

Silicon Epitaxial Base Mesa Transistor

TOP-3 Package (See Page 36 For Dimensions)

T-33-13
T-33-21

**2SA1061 (PNP)
2SC2485 (NPN)**

2SA1061 (PNP)

Absolute Maximum Ratings (Ta=25°C)

| Item | Symbol | Rating | Unit |
|-----------------------------|-------------------|----------|------|
| Collector-Base Voltage | -V _{CB0} | 100 | V |
| Collector-Emitter Voltage | -V _{CEO} | 100 | V |
| Emitter-Base Voltage | -V _{EB0} | 5 | V |
| Collector Current | -I _C | 6 | A |
| Peak Collector Current | -I _{CM} | 10 | A |
| Collector Power Dissipation | P _C * | 70 | W |
| Junction Temperature | T _J | 150 | °C |
| Storage Temperature | T _{stg} | -55~+150 | °C |

*T_c=25°C

High Power Audio Frequency Amplifier
Complementary Pair with 2SC2485

Feature:

- High collector power dissipation: 70W(T_c=25°C)

**hFE Classification

| hFE | 100~200 | 60~120 | 40~80 |
|-------|---------|--------|-------|
| Class | P | Q | R |

Electrical Characteristics (Ta=25°C)

| Item | Symbol | Condition | min. | typ. | max. | Unit |
|--------------------------------------|-----------------------|---|------|------|------|------|
| Collector Cutoff Current | -I _{CB0} | -V _{CB} =100V, I _E =0 | | | 50 | μA |
| Emitter Cutoff Current | -I _{EB0} | -V _{EB} =3V, I _C =0 | | | 50 | μA |
| DC Current Gain | hFE1 | -V _{CE} =5V, -I _C =0.2A | 20 | | | |
| | hFE2** | -V _{CE} =5V, -I _C =1.0A | 40 | | 220 | V |
| | hFE3 | -V _{CE} =5V, -I _C =4A | 20 | | | |
| Base Emitter Voltage | -V _{BE} | -V _{CE} =5V, -I _C =4A | | | 1.8 | V |
| Collector-Emitter Saturation Voltage | -V _{CE(sat)} | -I _C =4A, -I _B =0.4A | | | 2.0 | V |
| Gain Bandwidth Product | f _T | -V _{CE} =5V, -I _C =0.5A | | 20 | | MHz |

2SC2485 (NPN)

Absolute Maximum Ratings (Ta=25°C)

| Item | Symbol | Rating | Unit |
|-----------------------------|------------------|----------|------|
| Collector-Base Voltage | V _{CB0} | 100 | V |
| Collector-Emitter Voltage | V _{CEO} | 100 | V |
| Emitter-Base Voltage | V _{EB0} | 5 | V |
| Collector Current | I _C | 6 | A |
| Peak Collector Current | I _{CM} | 10 | A |
| Collector Power Dissipation | P _C * | 70 | W |
| Junction Temperature | T _J | 150 | °C |
| Storage Temperature | T _{stg} | -55~+150 | °C |

*T_c=25°C

High Power Audio Frequency Amplifier
Complementary Pair with 2SA1061

Feature:

- High collector power dissipation: 70W(T_c=25°C)

**hFE Classification

| hFE | 100~200 | 60~120 | 40~80 |
|-------|---------|--------|-------|
| Class | P | Q | R |

Electrical Characteristics (Ta=25°C)

