Features

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

Absolute Maximum Ratings

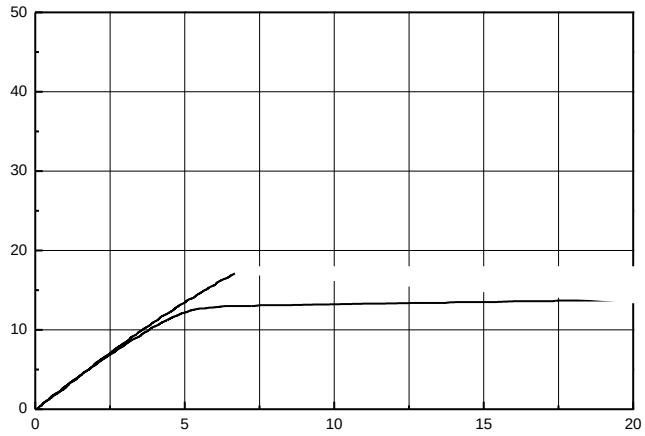
Parameter		Symbol	TMP16N60A(G)	TMPF16N60A(G)	Unit
Drain-Source Voltage		V_{DSS}	600		V
Gate-Source Voltage		V_{GS}	30		V
Continuous Drain Current	T_C = 25	I_D	16	16 *	A
	T_C = 100		9.97	9.97 *	A
Pulsed Drain Current (Note 1)		I_{DM}	64	64 *	A
Single Pulse Avalanche Energy (Note 2)		E_{AS}	194		mJ
Repetitive Avalanche Current (Note 1)		I_{AR}	16		A
Repetitive Avalanche Energy (Note 1)		E_{AR}	29		mJ
Power Dissipation	T_C = 25	P_D	290	48	W
	Derate above 25		2.32	0.38	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		

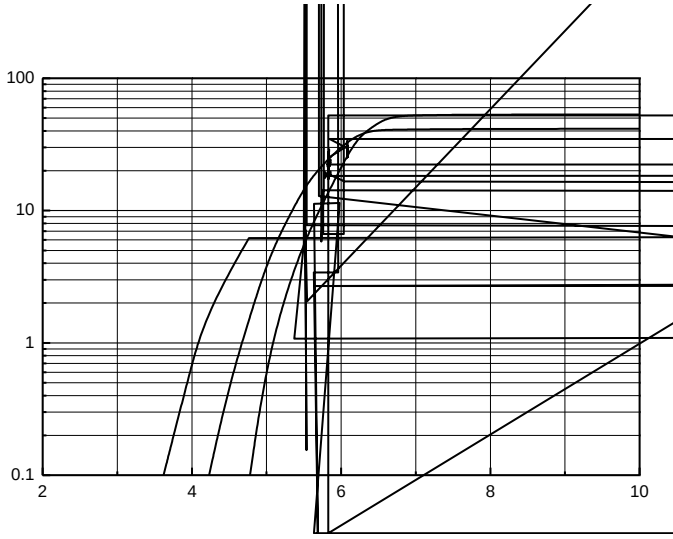
Thermal Characteristics

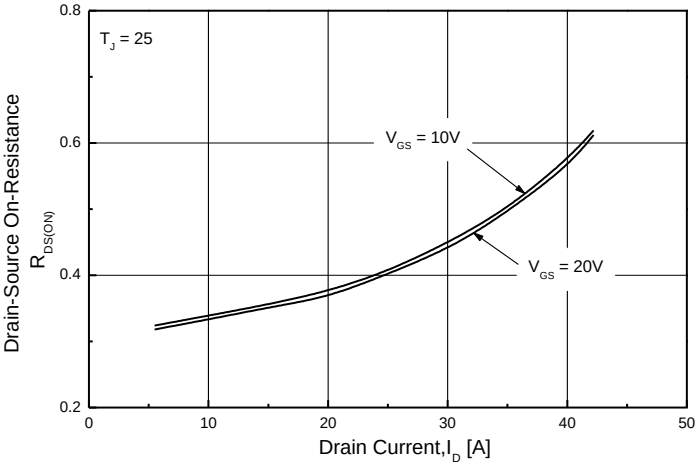
Parameter	Symbol	TMP16N60A(G)	TMPF16N60A(G)	Unit
Maximum Thermal resistance, Junction-to-Case	$R_{\theta JC}$	0.43	2.6	

