Rochester Electronics

Datasheet

Rochester Electronics Manufactured Components

Rochester branded components are manufactured using either die/wafers purchased from the original suppliers or Rochester wafers recreated from the original IP. All recreations are done with the approval of the OCM.

Parts are tested using original factory test programs or Rochester developed test solutions to guarantee product meets or exceed the OCM data sheet.

Quality Overview

- ISO-9001
- AS9120 certification
- Qualified Manufacturers List (QML) MIL-PRF-35835
    - Class Q Military
    - Class V Space Level
- Qualified Suppliers List of Distributors (QSLD)

    - Rochester is a critical supplier to DLA and meets all industry and DLA standards.

Rochester Electronics, LLC is committed to supplying products that satisfy customer expectations for quality and are equal to those originally supplied by industry manufacturers.

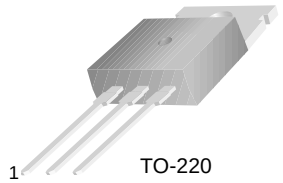
The original manufacturer's datasheet accompanying this document reflects the performance and specifications of the Rochester manufactured version of this device. Rochester Electronics guarantees the performance of its semiconductor products to the original OEM specifications. 'Typical' values are for reference purposes only. Certain minimum or maximum ratings may be based on product characterization, design, simulation, or sample testing.

FAIRCHILD SEMICONDUCTOR™

KSB596

Power Amplifier Applications

- Complement to KSD526



TO-220

1.Base 2.Collector 3.Emitter

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	- 80	V
V_{CEO}	Collector-Emitter Voltage	- 80	V
V_{EBO}	Emitter-Base Voltage	- 5	V
I_C	Collector Current(DC)	- 4	A
I_B	Base Current	- 0.4	A
P_C	Collector Dissipation (T_C=25°C)	30	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = - 50mA, I_B = 0	- 80			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = - 10mA, I_C = 0	- 5			V
I_{CBO}	Collector Cut-off Current	V_{CB} = - 80V, I_E = 0			- 70	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = - 5V, I_C = 0			- 100	μA
h_{FE1} h_{FE2}	DC Current Gain	V_{CE} = - 5V, I_C = - 0.5A V_{CE} = - 5V, I_C = - 3A	40 15		240	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = - 3A, I_B = - 0.3A		- 1	- 1.7	V
V_{BE} (on)	Base-Emitter ON Voltage	V_{CE} = - 5V, I_C = - 3A		- 1	- 1.5	V
f_T	Current Gain Bandwidth Product	V_{CE} = - 5V, I_C = - 0.5A	3			MHz
C_{ob}	Output Capacitance	V_{CB} = - 10V, I_E = 0 f = 1MHz		130		pF

