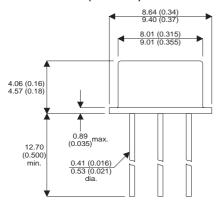
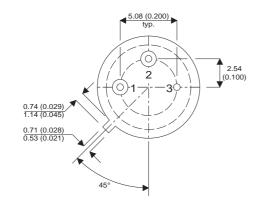


MECHANICAL DATA

Dimensions in mm (inches)





TO-39 (TO-205AF) METAL PACKAGE

PIN1 - Source

PIN 2 - Gate

PIN 3 - Drain

N-CHANNEL ENHANCEMENT MODE HIGH VOLTAGE POWER MOSFETS

VDSS -100V -4.0A I_{D(cont)} R_{DS(on)} 0.60Ω

FEATURES

- HERMETICALLY SEALED TO-39 METAL **PACKAGE**
- SIMPLE DRIVE REQUIREMENTS
- LIGHTWEIGHT
- SCREENING OPTIONS AVAILABLE

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{GS}	Gate – Source Voltage	±20V		
I_{D}	Continuous Drain Current $(V_{GS} = 0, T_{case} = 25^{\circ}C)$	-4.0A		
I_{D}	Continuous Drain Current (V _{GS} = 0 , T _{case} = 100°C)	-2.6A		
I_{DM}	Pulsed Drain Current ¹	-16A		
P_{D}	Power Dissipation @ T _{case} = 25°C	20 W		
	Linear Derating Factor	0.16 W/°C		
T_J , T_stg	Operating and Storage Temperature Range	−55 to 150°C		
TL	Package Mounting Surface Temperature (for 5 sec)	300°C		
$R_{ heta JC}$	Thermal Resistance Junction to Case	6.25°C/W		

Notes

1) Repetitive Rating – Pulse width limited by maximum junction temperature.

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

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2N6845 **IRFF9120**

ELECTRICAL CHARACTERISTICS (T_{amb} = 25°C unless otherwise stated)

	Parameter	Test Conditions	Min.	Тур.	Max.	Unit
	STATIC ELECTRICAL RATINGS					•
BV _{DSS}	Drain – Source Breakdown Voltage	$V_{GS} = 0$ $I_D = -1 mA$	- 100			V
ΔBV_{DSS}	Temperature Coefficient of	Reference to 25°C		- 0.10		1,,,,,,
ΔT_{J}	Breakdown Voltage	I _D = - 1mA				V/°C
R _{DS(on)}	Static Drain – Source On–State	$V_{GS} = -10V$ $I_{D} = -2.6A$			0.60	Ω
	Resistance ¹	V _{GS} = - 10V I _D = - 4.0A			0.69	
V _{GS(th)}	Gate Threshold Voltage	$V_{DS} = V_{GS}$ $I_D = -250\mu A$	- 2		- 4	V
9 _{fs}	Forward Transconductance ¹	$V_{DS} > -15V$ $I_{D} = -2.6A$	1.25			S
I _{DSS}	Drain-to-Source Leakage Current	$V_{DS} = -80V$ $V_{GS} = 0$			-25	μΑ
		T _J = 125°C			-250	
I _{GSS}	Forward Gate – Source Leakage	V _{GS} = 20V			100	nA
I _{GSS}	Reverse Gate – Source Leakage	V _{GS} = -20V			-100	
	DYNAMIC CHARACTERISTICS					
C _{iss}	Input Capacitance	$V_{GS} = 0$		380		
C _{oss}	Output Capacitance	V _{DS} = - 25V		170		pF
C _{rss}	Reverse Transfer Capacitance	f = 1MHz		45		
Q _g	Total Gate Charge	$V_{GS} = -10V$ $I_{D} = -4.0A$	4.3		16.3	nC
Q _{gs}	Gate - Source Charge		1.3		4.7	
Q _{gd}	Gate - Drain ("Miller") Charge	$V_{DS} = -50V$	1.0		9.0	
t _{d(on)}	Turn-On Delay Time	V _{DD} = -50V			60	
t _r	Rise Time	I _D = - 4.0A			100	ns
t _{d(off)}	Turn-Off Delay Time	$R_G = 7.5\Omega$			50	1115
t _f	Fall Time				70	
	SOURCE - DRAIN DIODE CHARAC	TERISTICS				
I _S	Continuous Source Current	Mosfet symbol showing the			- 4.0	A
I _{SM}	Pulse Source Current	tegral reverse p-n junction diode			- 16	
V _{SD}	Diode Forward Voltage ¹	$I_S = -4.0A$ $T_J = 25$ °C $V_{GS} = 0V$			- 4.8	V
t _{rr}	Reverse Recovery Time ¹	$I_F = -4.0A$ $T_J = 25^{\circ}C$			200	ns
Q _{rr}	Reverse Recovery Charge ¹	$d_i / d_t \le -100A/\mu s V_{DD} \le -50V$			3.1	μС
t _{on}	Forward Turn-On Time			Negligible		

Notes

1) Pulse Test: Pulse Width \leq 300ms, $\delta \leq$ 2%

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