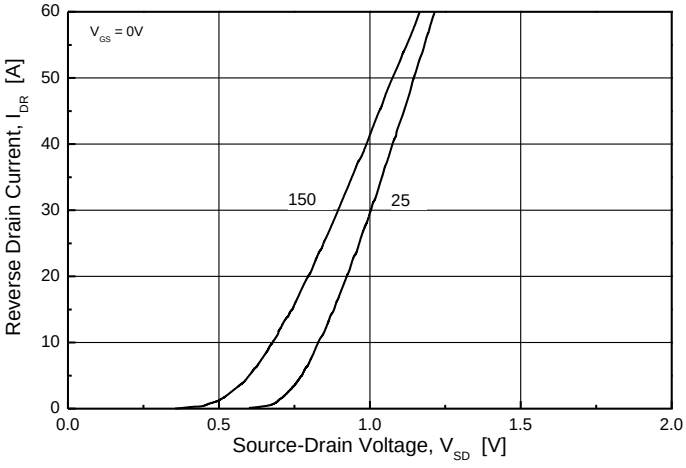
Electrical Characteristics : T_C=25 **, unless otherwise noted**

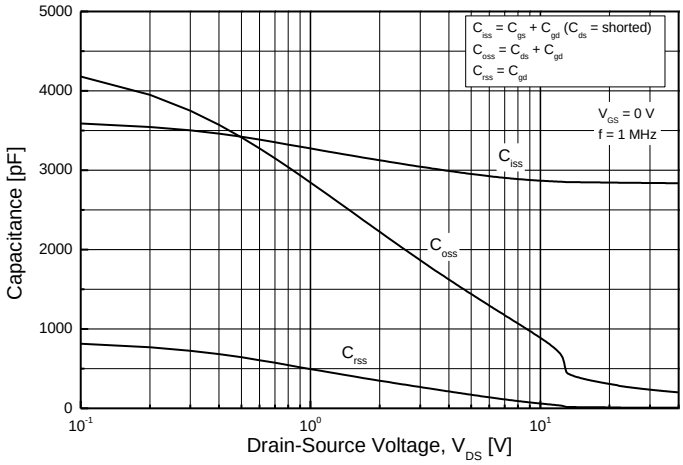
Note :

