

N-CHANNEL MOSFET
 Qualified per MIL-PRF-19500/557

DEVICES

2N6798 2N6798U

LEVELS

**JAN
 JANTX
 JANTXV**

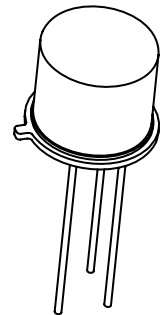
ABSOLUTE MAXIMUM RATINGS ($T_C = +25^\circ\text{C}$ unless otherwise noted)

Parameters / Test Conditions	Symbol	Value	Unit
Drain – Source Voltage	V_{DS}	200	Vdc
Gate – Source Voltage	V_{GS}	± 20	Vdc
Continuous Drain Current $T_C = +25^\circ\text{C}$	I_{D1}	5.5	Adc
Continuous Drain Current $T_C = +100^\circ\text{C}$	I_{D2}	3.5	Adc
Max. Power Dissipation	P_{tl}	25 ⁽¹⁾	W
Drain to Source On State Resistance	$R_{ds(on)}$	0.4 ⁽²⁾	Ω
Operating & Storage Temperature	T_{op}, T_{stg}	-55 to +150	$^\circ\text{C}$

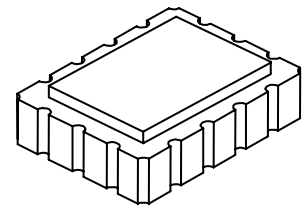
Note: (1) Derated Linearly by 0.2 W/ $^\circ\text{C}$ for $T_C > +25^\circ\text{C}$
 (2) $V_{GS} = 10\text{Vdc}$, $I_D = 3.5\text{A}$

ELECTRICAL CHARACTERISTICS ($T_A = +25^\circ\text{C}$, unless otherwise noted)

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
Drain-Source Breakdown Voltage $V_{GS} = 0\text{V}$, $I_D = 1\text{mA}$	$V_{(BR)DSS}$	200		Vdc
Gate-Source Voltage (Threshold) $V_{DS} \geq V_{GS}$, $I_D = 0.25\text{mA}$ $V_{DS} \geq V_{GS}$, $I_D = 0.25\text{mA}$, $T_j = +125^\circ\text{C}$ $V_{DS} \geq V_{GS}$, $I_D = 0.25\text{mA}$, $T_j = -55^\circ\text{C}$	$V_{GS(th)1}$ $V_{GS(th)2}$ $V_{GS(th)3}$	2.0 1.0	4.0 5.0	Vdc
Gate Current $V_{GS} = \pm 20\text{V}$, $V_{DS} = 0\text{V}$ $V_{GS} = \pm 20\text{V}$, $V_{DS} = 0\text{V}$, $T_j = +125^\circ\text{C}$	I_{GSS1} I_{GSS2}		± 100 ± 200	nAde
Drain Current $V_{GS} = 0\text{V}$, $V_{DS} = 160\text{V}$ $V_{GS} = 0\text{V}$, $V_{DS} = 160\text{V}$, $T_j = +125^\circ\text{C}$	I_{DSS1} I_{DSS2}		25 0.25	μAde mAde
Static Drain-Source On-State Resistance $V_{GS} = 10\text{V}$, $I_D = 3.5\text{A}$ pulsed $V_{GS} = 10\text{V}$, $I_D = 5.5\text{A}$ pulsed $T_j = +125^\circ\text{C}$ $V_{GS} = 10\text{V}$, $I_D = 3.5\text{A}$ pulsed	$r_{DS(on)1}$ $r_{DS(on)2}$ $r_{DS(on)3}$		0.4 0.42 0.75	Ω Ω Ω
Diode Forward Voltage $V_{GS} = 0\text{V}$, $I_D = 8.0\text{A}$ pulsed	V_{SD}		1.4	Vdc



TO-205AF
 (formerly TO-39)



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TECHNICAL DATA SHEET

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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	$Q_{g(on)}$ Q_{gs} Q_{gd}		42.07 5.29 28.11	nC
$V_{GS} = 10V, I_D = 5.5A$ $V_{DS} = 50V$				

SWITCHING CHARACTERISTICS

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
Switching time tests: Turn-on delay time Rinse time Turn-off delay time Fall time	$t_{d(on)}$ t_r $t_{d(off)}$ t_f		30 50 50 40	ns
$I_D = 5.5A, V_{GS} = 10Vdc,$ Gate drive impedance = $7.5\Omega,$ $V_{DD} = 77Vdc$				
Diode Reverse Recovery Time	t_{rr}		500	ns
$di/dt \leq 100A/\mu s, V_{DD} \leq 50V,$ $I_F = 5.5A$				