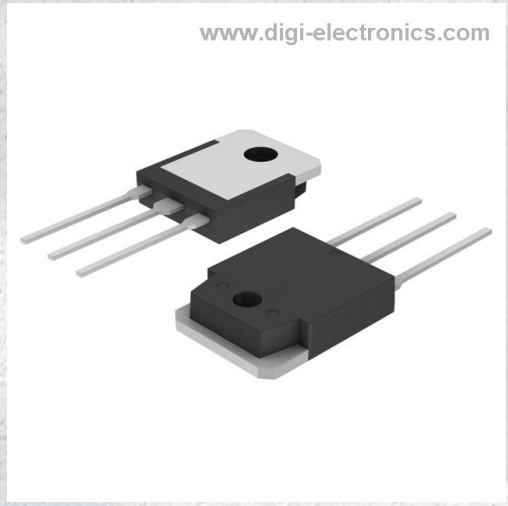
2SA1962OTU Datasheet



DiGi Electronics Part Number	2SA1962OTU-DG
Manufacturer	onsemi
Manufacturer Product Number	2SA1962OTU
Description	TRANS PNP 250V 17A TO3P
Detailed Description	Bipolar (BJT) Transistor PNP 250 V 17 A 30MHz 130 W Through Hole TO-3P

https://www.DiGi-Electronics.com

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
2SA1962OTU	onsemi
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
PNP	17 A
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
250 V	3V @ 800mA, 8A
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
5µA (ICBO)	80 @ 1A, 5V
Power - Max:	Frequency - Transition:
130 W	30MHz
Operating Temperature:	Mounting Type:
-55°C ~ 150°C (TJ)	Through Hole
Package / Case:	Supplier Device Package:
TO-3P-3, SC-65-3	TO-3P
Base Product Number:	
2SA1962	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	Not Applicable
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.29.0075	

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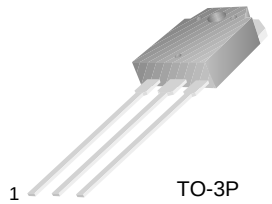
FAIRCHILD SEMICONDUCTOR®

January 2009

2SA1962/FJA4213
PNP Epitaxial Silicon Transistor

Applications

- High-Fidelity Audio Output Amplifier
- General Purpose Power Amplifier



1 TO-3P

1.Base 2.Collector 3.Emitter

Features

- High Current Capability: I_C = -17A
- High Power Dissipation : 130watts
- High Frequency : 30MHz.
- High Voltage : V_{CEO}= -250V
- Wide S.O.A for reliable operation.
- Excellent Gain Linearity for low THD.
- Complement to 2SC5242/FJA4313.
- Thermal and electrical Spice models are available.
- Same transistor is also available in:
  -- TO264 package, 2SA1943/FJL4215 : 150 watts
  -- TO220 package, FJP1943 : 80 watts
  -- TO220F package, FJPF1943 : 50 watts

Absolute Maximum Ratings* T_a = 25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
BV_{CBO}	Collector-Base Voltage	-250	V
BV_{CEO}	Collector-Emitter Voltage	-250	V
BV_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-17	A
I_B	Base Current	-1.5	A
P_D	Total Device Dissipation(T_C=25°C) Derate above 25°C	130 1.04	W W/°C
T_J, T_{STG}	Junction and Storage Temperature	- 50 ~ +150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics* T_a=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
$R_{\theta JC}$	Thermal Resistance, Junction to Case	0.96	°C/W

* Device mounted on minimum pad size

h_{FE} Classification

Classification	R	O
h_{FE1}	55 ~ 110	80 ~ 160

Electrical Characteristics*

T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C=-5mA, I_E=0	-250			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C=-10mA, R_{BE}=∞	-250			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E=-5mA, I_C=0	-5			V
I_{CBO}	Collector Cut-off Current	V_{CB}=-230V, I_E=0			-5.0	μA
I_{EBO}	Emitter Cut-off Current	V_{EB}=-5V, I_C=0			-5.0	μA
h_{FE1}	DC Current Gain	V_{CE}=-5V, I_C=-1A	55		160	
h_{FE2}	DC Current Gain	V_{CE}=-5V, I_C=-7A	35	60		
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C=-8A, I_B=-0.8A		-0.4	-3.0	V
V_{BE}(on)	Base-Emitter On Voltage	V_{CE}=-5V, I_C=-7A		-1.0	-1.5	V
f_T	Current Gain Bandwidth Product	V_{CE}=-5V, I_C=-1A		30		MHz
C_{ob}	Output Capacitance	V_{CB}=-10V, f=1MHz		360		pF