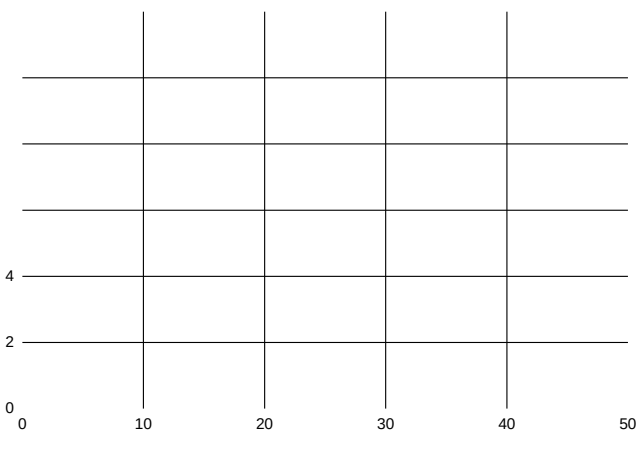

50
40
30
20
10
0
0
5
10
15
20

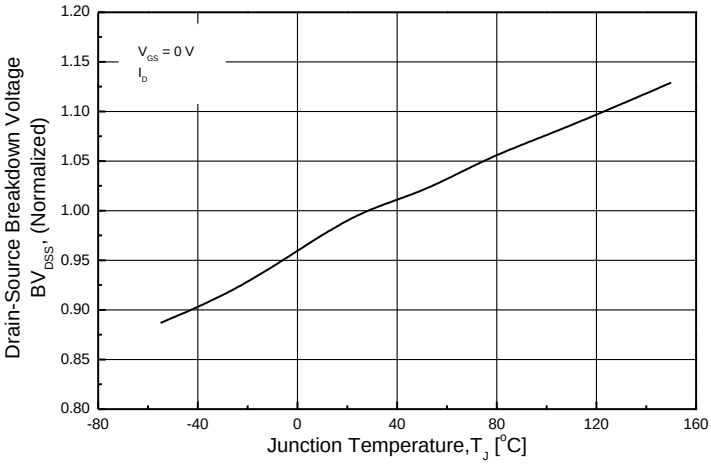

100
10
1
0.1
2
4
6
8
10

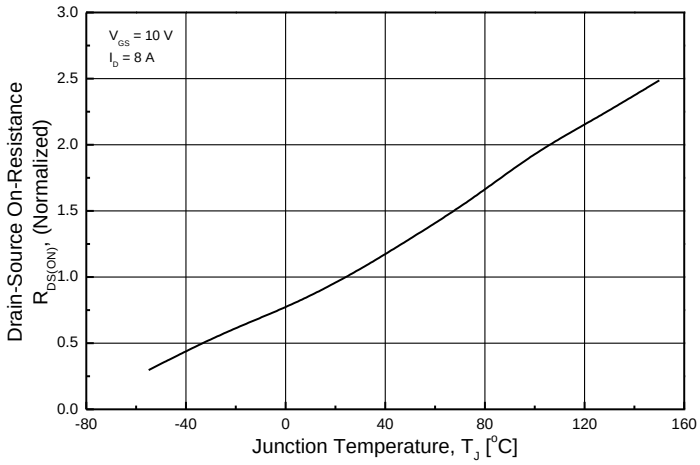

T_J = 25
V_GS = 10V
V_GS = 20V
Drain-Source On-Resistance
R_DS(ON)
0.8
0.6
0.4
0.2
0
10
20
30
40
50
Drain Current,I_D [A]

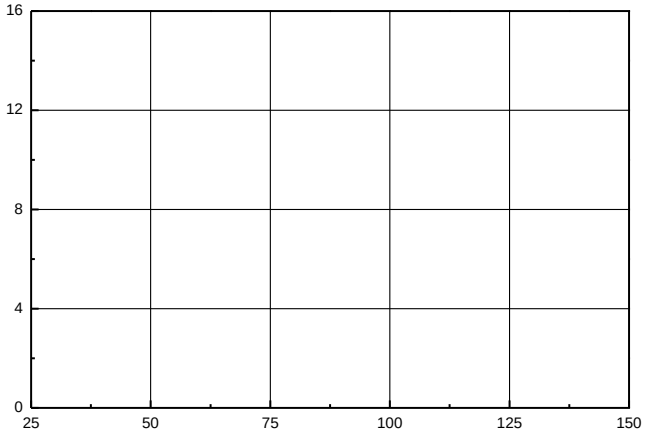

V_GS = 0V
150
25
Reverse Drain Current, I_DR [A]
60
50
40
30
20
10
0
0.0
0.5
1.0
1.5
2.0
Source-Drain Voltage, V_SD [V]

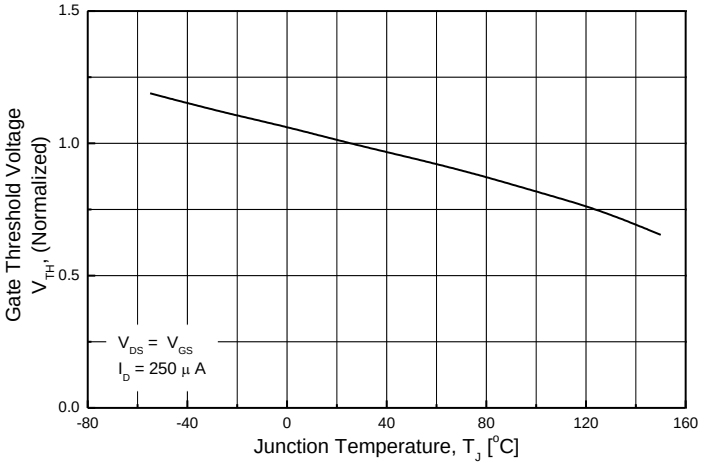

C_iss = C_gs + C_gd (C_ds = shorted)
C_oss = C_ds + C_gd
C_rss = C_gd
V_GS = 0 V
f = 1 MHz
C_iss
C_oss
C_rss
Capacitance [pF]
5000
4000
3000
2000
1000
0
10^-1
10^0
10^1
Drain-Source Voltage, V_DS [V]


