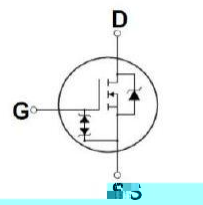
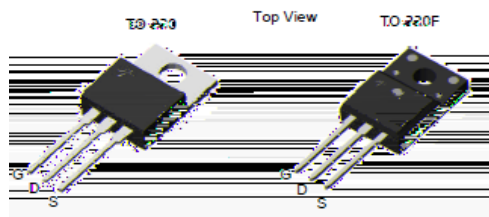


Features

- 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	$R_{DS(on)}$
650V	4.0A	< 2.4 Ω



Device	Package	Marking	Remark
TMP4N65AZ / TMPF4N65AZ	TO-220 / TO-220F	TMP4N65AZ / TMPF4N65AZ	RoHS
TMP4N65AZG / TMPF4N65AZG	TO-220 / TO-220F	TMP4N65AZG / TMPF4N65AZG	Halogen Free

Absolute Maximum Ratings

Parameter	Symbol	TMP4N65AZ(G)	TMPF4N65AZ(G)	Unit	
Drain-Source Voltage	V_{DSS}	650		V	
Gate-Source Voltage	V_{GS}	30		V	
Continuous Drain Current	I_D	$T_C = 25$	4	4 *	A
		$T_C = 100$	2.63	2.63 *	A
Pulsed Drain Current (Note 1)	I_{DM}	16	16 *	A	
Single Pulse Avalanche Energy (Note 2)	E_{AS}	206		mJ	
Repetitive Avalanche Current (Note 1)	I_{AR}	4		A	
Repetitive Avalanche Energy (Note 1)	E_{AR}	9.84		mJ	
Power Dissipation	P_D	$T_C = 25$	98.4	32.8	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	TMP4N65AZ(G)	TMPF4N65AZ(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

