

2SC5938

FOR LOW FREQUENCY AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

ISAHAYA 2SC5938 is a super mini package resin sealed silicon NPN epitaxial transistor for muting and switching application

FEATURE

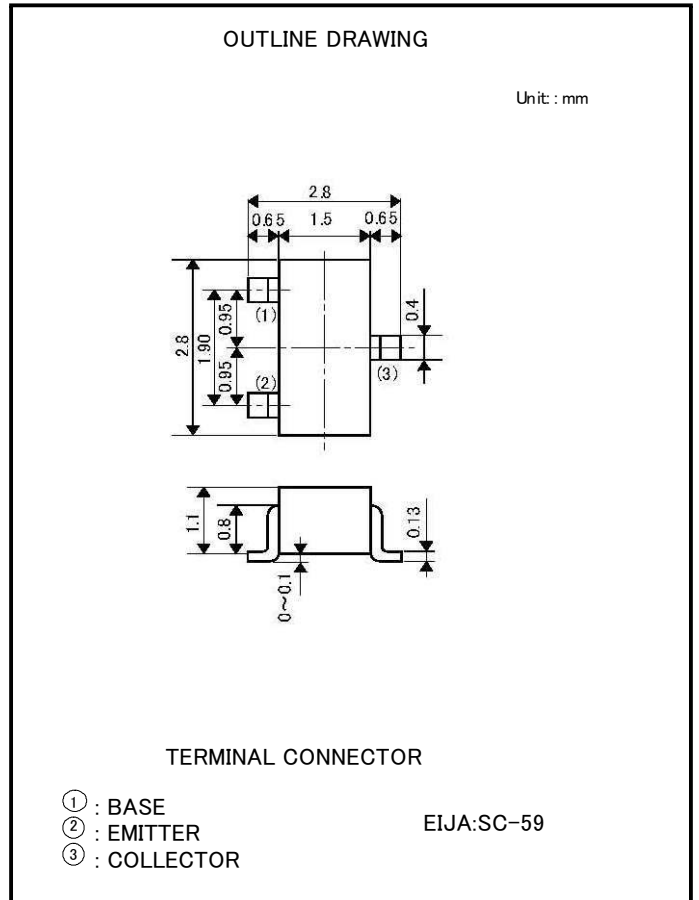
- High Emitter to Base voltage VEBO=50V
- High Reverse hFE
- Low ON RESISTANCE. RON=1 Ω
- Small package for mounting

APPLICATION

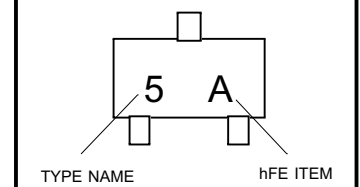
For muting, switching application

MAXIMUM RATINGS (Ta=25°C)

| Symbol | Parameter | Ratings | Unit |
|------------------|------------------------------|------------|------|
| V _{CB0} | Collector to Base voltage | 50 | V |
| V _{CEO} | Collector to Emitter voltage | 12 | V |
| V _{EBO} | Emitter to Base voltage | 50 | V |
| I _C | Collector current | 200 | mA |
| P _C | Collector dissipation | 150 | mW |
| T _j | Junction temperature | +125 | °C |
| T _{stg} | Storage temprature | -55 ~ +125 | °C |



MARKING



ELECTRICAL CHARACTERISTICS (Ta=25°C)

