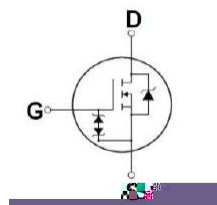
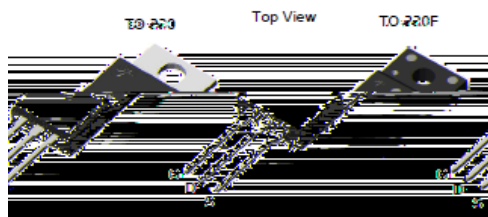


## Features

- Low gate charge
- 100% avalanche tested
- Improved dv/dt capability
- RoHS compliant
- Halogen free package
- JEDEC Qualification
- Improved ESD performance

N-channel MOSFET

$BV_{DSS}$	$I_D$	$R_{DS(on)}$
500V	4.5A	<1.5 $\Omega$



Device	Package	Marking	Remark
TMP830AZ / TMPF830AZ	TO-220 / TO-220F	TMP830AZ / TMPF830AZ	RoHS
TMP830AZG / TMPF830AZG	TO-220 / TO-220F	TMP830AZG / TMPF830AZG	Halogen Free

## Absolute Maximum Ratings

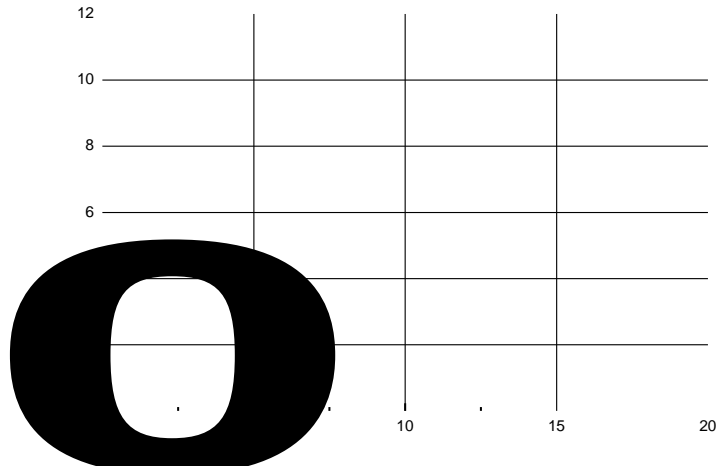
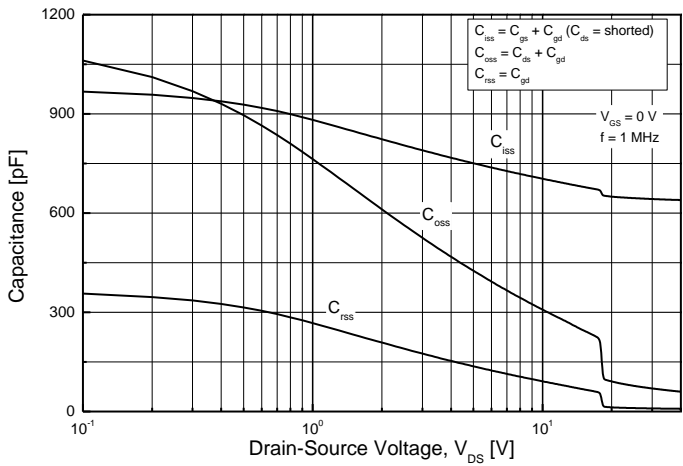
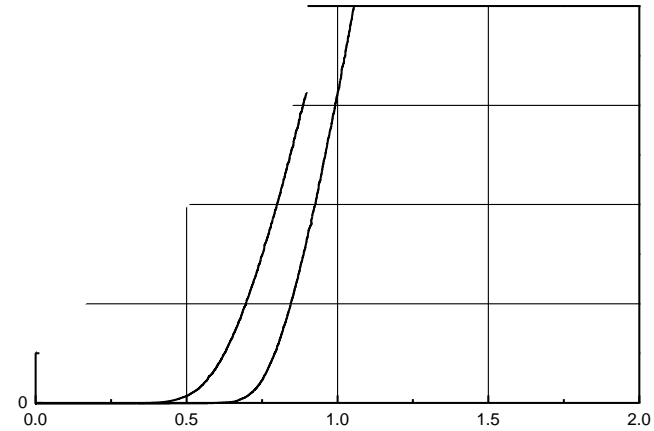
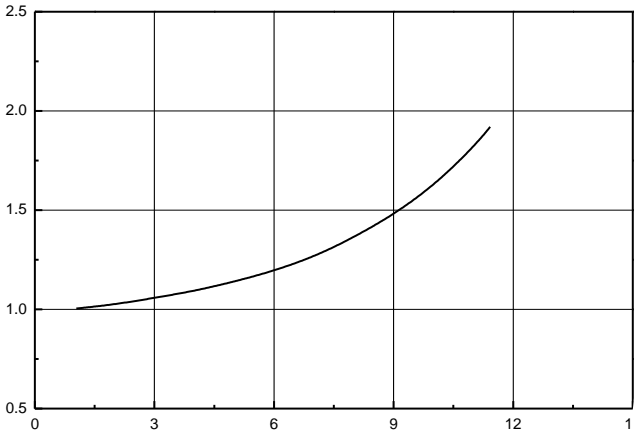
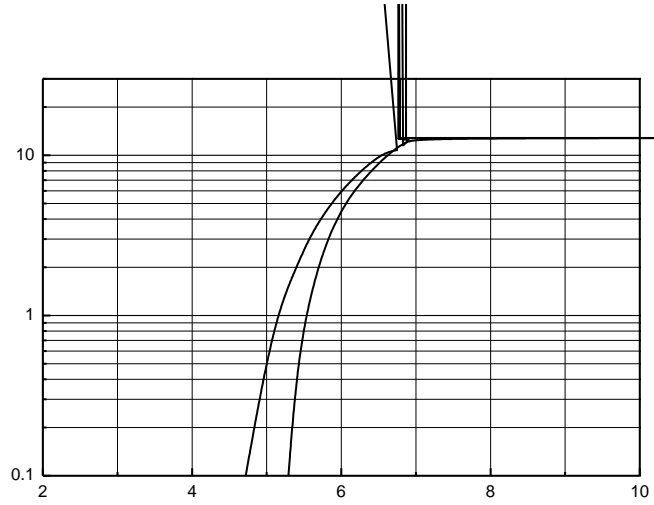
