80 V NPN, 10 A Power Transistor

These series of plastic, silicon NPN power transistors can be used as general purpose power amplification and switching such as output or driver stages in applications such as switching regulators, converters and power amplifiers.

Features

- Fast Switching Speeds
- High Frequency
- These Devices are Pb–Free, Halogen Free/BFR Free and are RoHS Compliant

Benefits

- Reliable Performance at Higher Powers
- Symmetrical Characteristics in Complementary Configurations
- Accurate Reproduction of Input Signal
- Greater Dynamic Range
- High Amplifier Bandwidth

Applications

- High-end Consumer Audio Products
 - Home Amplifiers
 - Home Receivers

MAXIMUM RATINGS ($T_A = 25^{\circ}C$)

Rating	Symbol	Max	Unit
Collector-Emitter Voltage	V _{CEO}	80	Vdc
Emitter-Base Voltage	V _{EBO}	5.0	Vdc
Collector Current – Continuous	Ι _C	10	А
Collector Current – Peak (Note 1)	I _{CM}	20	А
Total Power Dissipation @ $T_C = 25^{\circ}C$	PD	120	Watts

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{ extsf{ heta}JC}$	1.04	°C/W
Junction and Storage Temperature Range	T _J , T _{stg}	−65 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. Pulse Test: Pulse Width = 5 ms, Duty Cycle \leq 10%.

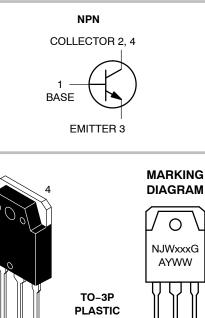
*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

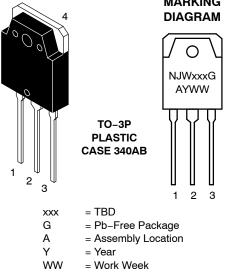


ON Semiconductor®

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80 VOLT, 10 AMPS NPN POWER TRANSISTORS