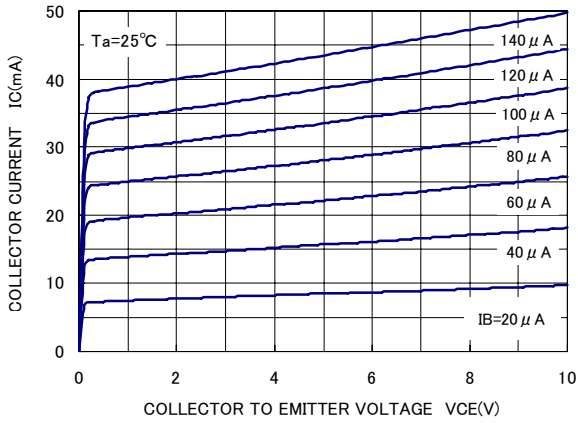
| Symbol | Parameter | Test conditions | Limits | | | Unit |
|----------------------|------------------------------|---|--------|-----|------|------|
| | | | Min | Typ | Max | |
| I _{CBO} | Collector cut off current | V _{CB} =50V, I _E =0mA | | | 0.1 | μA |
| I _{EBO} | Emitter cut off current | V _{EB} =50V, I _C =0mA | | | 0.1 | μA |
| h _{FE} | DC forward current gain | V _{CE} =2V, I _C =4mA | 200 | | 1200 | |
| V _{CE(sat)} | C to E saturation voltage | I _C =30mA, I _B =3mA | | 30 | | mV |
| f _T | Gain bandwidth product | V _{CE} =6V, I _C =4mA | | 30 | | MHz |
| C _{ob} | Collector output capacitance | V _{CB} =10V, I _E =0mA, f=1MHz | | 5.0 | | pF |

| Item | A | B |
|-----------------|------------|-------------|
| h _{FE} | 200 to 700 | 350 to 1200 |
| Marking | 5A | 5B |

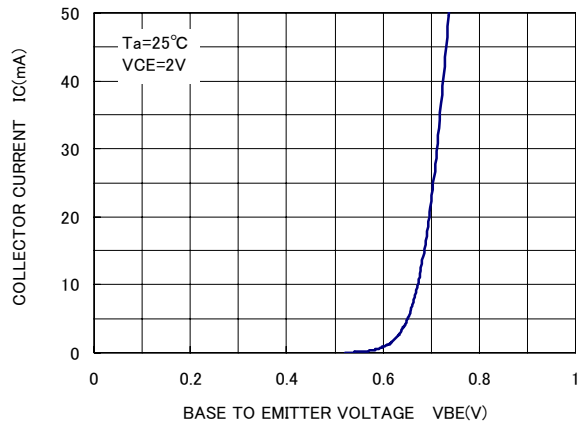
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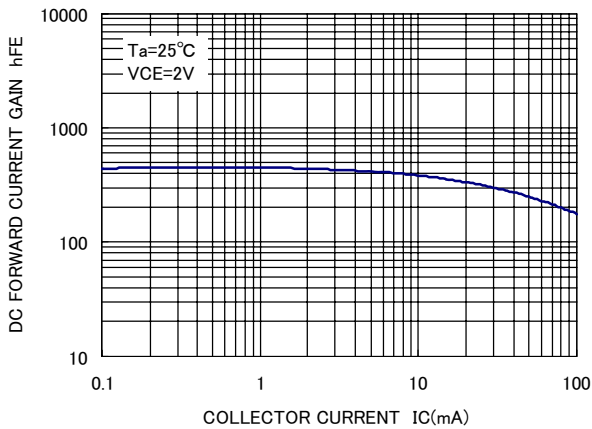
COMMON EMITTER OUTPUT



