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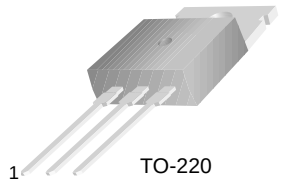
Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

FAIRCHILD
SEMICONDUCTOR®

D45H2A

PNP Power Amplifier

- This device is designed for power amplifier, regulator and switching circuits where speed is important.
- Sourced from process 5Q.



TO-220

1. Base 2. Collector 3. Emitter

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	30	V
I_C	Collector Current - Continuous	8.0	A
T_J, T_{STG}	Operating and Storage Junction Temperature Range	- 55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

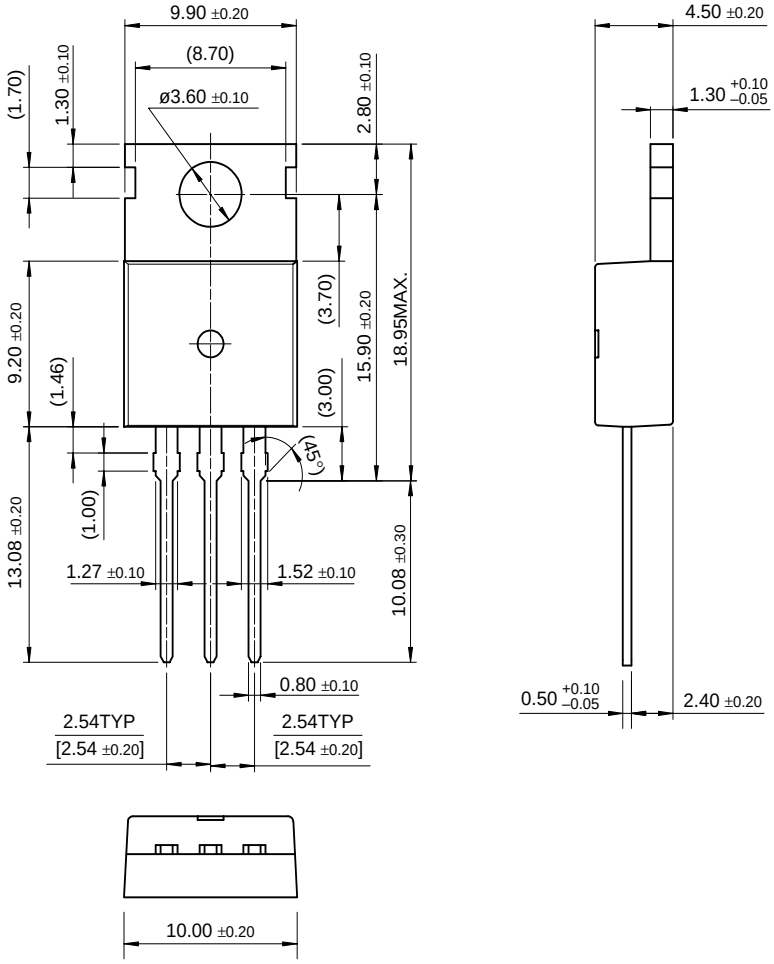
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristics						
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C = 100mA, IB = 0	30			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 60V, IE = 0			10	µA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 5V, IC = 0			100	µA
On Characteristics						
h_{FE}	DC Current Gain	V_{CE} = 5V, I_C = 8A V_{CE} = 5V, I_C = 10A V_{CE} = 5V, I_C = 12A	100 80 65			
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 8A, I_B = 0.4A			1	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 8A, I_B = 0.8A			1.5	V
Small Signal Characteristics						
f_T	Current Gain Bandwidth Product	V_{CE} = 10V, I_C = 500mA	25			MHz

Thermal Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation Derate above 25°C	60 480	W mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	2.1	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	62.5	°C/W

Package Demensions

TO-220



Dimensions in Millimeters

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DOME™	HiSeC™	PowerTrench®	SuperSOT™-8	
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Definition of Terms

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Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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