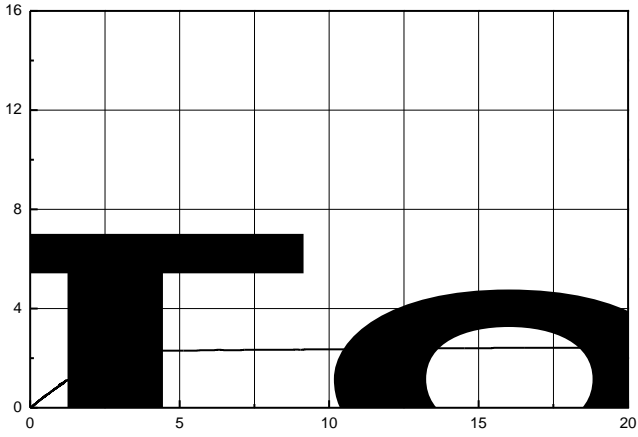
Parameter	Symbol	TMP830AZ(G)	TMPF830AZ(G)	Unit	
Drain-Source Voltage	$V_{DSS}$	500		V	
Gate-Source Voltage	$V_{GS}$	30		V	
Continuous Drain Current	$I_D$	$T_C = 25$	4.5	4.5 *	A
		$T_C = 100$	3.27	3.27 *	A
Pulsed Drain Current (Note 1)	$I_{DM}$	18	18 *	A	
Single Pulse Avalanche Energy (Note 2)	$E_{AS}$	254		mJ	
Repetitive Avalanche Current (Note 1)	$I_{AR}$	4.5		A	
Repetitive Avalanche Energy (Note 1)	$E_{AR}$	9.84		mJ	
Power Dissipation	$P_D$	$T_C = 25$	98.4	32.9	W
		Derate above 25	0.78	0.26	W/
Peak Diode Recovery dv/dt (Note 3)	dv/dt	4.5		V/ns	
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55~150			
Maximum lead temperature for soldering purposes,	$T_L$	300			