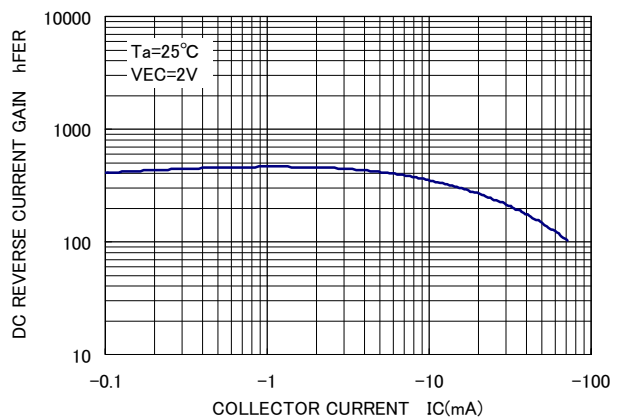
COMMON EMITTER TRANSFER



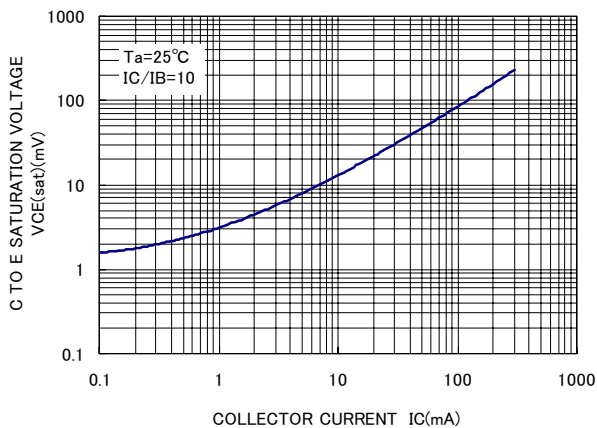
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



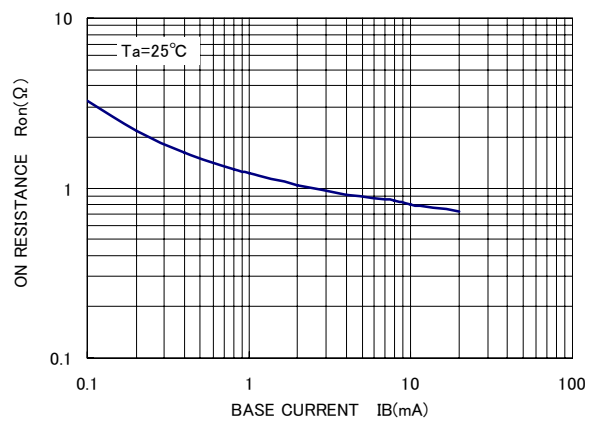
DC REVERSE CURRENT GAIN
VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE
VS. COLLECTOR CURRENT



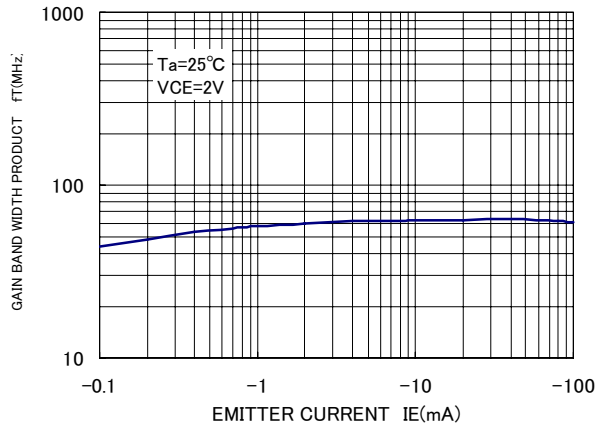
ON RESISTANCE VS. BASE CURRENT



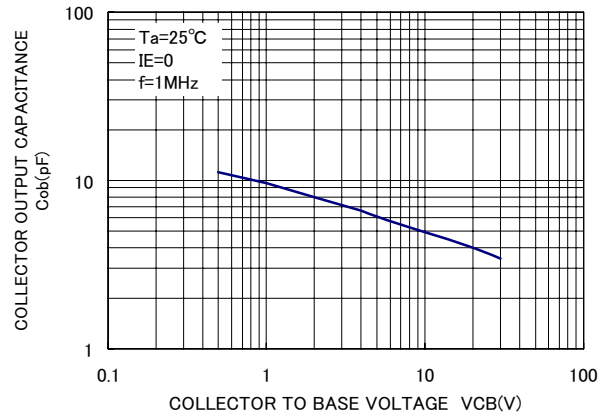
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GAIN BAND WIDTH PRODUCT VS.
EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE





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