4
2
0
0
10
20
30
40
50

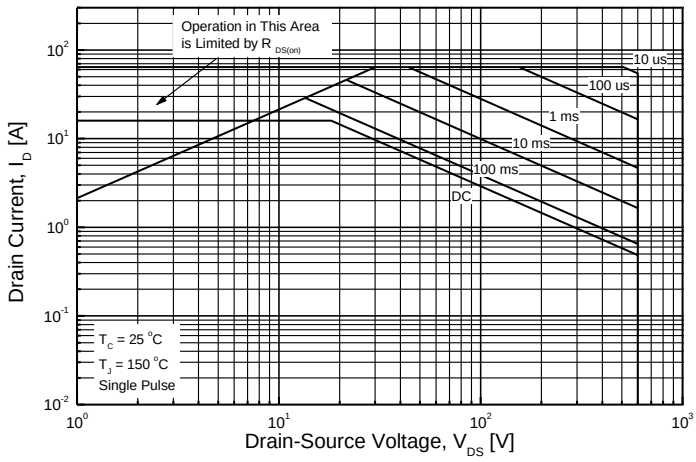




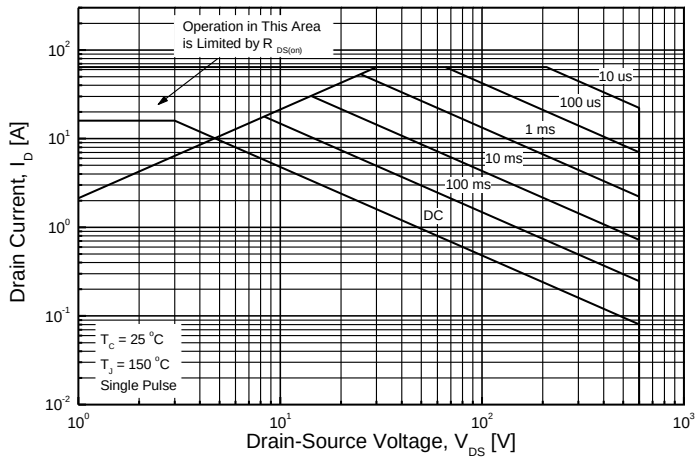




TMP16N60A(G)

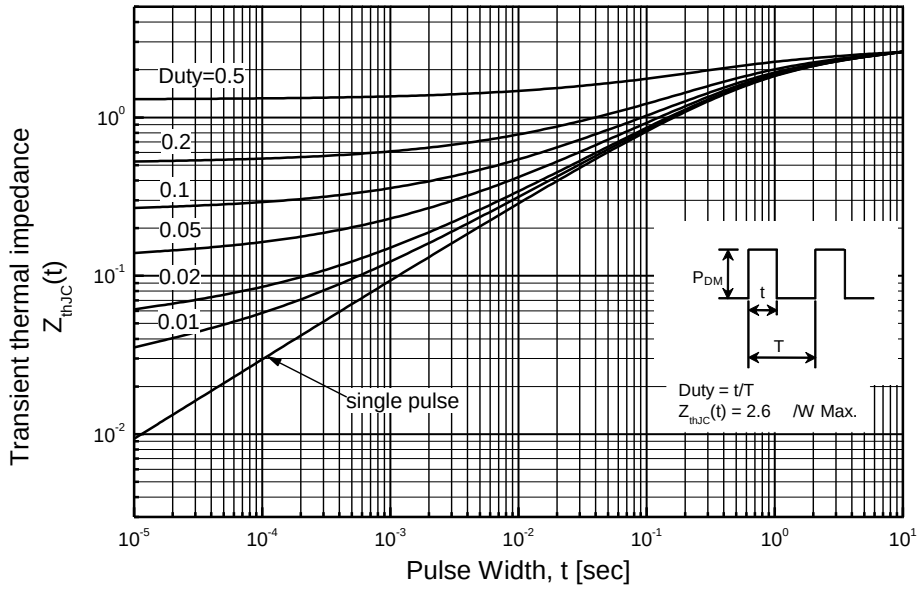


TMPF16N60A(G)