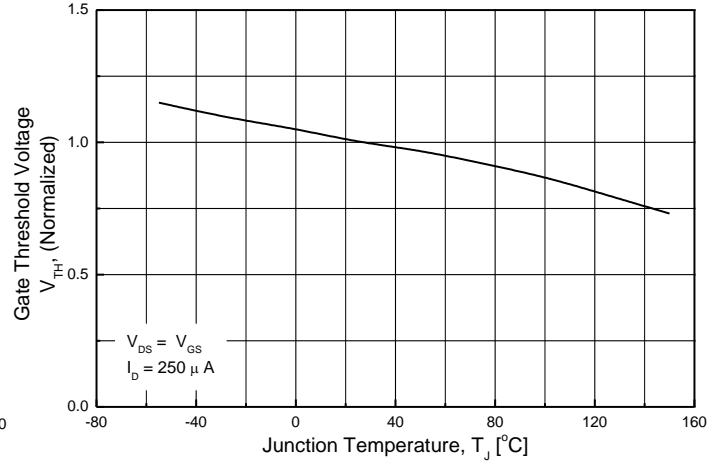
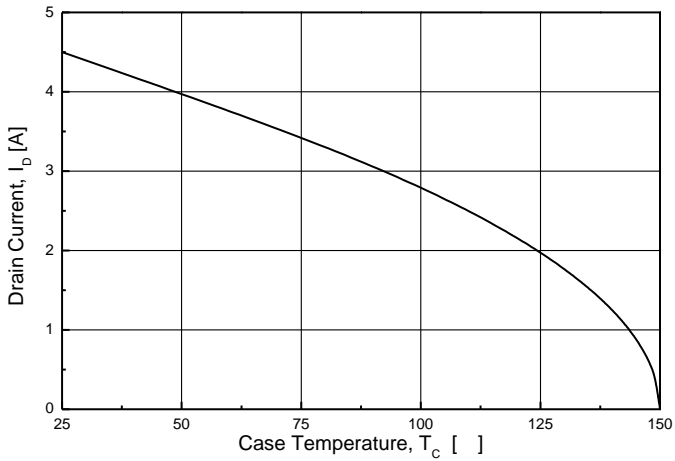
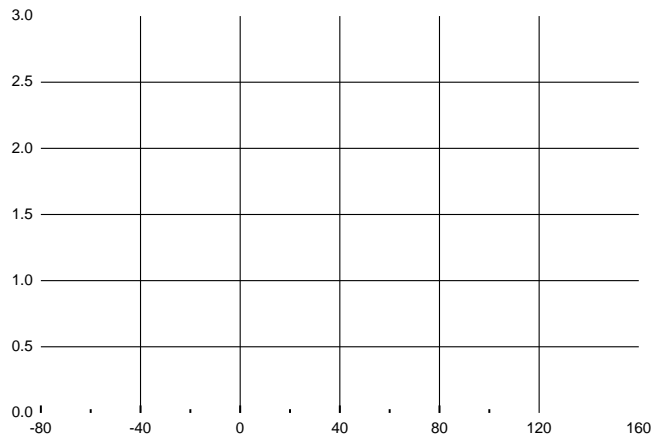
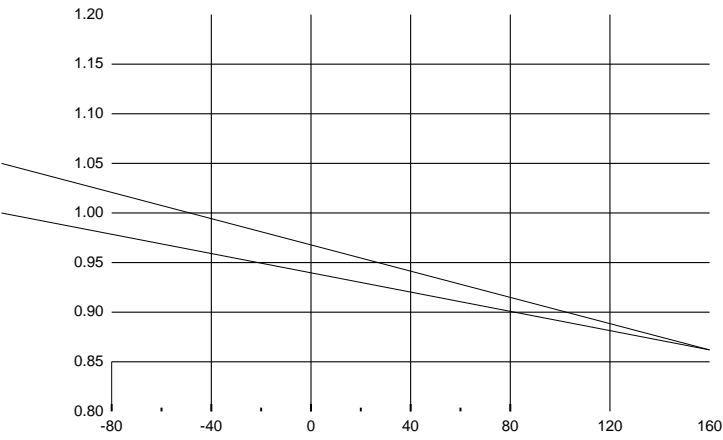
\* Limited only by maximum junction temperature