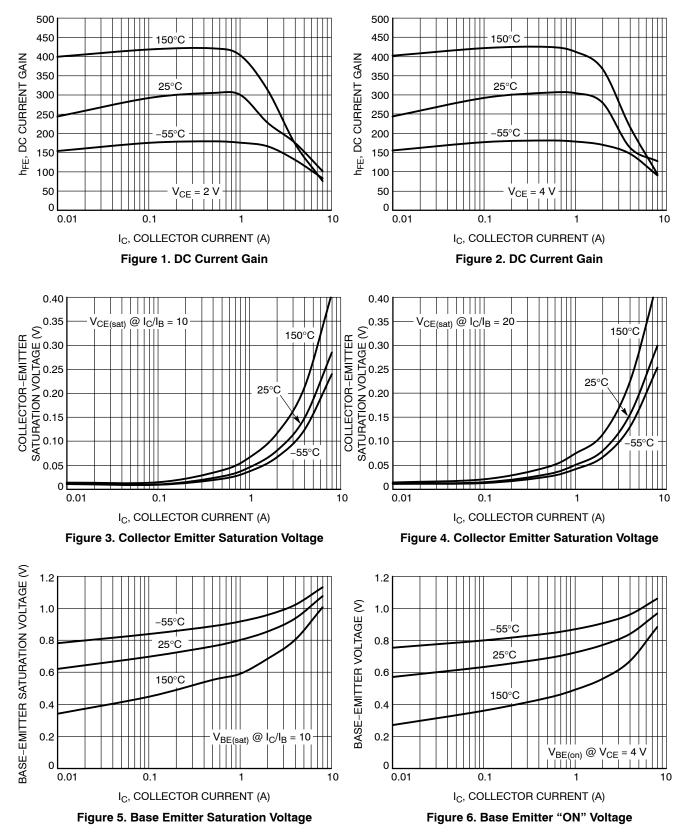
ORDERING INFORMATION

Device	Package	Shipping
NJW44H11G	TO–3P (Pb–Free)	30 Units/Rail

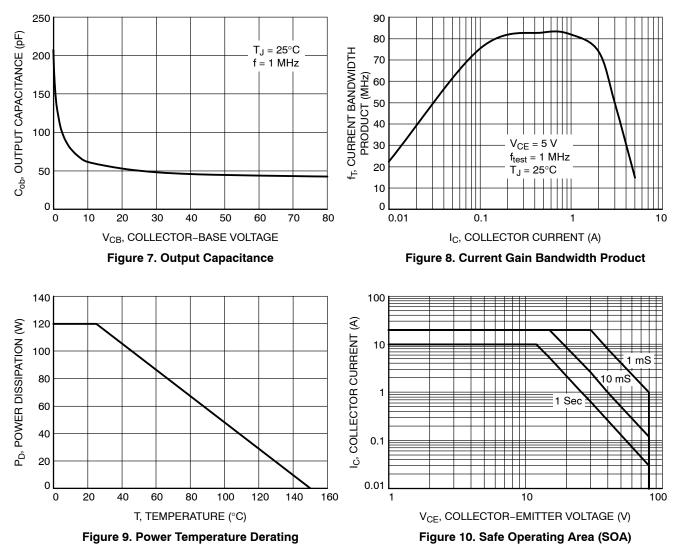
ELECTRICAL CHARACTERISTICS (T_A = 25° C unless otherwise noted)

Characteristic	Symbol	Min	Тур	Max	Unit
OFF CHARACTERISTICS					
Collector–Emitter Sustaining Voltage $(I_C = 30 \text{ mAdc}, I_B = 0)$	V _{CEO}	80	-	-	Vdc
Collector–Cutoff Current (V_{CE} = Rated V_{CEO} , V_{BE} = 0)	ICES	-	-	10	μAdc
Emitter Cutoff Current (V _{BE} = 5.0 Vdc)	I _{EBO}	_	-	10	μAdc
ON CHARACTERISTICS					
DC Current Gain ($I_C = 2 A, V_{CE} = 2 V$) ($I_C = 4 A, V_{CE} = 2 V$)	h _{FE}	100 80		400 320	-
Collector-Emitter Saturation Voltage $(I_C = 8 \text{ A}, I_B = 400 \text{ mA})$	V _{CE(sat)}	-	-	1.0	V
Base-Emitter Turn-on Voltage $(I_C = 8 A, V_{CE} = 2.0 V)$	V _{BE(on)}	_	-	1.5	V
DYNAMIC CHARACTERISTICS		-	•	•	•
Output Capacitance $(V_{CB} = 10 \text{ V}, \text{ f} = 1.0 \text{ MHz})$	C _{obo}	-	65	-	pF
Cutoff Frequency ($I_C = 500 \text{ mA}, V_{CE} = 5 \text{ V}, f = 1.0 \text{ MHz}$)	f _T	_	85	-	MHz
SWITCHING TIMES		-	•	•	•
Delay and Rise Times ($I_{C} = 5.0$ Adc, $I_{B1} = 0.5$ A)	t _d + t _r	-	300	-	ns
Storage Time $(I_C = 5.0 \text{ Adc}, I_{B1} = I_{B2} = 0.5 \text{ A})$	t _s	-	500	-	ns
Fall Time (I _C = 5.0 Adc, I _{B1} = I _{B2} = 0.5 A)	t _f	-	140	-	ns

TYPICAL CHARACTERISTICS

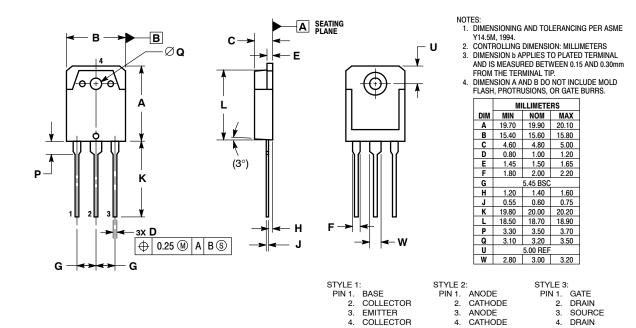


TYPICAL CHARACTERISTICS



PACKAGE DIMENSIONS

TO-3P-3LD CASE 340AB-01 ISSUE A



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