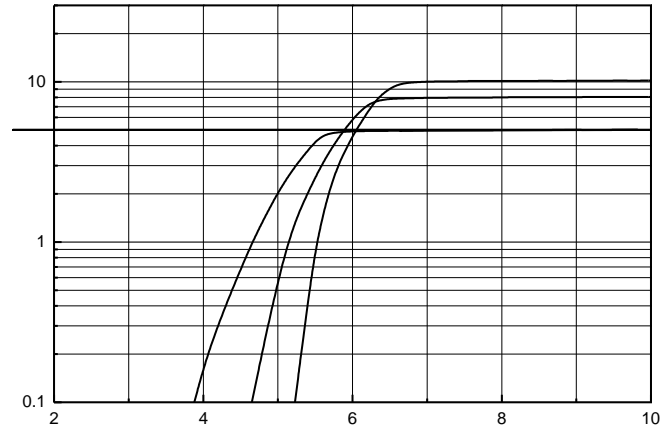
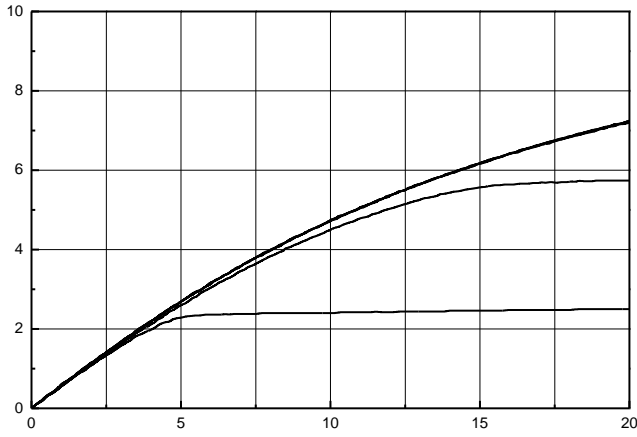
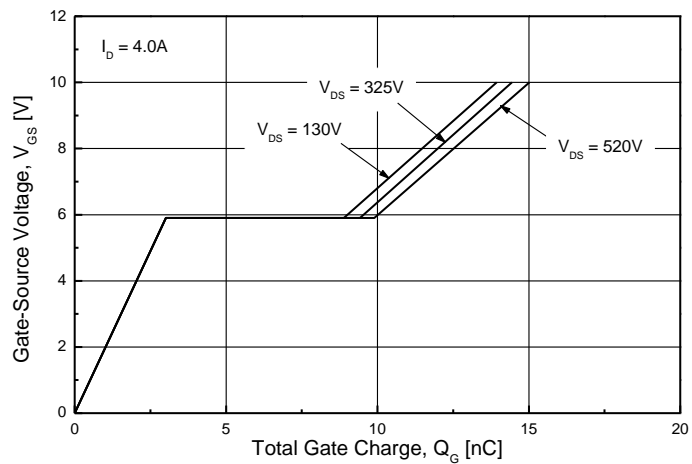
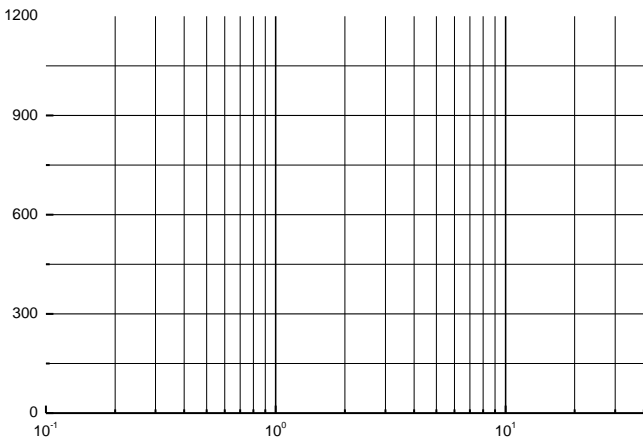
