

FAST RECOVERY RECTIFIER DIODE

MAIN PRODUCT CHARACTERISTICS

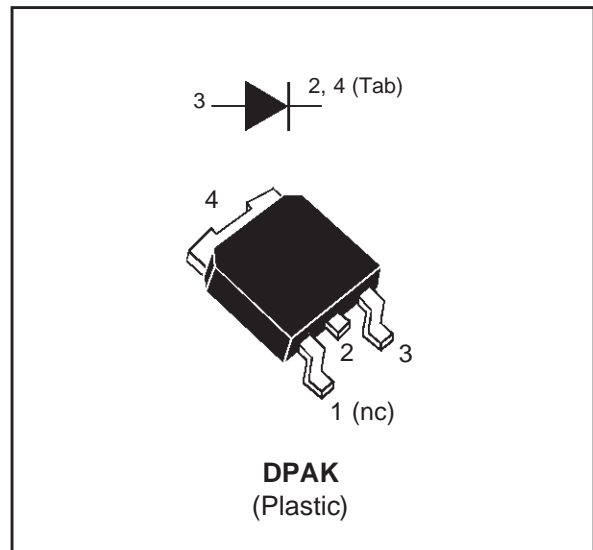
$I_{F(AV)}$	3 A
V_{RRM}	400 V
$V_F (max)$	1.4 V

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	$T_{case} = ^\circ C \quad \delta = 0.5$	3	A
I_{FSM}	Surge non repetitive forward current	$t_p = 10 \text{ ms}$ Sinusoidal	60	A
T_{stg}	Storage temperature range		- 40 to + 150	$^\circ C$
T_j	Maximum junction temperature		150	$^\circ C$

THERMAL RESISTANCES

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

STATIC ELECTRICAL CHARACTERISTICS

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

Pulse test : * $t_p = 5 \text{ ms}$, $\delta < 2 \%$

** $t_p = 380 \mu s$, $\delta < 2\%$

BYT3400B(-TR)

RECOVERY CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
t_{rr}	$T_j = 25^{\circ}\text{C}$	$I_F = 0.5\text{A}$ $I_R = 1\text{A}$	$I_{rr} = 0.25\text{A}$			25	ns
		$I_F = 1\text{A}$ $V_R = 30\text{V}$	$dI_F/dt = -15\text{ A}/\mu\text{s}$			60	ns

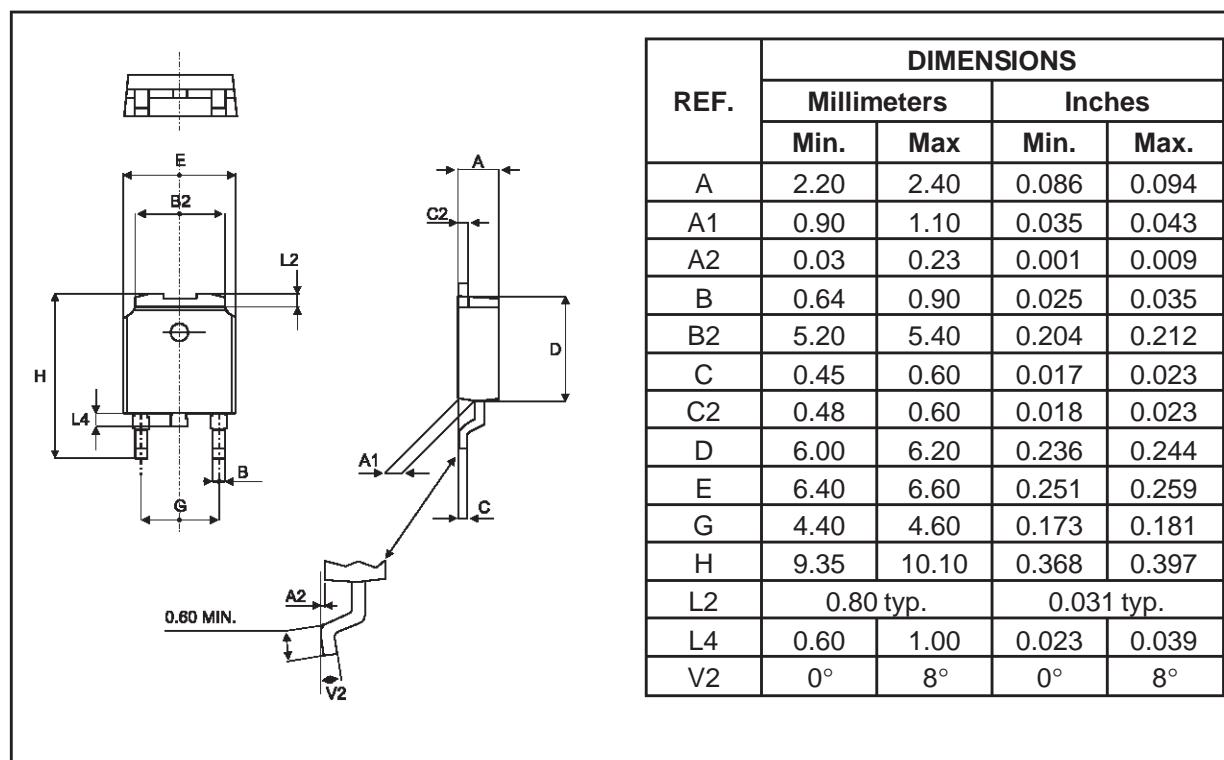
TURN-OFF SWITCHING CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
t_{IRM}	$V_{CC} = 200\text{V}$ $T_j = 100^{\circ}\text{C}$	$I_F = 3\text{A}$ $dI_F/dt = -50\text{ A}/\mu\text{s}$	$L_p \leq 0.05\mu\text{H}$		35	50	ns
I_{RM}					1.5	2	A

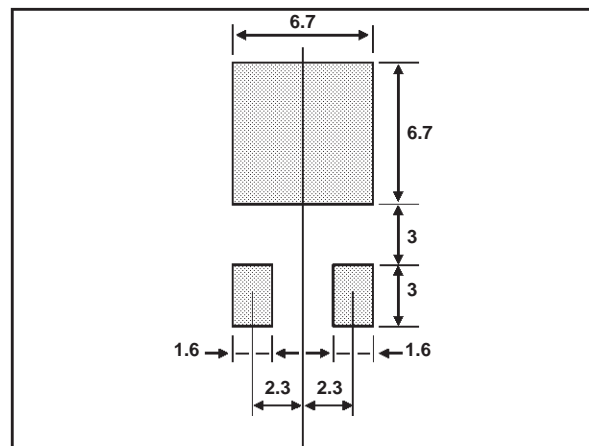
To evaluate the maximum conduction losses use the following equation :

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

PACKAGE MECHANICAL DATA **DPAK**



FOOT PRINT (in millimeters)



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