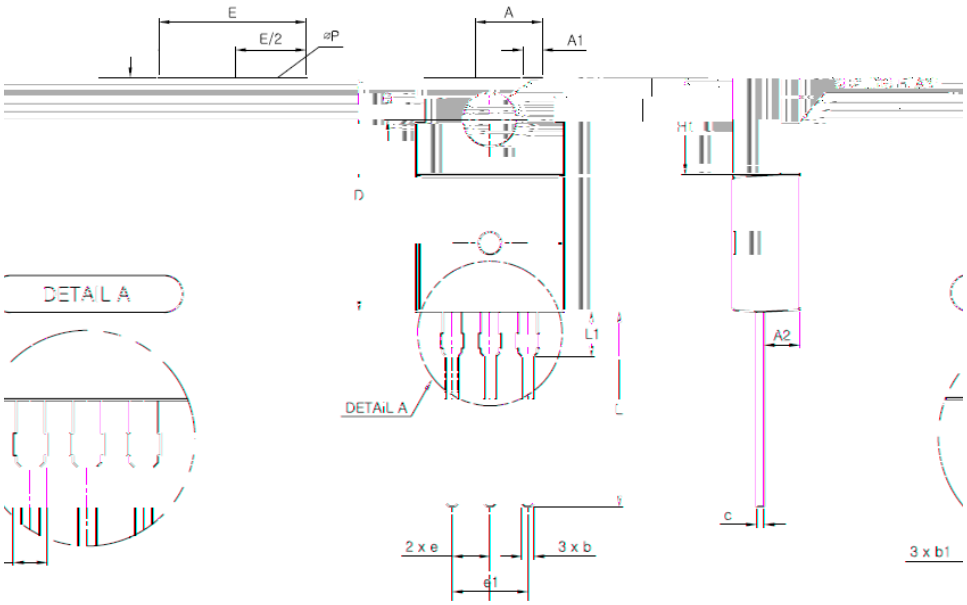


TMP16N60A(G)

TMPF16N60A(G)

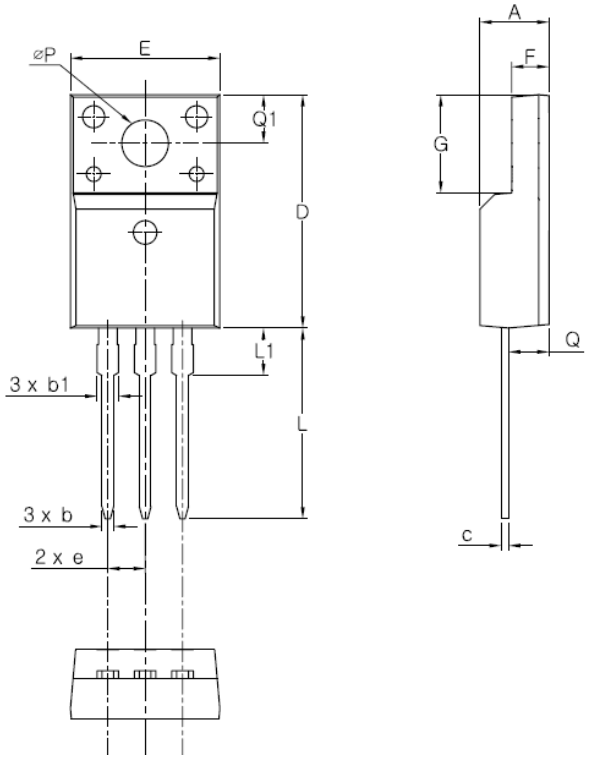


TO-220AB-3L MECHANICAL DATA



SYMBOL	MIN	MAX
A	4.30	4.70
A1	1.22	1.40
A2	2.20	2.79
b	0.70	0.91
b1	1.15	1.62
c	0.36	0.60
D	14.99	15.90
E	9.70	10.41
e	2.54 TYP	
e1	5.08 BSC	
H1	5.97	6.70
L	12.88	13.97
L1	3.31	3.81
ØP	3.40	3.88
Q	2.60	2.90

TO-220F-3L MECHANICAL DATA



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