## Thermal Characteristics

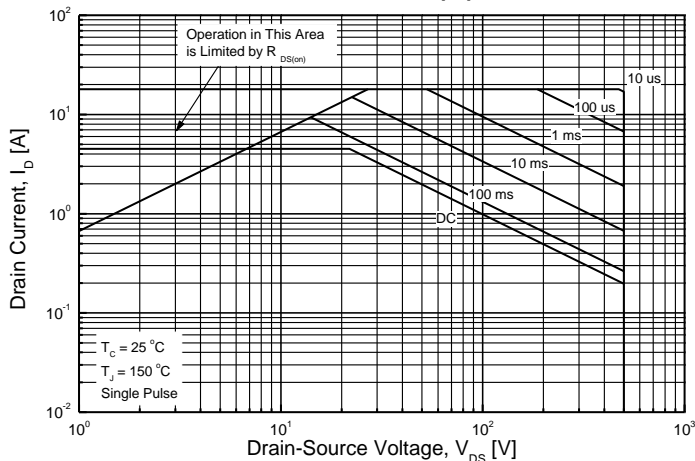
Parameter	Symbol	TMP830AZ(G)	TMPF830AZ(G)	Unit
Maximum Thermal resistance, Junction-to-Case	$R_{\theta JC}$	1.27	3.8	/W
Maximum Thermal resistance, Junction-to-Ambient	$R_{\theta JA}$	62.5	62.5	/W