h_{FE} Classification

Classification	R	O	Y
h_{FE1}	40 ~ 80	70 ~ 140	120 ~ 240

Typical Characteristics

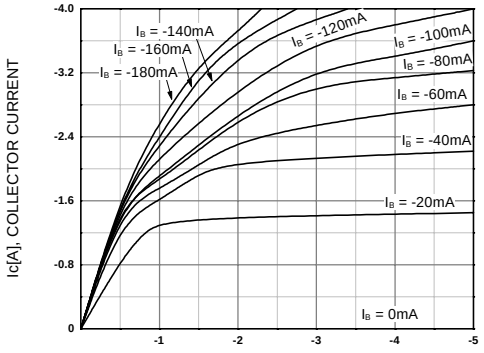


Figure 1. Static Characteristic

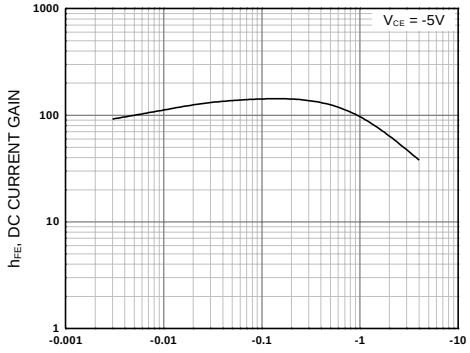


Figure 2. DC current Gain

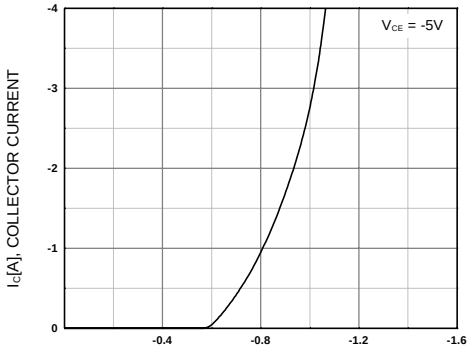


Figure 3. Base-Emitter Saturation Voltage

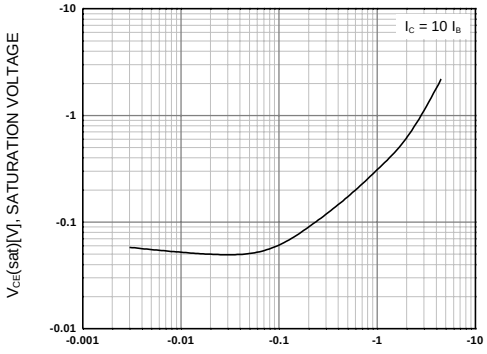


Figure 4. Collector-Emitter Saturation Voltage

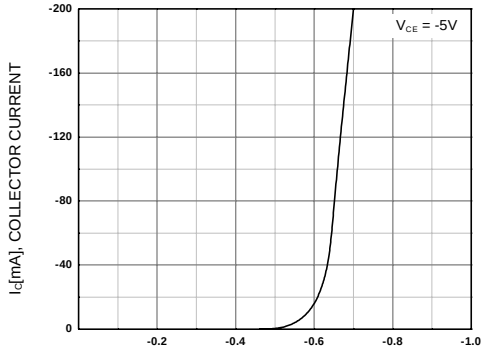


Figure 5. Base-Emitter On Voltage

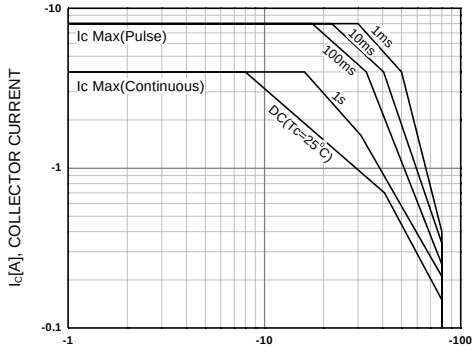


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

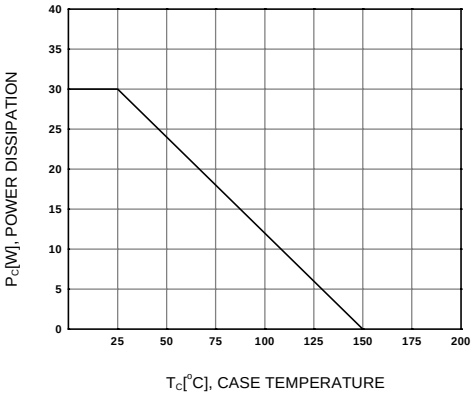


Figure 1. Power Derating

Package Demensions

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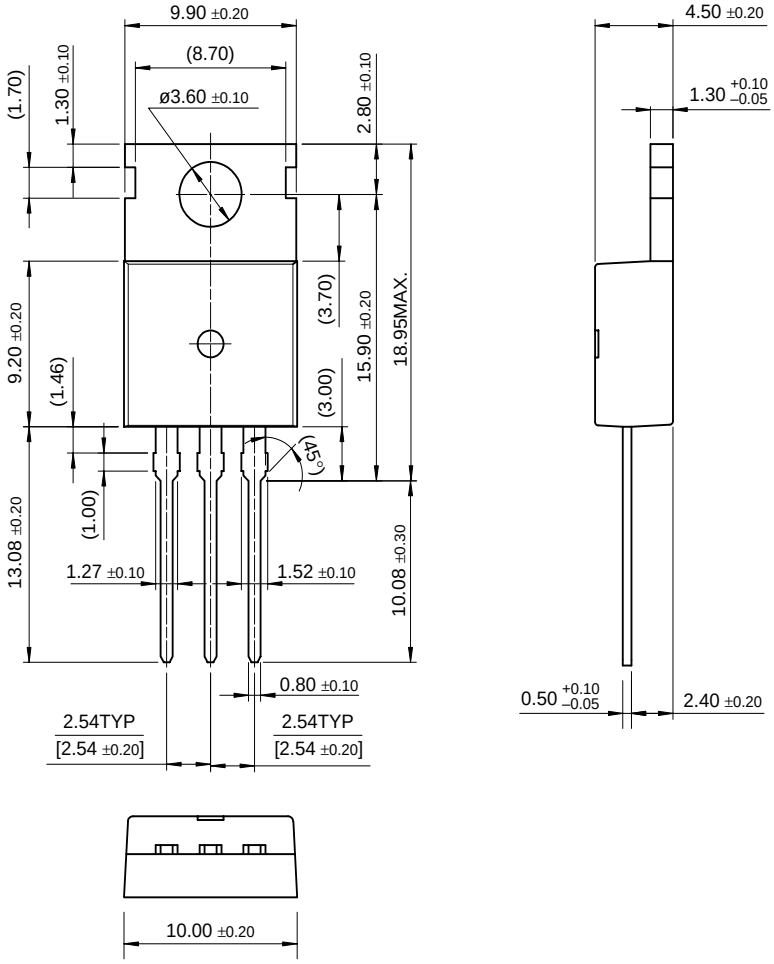

Dimensions in Millimeters

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
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.

KSB596
PNP Epitaxial Silicon Transistor

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- Complement to KSD526

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Applications

Power Amplifier

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
KSB596YTU	Full Production	$0.363	TO-220	3	RAIL
KSB596Y	Full Production	$0.363	TO-220	3	BULK
KSB596OTU	Full Production	$0.363	TO-220	3	RAIL
KSB596O	Full Production	$0.363	TO-220	3	BULK

* 1,000 piece Budgetary Pricing

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