* Pulse Test: Pulse Width=20μs, Duty Cycle≤2%

Ordering Information

Part Number	Marking	Package	Packing Method	Remarks
2SA1962RTU	A1962R	TO-3P	TUBE	hFE1 R grade
2SA1962OTU	A1962O	TO-3P	TUBE	hFE1 O grade
FJA4213RTU	J4213R	TO-3P	TUBE	hFE1 R grade
FJA4213OTU	J4213O	TO-3P	TUBE	hFE1 O grade

Typical Characteristics

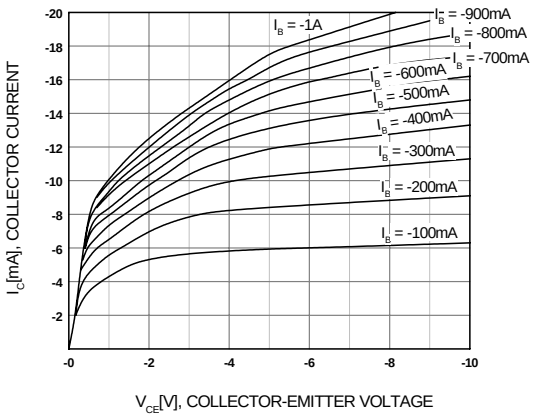


Figure 1. Static Characteristic

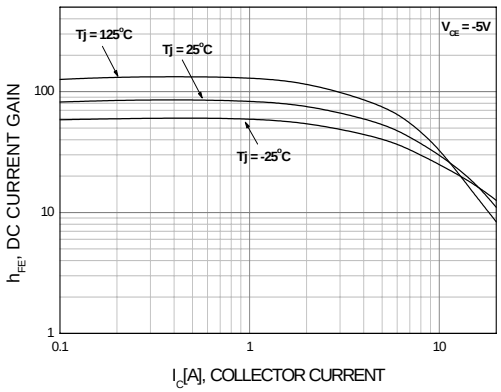


Figure 2. DC current Gain (R Grade)

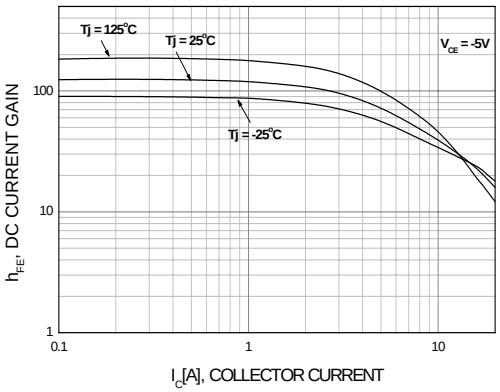


Figure 3. DC current Gain (O Grade)