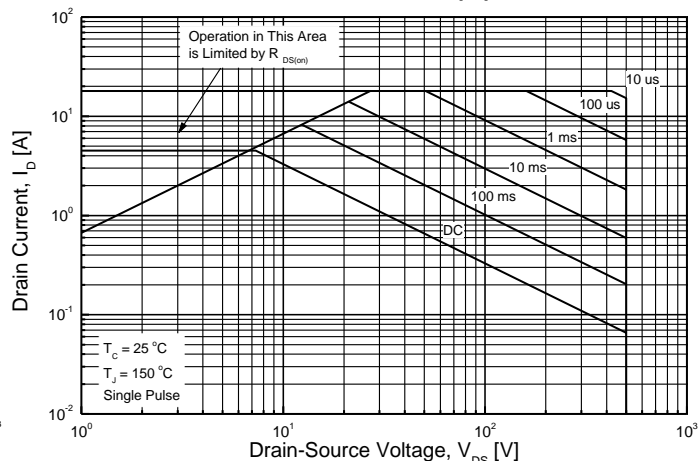


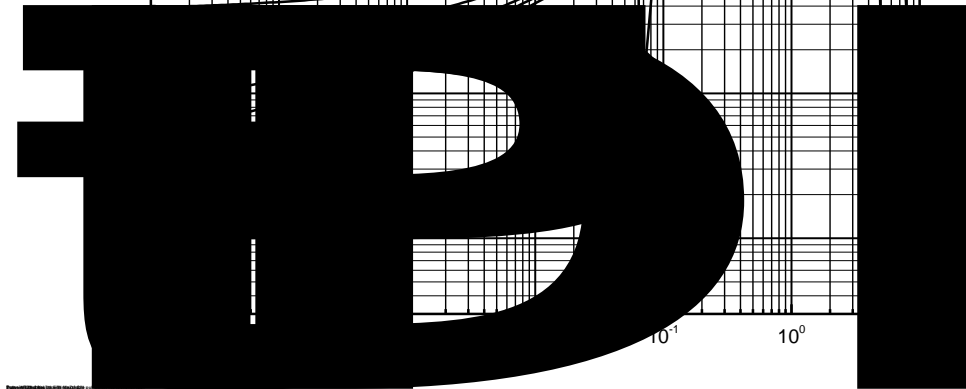
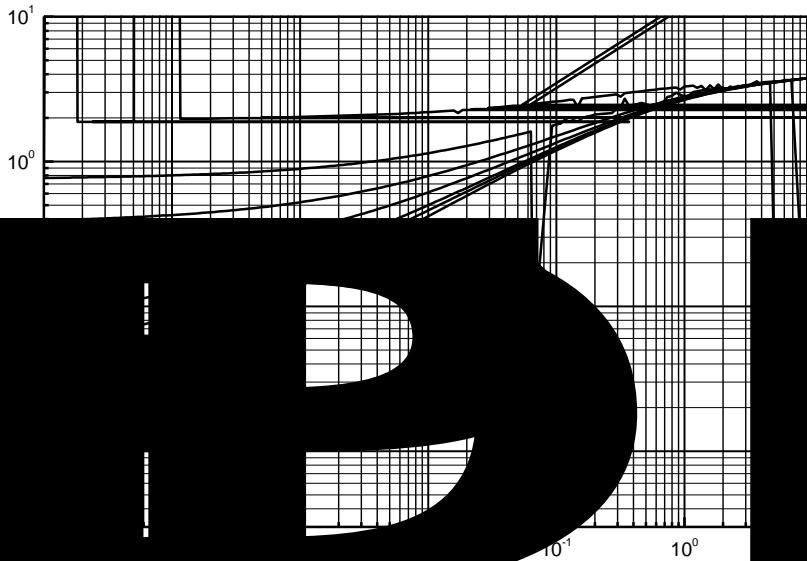
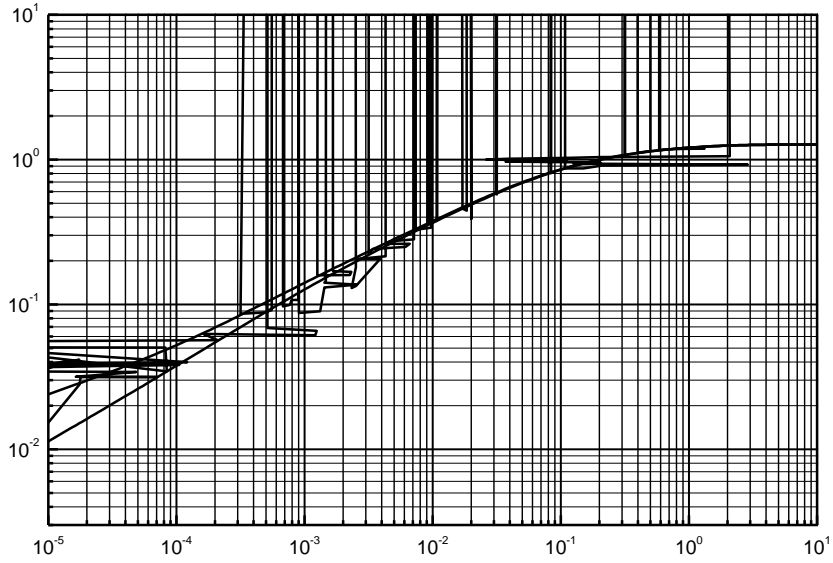