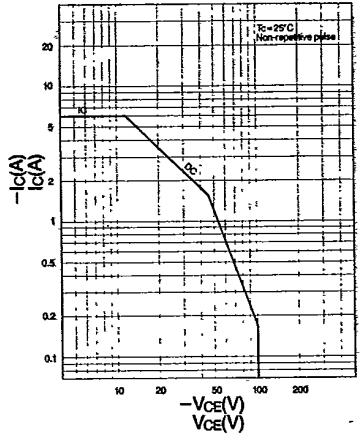
| Item | Symbol | Condition | min. | typ. | max. | Unit |
|--------------------------------------|----------------------|---|------|------|------|------|
| Collector Cutoff Current | I _{CB0} | V _{CB} =100V, I _E =0 | | | 50 | μA |
| Emitter Cutoff Current | I _{EB0} | V _{EB} =3V, I _C =0 | | | 50 | μA |
| DC Current Gain | hFE1 | V _{CE} =5V, I _C =0.2A | 20 | | | |
| | hFE2** | V _{CE} =5V, I _C =1.0A | 40 | | 220 | V |
| | hFE3 | V _{CE} =5V, I _C =4A | 20 | | | |
| Base Emitter Voltage | V _{BE} | V _{CE} =5V, I _C =4A | | | 1.8 | V |
| Collector-Emitter Saturation Voltage | V _{CE(sat)} | I _C =4A, I _B =0.4A | | | 2.0 | V |
| Gain Bandwidth Product | f _T | V _{CE} =5V, I _C =0.5A | | 20 | | MHz |

T-33-13
T-33-21

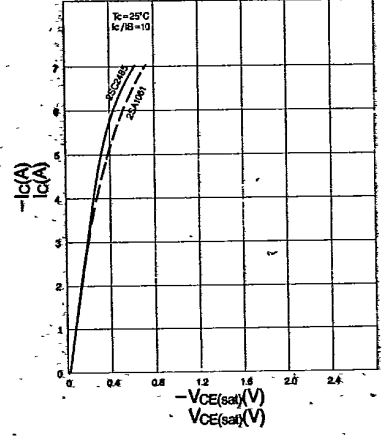
**2SA1061 (PNP)
2SC2485 (NPN)**

Typical Characteristics

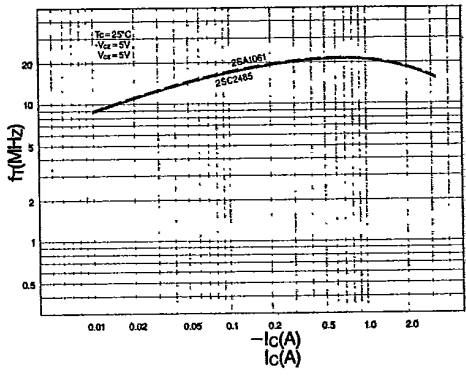
Area of Safe Operation (ASO) ($T_c=25^\circ\text{C}$)



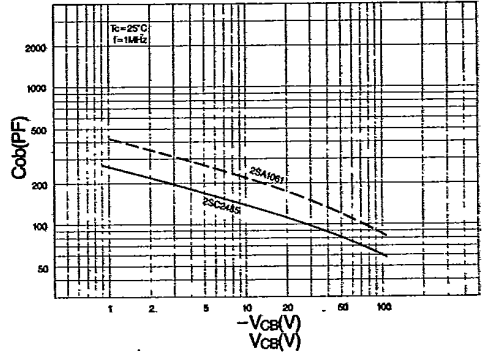
$V_{CE(sat)}$ vs. I_c characteristics



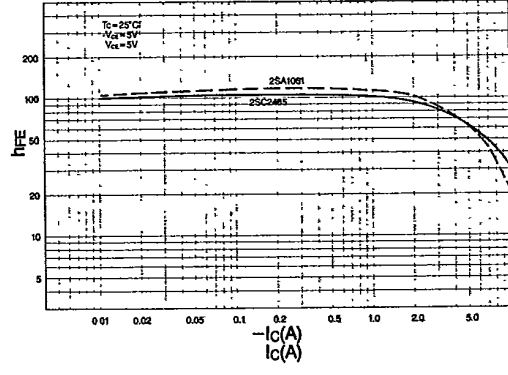
f_T vs. I_c characteristics



C_{ob} vs. V_{CB} characteristics



h_{FE} vs I_c characteristics



V_{BE} vs. I_c characteristics