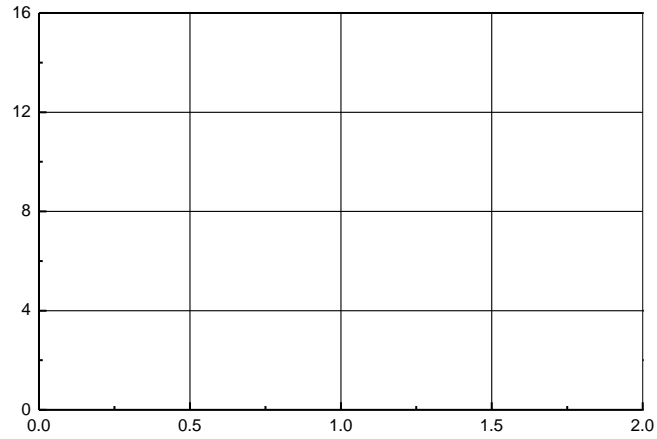
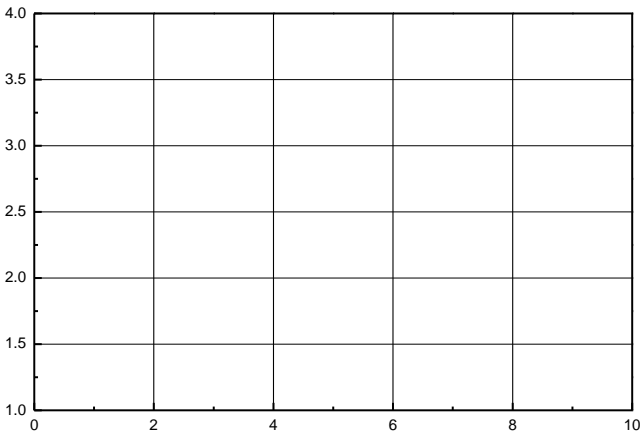
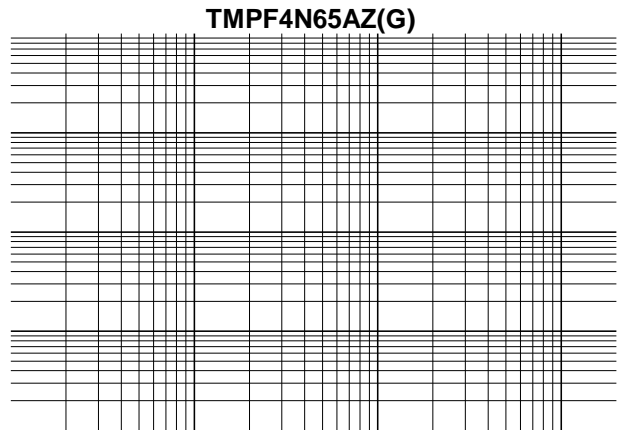
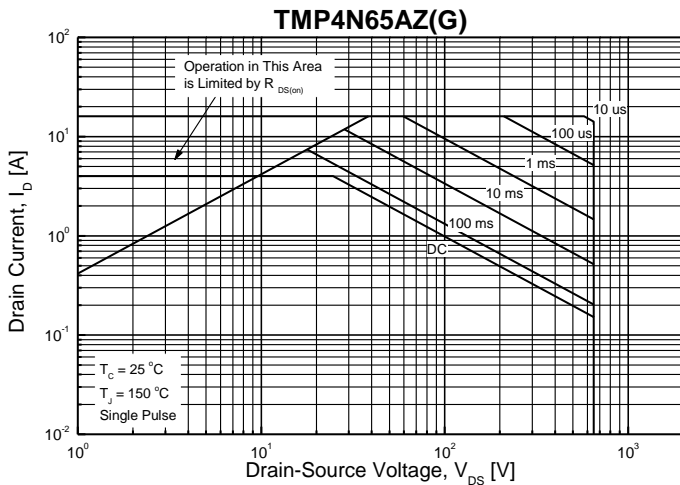
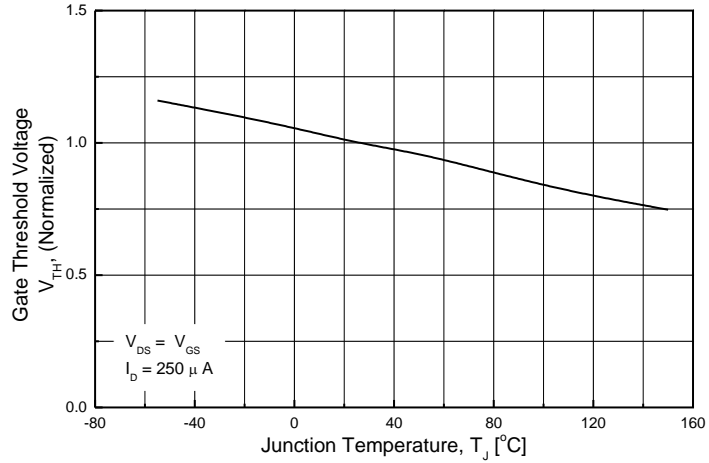