## TMP830AZ(G)

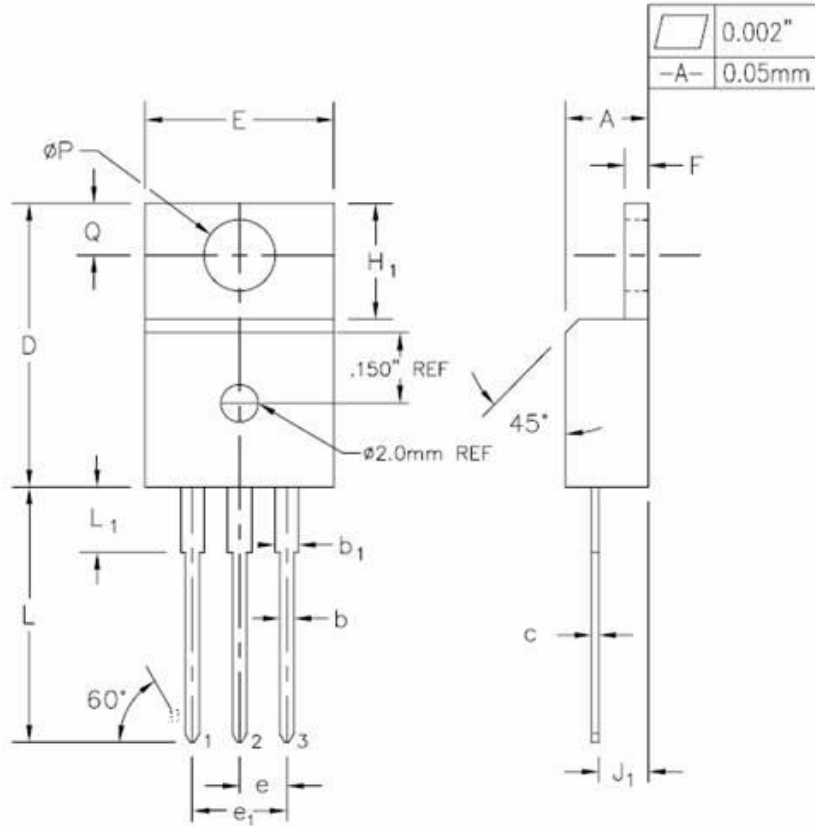


## TMPF830AZ(G)



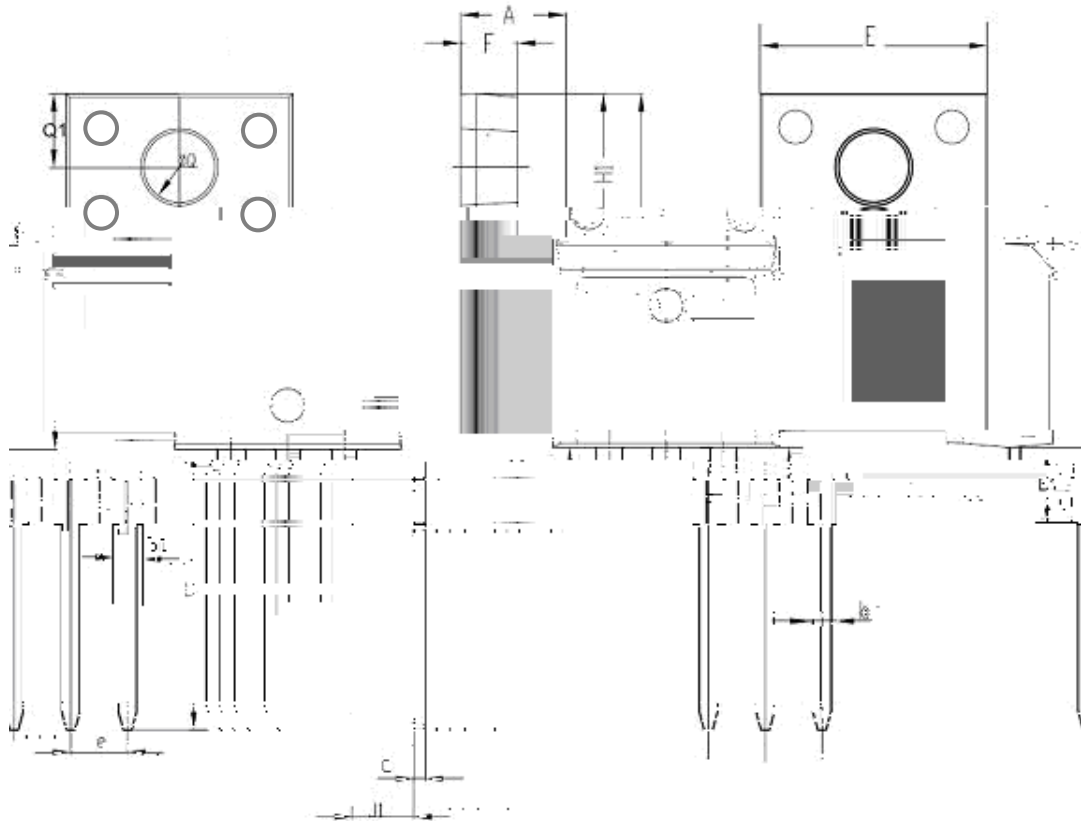


TO-220AB-3L MECHANICAL DATA



SYMBOL	INCHES		MILLIMETERS		NOTES
	MIN.	MAX.	MIN.	MAX.	
A	0.170	0.180	4.32	4.57	
b <sub>1</sub>	0.028	0.036	0.71	0.91	
b	0.045	0.055	1.15	1.39	
c	0.014	0.021	0.36	0.53	
D	0.590	0.610	14.99	15.49	
E	0.395	0.470	10.04	11.94	
e	0.100 TYP.		2.54 TYP.		
e <sub>1</sub>	0.200 BSC		5.08 BSC		
F	0.048	0.054	1.22	1.37	
H <sub>1</sub>	0.235	0.255	5.97	6.47	
J <sub>1</sub>	0.100	0.110	2.54	2.79	
L	0.530	0.550	13.47	13.97	
L <sub>1</sub>	0.130	0.150	3.31	3.81	
2	∅P	0.149	3.78	3.98	
Q	0.102	0.112	2.60	2.84	

**TO-220F-3L MECHANICAL DATA**



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