6 Lake Street, Lawrence, MA 01841
1-800-446-1158 / (978) 620-2600 / Fax: (978) 689-0803
Website: http://www.microsemi.com

TECHNICAL DATA SHEET

N-CHANNEL MOSFET

Qualified per MIL-PRF-19500/542

DEVICES

2N6762

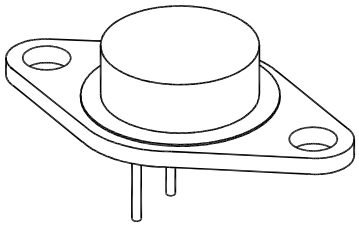
LEVELS

JAN
JANTX
JANTXV

ABSOLUTE MAXIMUM RATINGS *(T_C = +25°C unless otherwise noted)*

Parameters / Test Conditions	Symbol	Value	Unit
Drain – Source Voltage	V_{DS}	500	Vdc
Gate – Source Voltage	V_{GS}	±20	Vdc
Continuous Drain Current T_C = +25°C	I_{D1}	4.5	Adc
Continuous Drain Current T_C = +100°C	I_{D2}	3.0	Adc
Max. Power Dissipation T_C = +25°C	P_{tl}	75 (1)	W
Drain to Source On State Resistance	$R_{ds(on)}$	1.5 (2)	Ω
Operating & Storage Temperature	T_{op}, T_{stg}	-55 to +150	°C

Note: (1) Derated Linearly by 0.6 W/°C for T_C > +25°C
(2) V_{GS} = 10Vdc, I_D = 3A



TO-204AA
(TO-3)
2N6762

ELECTRICAL CHARACTERISTICS *(T_A = +25°C, unless otherwise noted)*

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
OFF CHARACTERTICS				
Drain-Source Breakdown Voltage V_{GS} = 0V, I_D = 1mAdc	$V_{(BR)DSS}$	500		Vdc
Gate-Source Voltage (Threshold) $V_{DS} \geq V_{GS}$, I_D = 0.25mA $V_{DS} \geq V_{GS}$, I_D = 0.25mA, T_j = +125°C $V_{DS} \geq V_{GS}$, I_D = 0.25mA, T_j = -55°C	$V_{GS(th)1}$ $V_{GS(th)2}$ $V_{GS(th)3}$	2.0 1.0	4.0 5.0	Vdc
Gate Current V_{GS} = ±20V, V_{DS} = 0V V_{GS} = ±20V, V_{DS} = 0V, T_j = +125°C	I_{GSS1} I_{GSS2}		±100 ±200	nAdc
Drain Current V_{GS} = 0V, V_{DS} = 400V V_{GS} = 0V, V_{DS} = 500V, T_j = +125°C V_{GS} = 0V, V_{DS} = 400V, T_j = +125°C	I_{DSS1} I_{DSS2} I_{DSS3}		25 1.0 0.25	µAdc mAdc mAdc
Static Drain-Source On-State Resistance V_{GS} = 10V, I_D = 3A pulsed V_{GS} = 10V, I_D = 4.5A pulsed V_{GS} = 10V, I_D = 3.0A pulsed, T_j = +125°C	$r_{DS(on)1}$ $r_{DS(on)2}$ $r_{DS(on)3}$		1.5 1.80 3.3	Ω Ω Ω
Diode Forward Voltage V_{GS} = 0V, I_D = 4.5A pulsed	V_{SD}		1.4	Vdc

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DYNAMIC CHARACTERISTICS

Parameters / Test Conditions		Symbol	Min.	Max.	Unit
Gate Charge: On-State Gate Charge Gate to Source Charge Gate to Drain Charge	V_{GS} = 10V, I_D = 4.5A V_{DS} = 400V	 $Q_{g(on)}$ Q_{gs} Q_{gd}		 40 6.0 20	nC

SWITCHING CHARACTERISTICS

Parameters / Test Conditions		Symbol	Min.	Max.	Unit
Switching time tests: Turn-on delay time Rinse time Turn-off delay time Fall time	I_D = 4.5A, V_{GS} = 10Vdc, Gate drive impedance = 7.5Ω, V_{DD} = 250Vdc	 $t_{d(on)}$ t_r $t_{d(off)}$ t_f		 30 40 80 30	ns
Diode Reverse Recovery Time	di/dt ≤ 100A/µs, V_{DD} ≤ 30V, I_F = 4.5A	t_{rr}		900	ns

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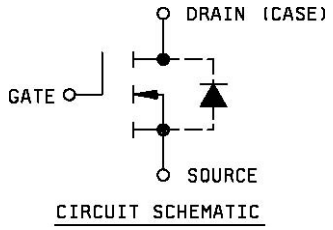
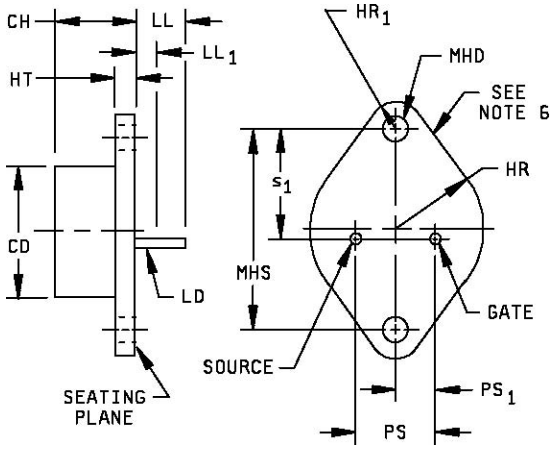
TECHNICAL DATA SHEET

PACKAGE DIMENSIONS





NOTES:

1 Dimensions are in inches.
2 Millimeters are given for general information only.
3 These dimensions should be measured at points .050 inch (1.27 mm) and .055 inch (1.40 mm) below seating plane. When gauge is not used measurement will be made at the seating plane.
4 The seating plane of the header shall be flat within .001 inch (0.03 mm) concave to .004 inch (0.10 mm) convex inside a .930 inch (23.62 mm) diameter circle on the center of the header and flat within .001 inch (0.03 mm) concave to .006 inch (0.15 mm) convex overall.
5 Mounting holes shall be deburred on the seating plane side.
6 Drain is electrically connected to the case.
7 In accordance with ASME Y14.5M, diameters are equivalent to φx symbology.

Ltr	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
CD		.875		22.23	
CH	.250	.360	6.35	9.14	
HR	.495	.525	12.57	13.34	
HR1	.131	.188	3.33	4.78	
HT	.060	.135	1.52	3.43	
LD	.038	.043	0.97	1.09	
LL	.312	.500	7.92	12.70	
LL1		.050		1.27	
MHD	.151	.161	3.84	4.09	
MHS	1.177	1.197	29.90	30.40	
PS	.420	.440	10.67	11.18	3, 5
PS1	.205	.225	5.21	5.72	3, 5
s1	.655	.675	16.64	17.15	

*** FIGURE 1: Physical dimensions of transistor (TO-204AA).**