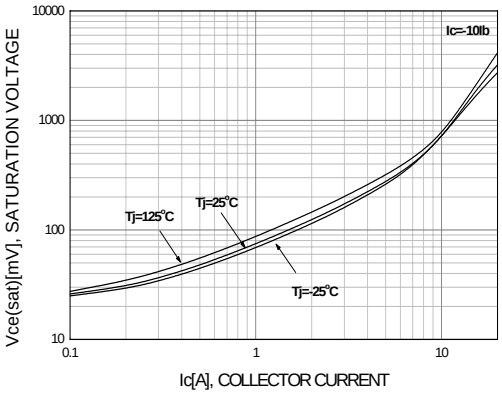


Figure 4. Collector-Emitter Saturation Voltage

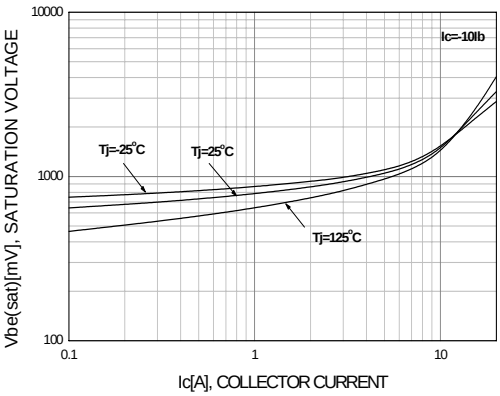


Figure 5. Base-Emitter Saturation Voltage

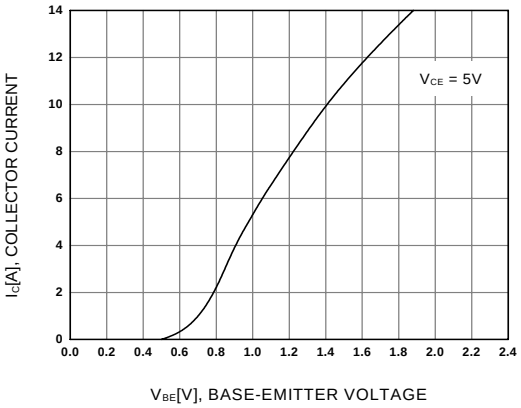


Figure 6. Base-Emitter On Voltage

Typical Characteristics

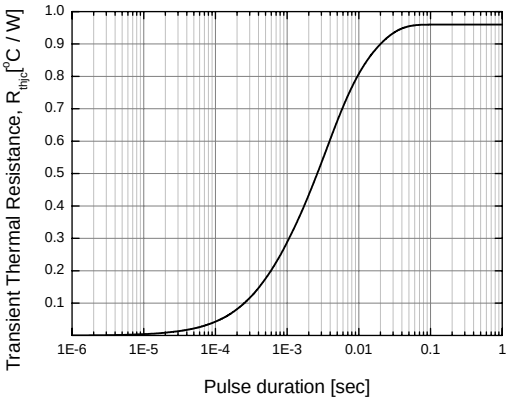


Figure 7. Thermal Resistance

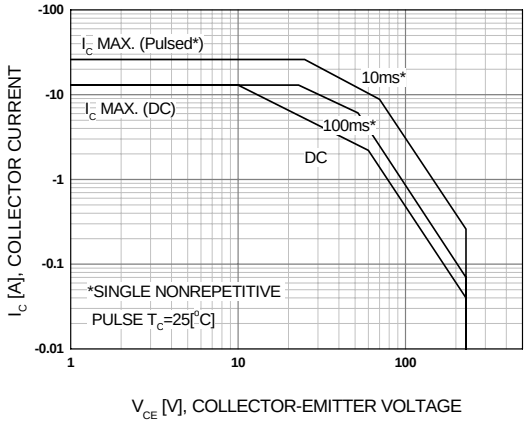


Figure 8. Safe Operating Area

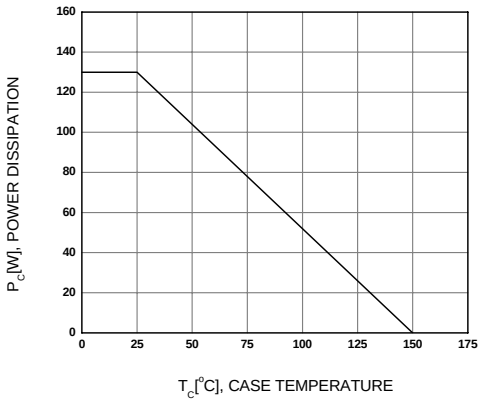