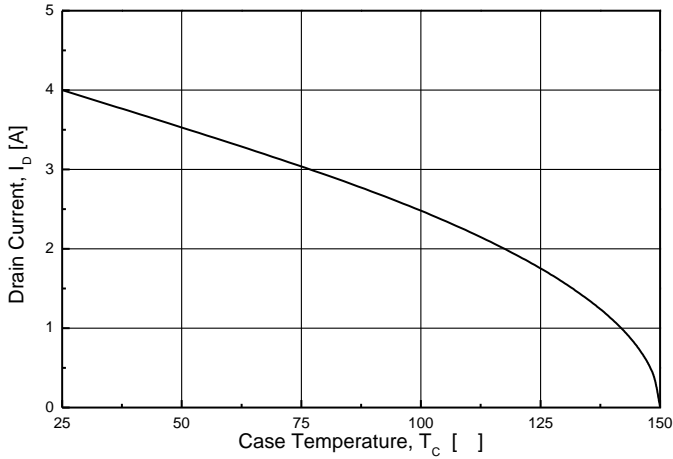
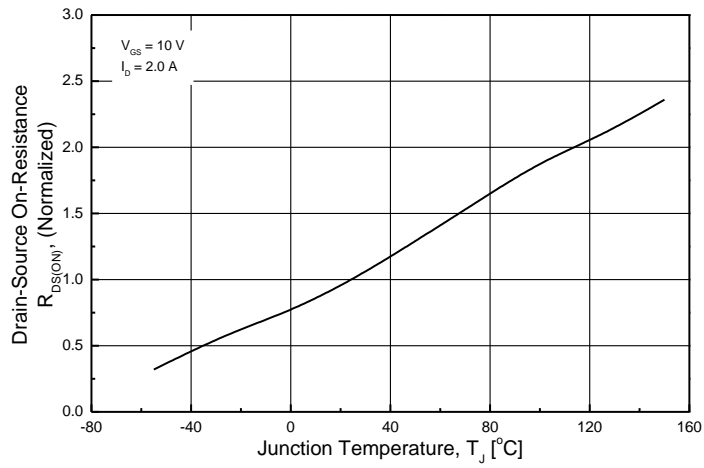
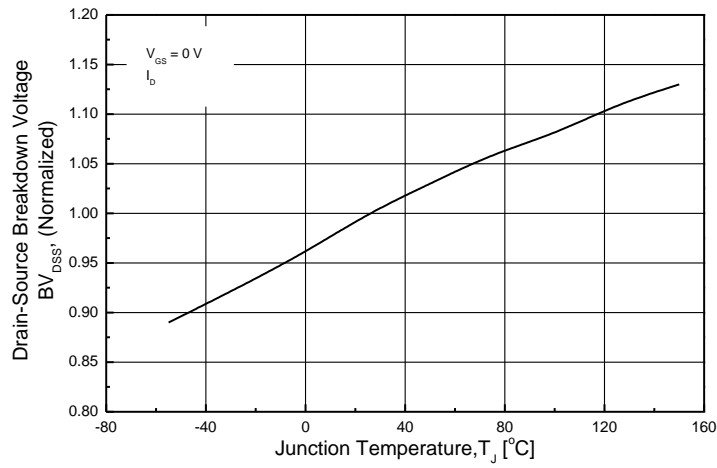
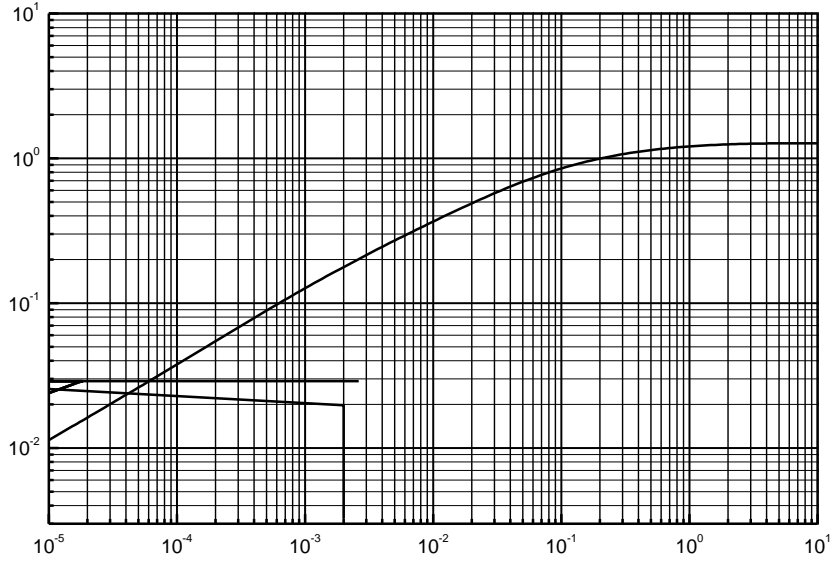


