

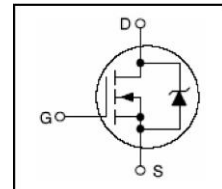
## N-Channel Enhancement Mode Field Effect Transistor

### Features

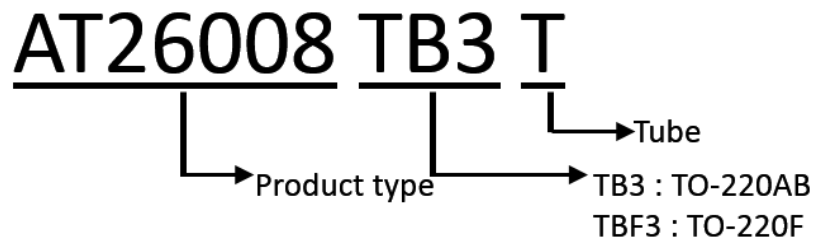
$V_{(BR)DSS}$	$R_{DS(ON)}$	$I_D$
600V	1.22Ω	8A

### Application

- High efficiency switch mode power supplies
- Electronic lamp ballasts based on half bridge
- UPS



### Order information:



### ABSOLUTE MAXIMUM RATINGS

PARAMETERS/TEST CONDITIONS	SYMBOL	LIMITS	UNITS
Drain-Source Voltage	$V_{DS}$	600	V
Drain Current –continuous @25°C	$I_D$	8	A
Drain Current –continuous @100°C	$I_D$	5	A
Pulsed Drain Current <sup>1</sup>	$I_{DM}$	32	A
Gate-Source Voltage	$V_{GS}$	±30	V
Single Pulse Avalanche <sup>2</sup>	$E_{AS}$	320	mJ
Pulsed Avalanche Rating <sup>2</sup>	$I_{AS}$	8	A
Operating Junction & Storage Temperature	$T_j, T_{stg}$	-55 to 150	°C
Lead Temperature ( <sup>1</sup> / <sub>16</sub> " from case for 10sec.)	$T_L$	300	°C

### Note:

1. Pulse width limited by maximum junction temperature.
2.  $V_{DD} = 50V, V_{DS} = 600V, R_G = 25 \Omega, T_J: 25^\circ C$

### ELECTRICAL CHARACTERISTICS

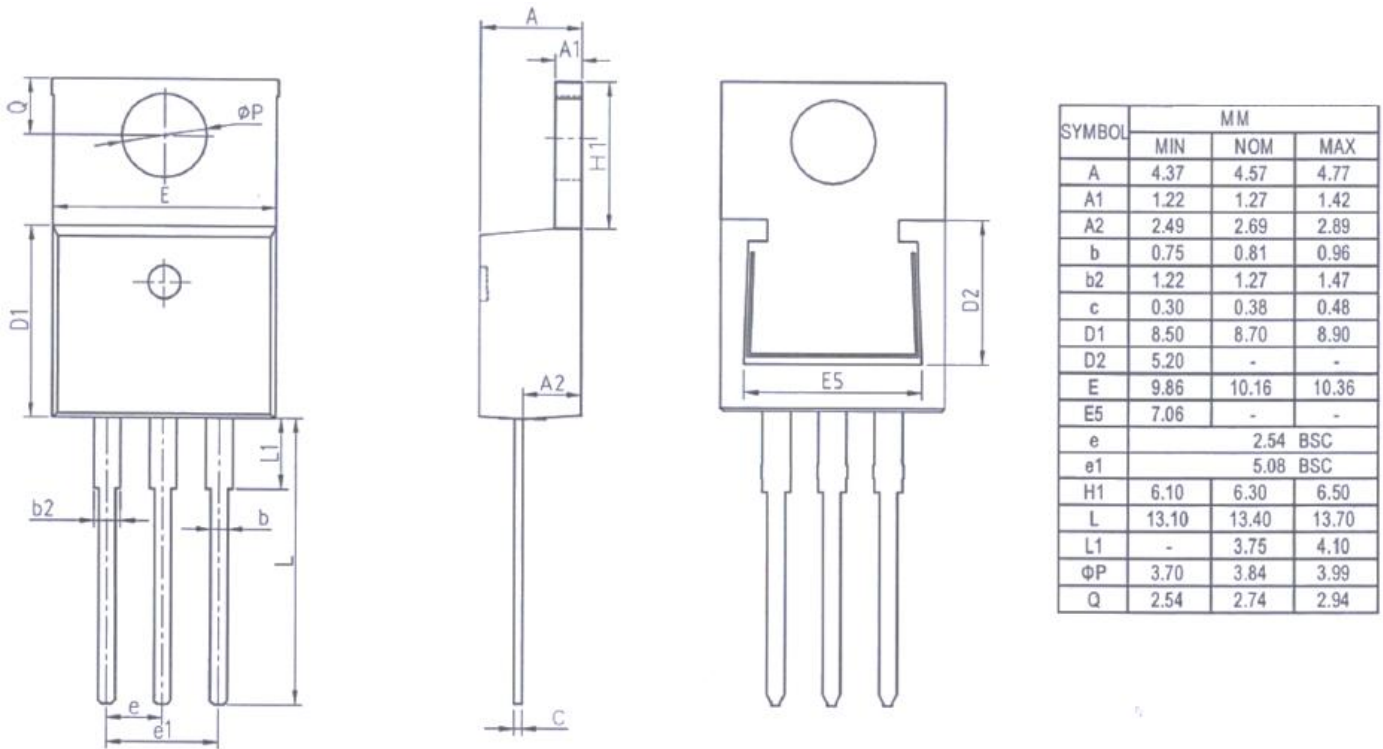
## N-Channel Enhancement Mode Field Effect Transistor

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
<b>STATIC</b>						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	600			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	2.5		4.5	
Gate-Body Leakage	$I_{GSS}$	$V_{DS} = 0V, V_{GS} = \pm 30V$			$\pm 100$	nA
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 600V, V_{GS} = 0V$			1	$\mu A$
		$V_{DS} = 600V, V_{GS} = 0V, T_j = 150^\circ C$			10	
On-State Drain Current	$R_{DS(ON)}$	$V_{GS} = 10V, I_D = 4A$		1.22	1.45	$\Omega$
<b>DYNAMIC</b>						
Input Capacitance	$C_{iss}$	$V_{GS} = 0V, V_{DS} = 25V, f = 1MHz$				pF
Output Capacitance	$C_{oss}$					
Reverse Transfer Capacitance	$C_{rss}$					
Total Gate Charge	$Q_g$	$V_{DD} = 600V, I_D = 8A, V_{GS} = 10V$				nC
Gate-Source Charge	$Q_{gs}$					
Gate-Drain Charge	$Q_{gd}$					
<b>SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (<math>T_c = 25^\circ C</math>)</b>						
Continuous Current	$I_s$				8	A
Forward Voltage	$V_{SD}$	$I_F = I_s, V_{GS} = 0V$			1.5	V
Reverse Recovery Time	$t_{rr}$	$I_s = 8A, di_F/dt = 100A / \mu S$				nS
Reverse Recovery Charge	$Q_{rr}$	$V_{GS} = 0V$				nC
<b>THERMAL DATA</b>						
Thermal Resistance Junction to Case	$R_{\theta JC}$	AT26008 (TO-220AB)			1.0	$^\circ C/W$
		AT26008 (TO-220F)			3.1	$^\circ C/W$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	AT26008 (TO-220AB)			62.5	$^\circ C/W$
		AT26008 (TO-220F)			62.5	$^\circ C/W$

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### Mechanical Dimensions

#### TO-220AB



#### TO-220F