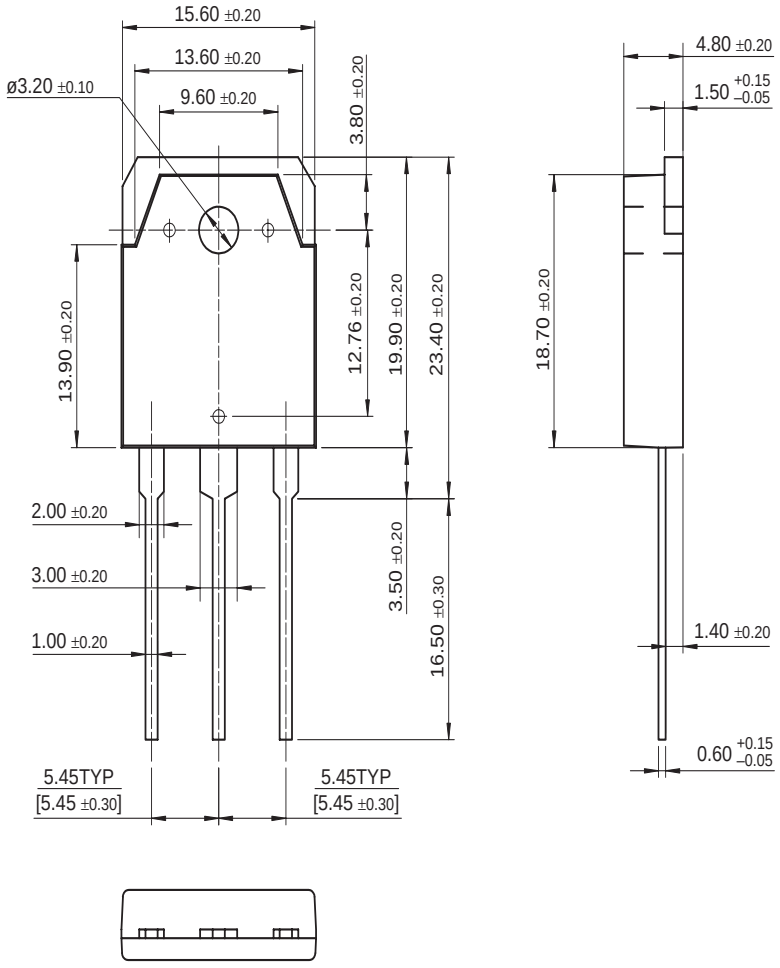


Figure 9. Power Derating

Package Dimensions

TO-3P



Dimensions in Millimeters

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No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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Rev. I35

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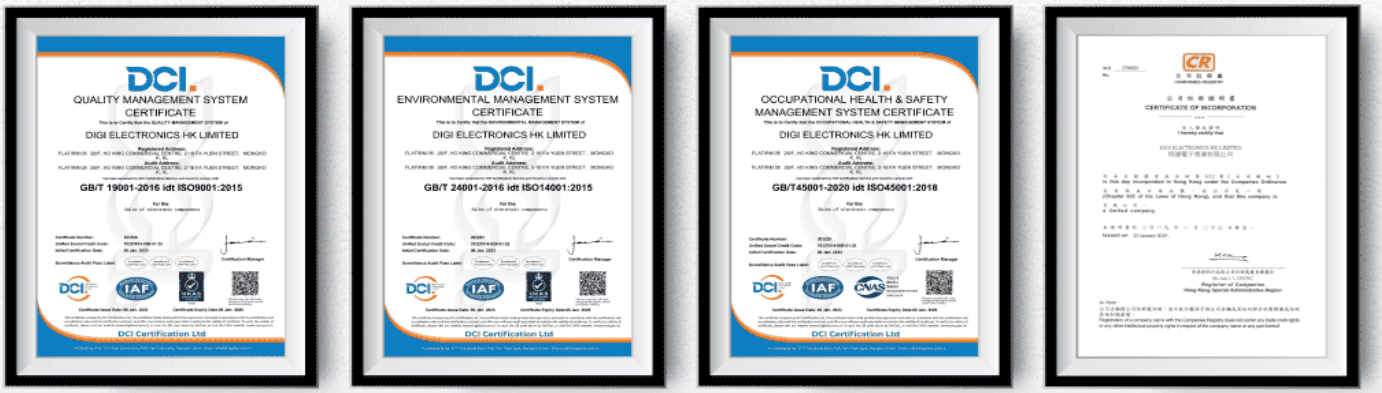

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