Figure 10: $r_{DS(on)}$ vs. T_c

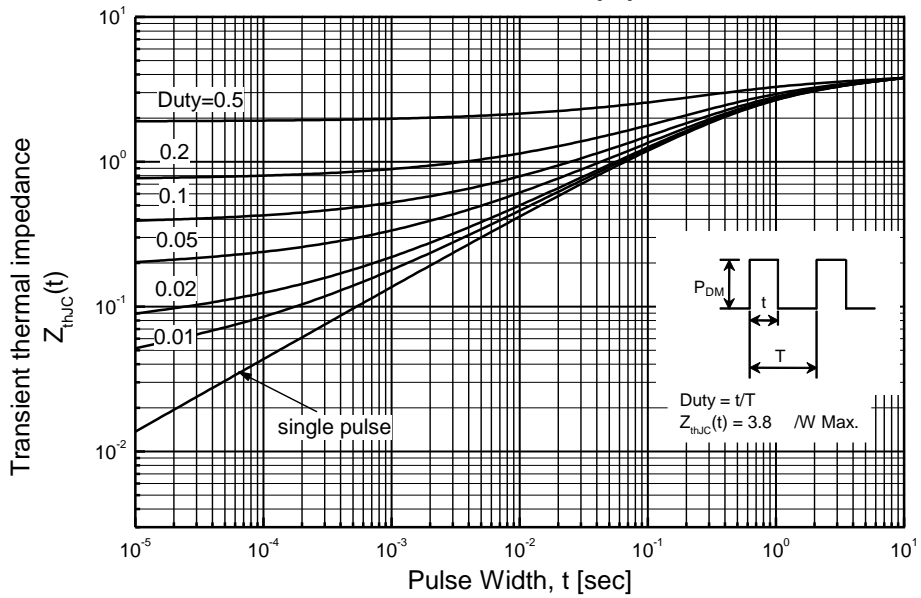




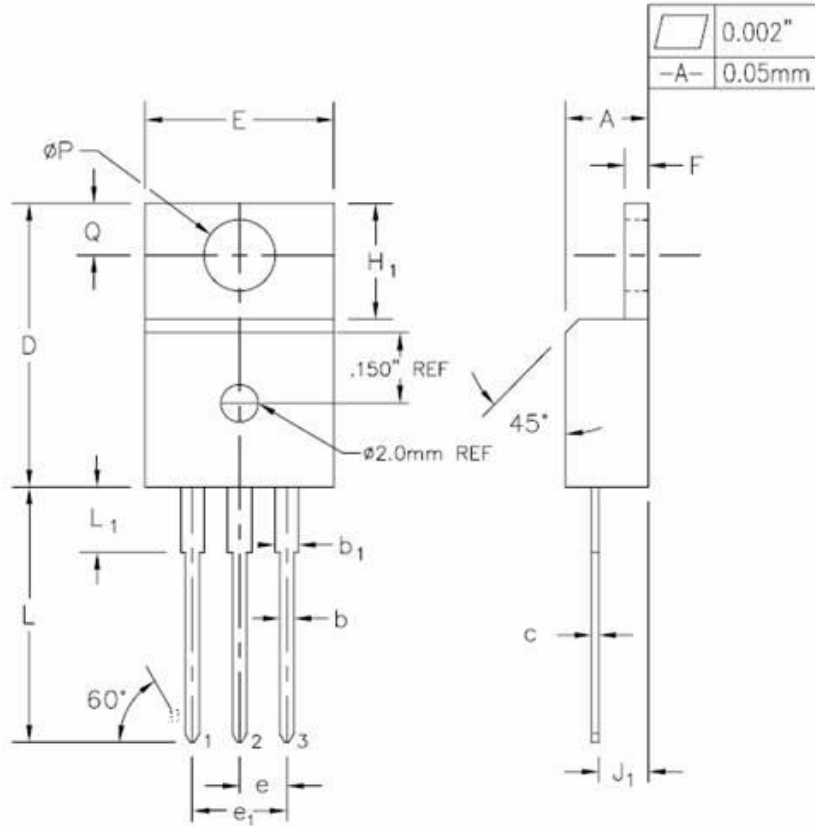
TMP4N65AZ(G)



TMPF4N65AZ(G)



TO-220AB-3L MECHANICAL DATA



SYMBOL	INCHES		MILLIMETERS		NOTES
	MIN.	MAX.	MIN.	MAX.	
A	0.170	0.180	4.32	4.57	
b	0.028	0.036	0.71	0.91	
b ₁	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	0.595	0.610	14.99	15.49	
e	0.100 TYP.		2.54 TYP.		
e ₁	0.200 BSC		5.08 BSC		
F	0.048	0.054	1.22	1.37	
H ₁	0.235	0.255	5.97	6.47	
J ₁	0.100	0.110	2.54	2.79	
L	0.530	0.550	13.47	13.97	
L ₁	0.130	0.150	3.31	3.81	
ϕP	0.149	0.153	3.79	3.88	
Q	0.102	0.112	2.60	2.84	

