_{RRM}	400 V
V_F (max)	1.4 V



DPAK
(Plastic)

FEATURES AND BENEFITS

- VERY LOW REVERSE RECOVERY TIME
- VERY LOW SWITCHING LOSSES
- LOW NOISE TURN-OFF SWITCHING
- SURFACE MOUNT PACKAGE
- TAPE AND REEL OPTION : -TR

DESCRIPTION

Single high voltage rectifier suited to Switch Mode Power Supplies and other power converters.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive peak reverse voltage		400	V
$I_{F(RMS)}$	RMS forward current		10	A
$I_{F(AV)}$	Average forward current	Tcase = °C δ = 0.5	3	A
I_{FSM}	Surge non repetitive forward current	tp = 10 ms Sinusoidal	60	A
Tstg	Storage temperature range		- 40 to + 150	°C
Tj	Maximum junction temperature		150	°C

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{TH\ (j-c)}$	Junction to case	TBD	°C/W

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Tests Conditions	Tests Conditions		Min.	Typ.	Max.	Unit
I_R *	Reverse leakage current	Tj = 25°C	$V_R = V_{RRM}$			20	µA
		Tj = 100°C				0.5	mA
V_F **	Forward voltage drop	Tj = 25°C	I_F = 3 A			1.5	V
		Tj = 100°C	I_F = 3 A			1.4	

Pulse test : * tp = 5 ms, δ < 2 %
** tp = 380 µs, δ < 2%

RECOVERY CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
t_{rr}	Tj = 25°C	I_F = 0.5A I_R = 1A	Irr = 0.25A			25	ns
		I_F = 1A V_R = 30V	dI_F/dt = -15 A/µs			60	ns

TURN-OFF SWITCHING CHARACTERISTICS

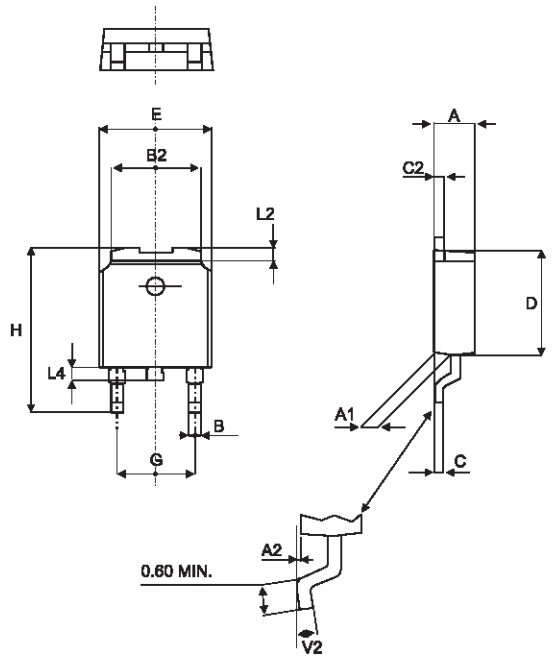
Symbol	Test Conditions			Min.	Typ.	Max.	Unit
t_{IRM}	Vcc = 200V Tj = 100°C	I_F = 3A dI_F/dt = -50 A/µs	Lp ≤ 0.05µH		35	50	ns
I_{RM}					1.5	2	A

To evaluate the maximum conduction losses use the following equation :

$P = 1.1 \times I_{F(AV)} + 0.08\ I_F{}^2{}_{(RMS)}$

PACKAGE MECHANICAL DATA

DPAK



REF.	DIMENSIONS			
	Millimeters		Inches	
	Min.	Max	Min.	Max.
A	2.20	2.40	0.086	0.094
A1	0.90	1.10	0.035	0.043
A2	0.03	0.23	0.001	0.009
B	0.64	0.90	0.025	0.035
B2	5.20	5.40	0.204	0.212
C	0.45	0.60	0.017	0.023
C2	0.48	0.60	0.018	0.023
D	6.00	6.20	0.236	0.244
E	6.40	6.60	0.251	0.259
G	4.40	4.60	0.173	0.181
H	9.35	10.10	0.368	0.397
L2	0.80 typ.		0.031 typ.	
L4	0.60	1.00	0.023	0.039
V2	0°	8°	0°	8°

FOOT PRINT (in millimeters)