Low frequency transistor 2SA2018 / 2SA2030 / 2SA2119K

The transistor of 500mA class which went only into 2125 size conventionally was attained in 1608 sizes or 1208 sizes.

Applications

For switching, for muting.

Features

- 1) A collector current is large.
- 2) Collector saturation voltage is low.

 $V_{CE\,(sat)} \leq 250 mA$

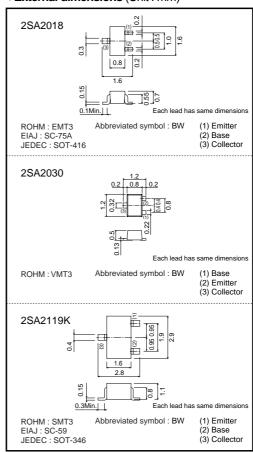
At $I_C = 200 \text{mA} / I_B = 10 \text{mA}$

●Absolute maximum ratings (Ta=25°C)

| Parameter | Sy | mbol | Limits | Unit | | | |
|-----------------------------|-----------------|------------------|-------------|------|--|--|--|
| Collector-base voltage | \ | /сво | 15 | V | | | |
| Collector-emitter voltage | ١ | / _{CEO} | 12 | V | | | |
| Collector current | | lc | 500 | mA | | | |
| Collector current | I _{CP} | | 1 | Α * | | | |
| Collector power dissipation | Pc | VMT3 | 150 | mW | | | |
| | | EMT3 | 150 | | | | |
| | | SMT3 | 300 | | | | |
| Junction temperature | Tj | | 150 | °C | | | |
| Storage temperature | Tstg | | -55 to +150 | °C | | | |
| 0: 1 1 5 1 | | | | | | | |

^{*}Single pulse, Pw=1ms

●External dimensions (Unit : mm)



●Electrical characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Тур. | Max. | Unit | Conditions | |
|--------------------------------------|-------------------|------|------|------|------|----------------------------|--|
| Collector-base breakdown voltage | ВУсво | 15 | - | - | V | I _C =10μA | |
| Collector-emitter breakdown voltage | BV _{CEO} | 12 | _ | _ | V | I _C =1mA | |
| Emitter-base breakdown voltage | BV _{EBO} | 6 | - | - | V | I _E =10μA | |
| Collector cutoff current | Ісво | _ | - | 100 | nA | V _{CB} =15V | |
| DC current transfer ratio | hfe | 270 | - | 680 | - | VcE=2V / Ic=10mA | |
| Collector-emitter saturation voltage | VCE (sat) | - | 100 | 250 | mV | Ic=200mA / Iв=10mA | |
| Transition frequency | f⊤ | _ | 260 | _ | MHz | Vce=2V, Ie=10mA, fr=100MHz | |
| Output capacitance | Cob | _ | 6.5 | _ | pF | Vcb=10V, Ie=0A, f=1MHz | |

●Packaging specifications and hFE

| | | Package name | | Taping | |
|----------|-----------------|------------------------------|------|--------|------|
| Type | | Code | T146 | TL | T2L |
| | h _{FE} | Basic ordering unit (pieces) | 3000 | 3000 | 8000 |
| 2SA2119K | | | 0 | - | _ |
| 2SA2018 | | | - | 0 | _ |
| 2SA2030 | | | _ | _ | 0 |

Electrical characteristic curves

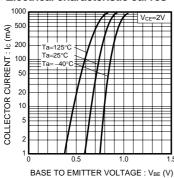


Fig.1 Grounded Emitter Propagation Characteristics

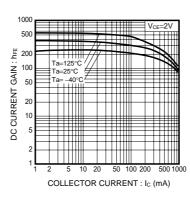


Fig.2 DC Current Gain vs. Collector Current

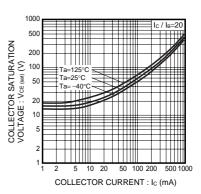


Fig.3 Collector-Emitter Saturation Voltage vs. Collector Current (I)

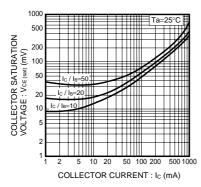


Fig.4 Collector-Emitter Saturation Voltage vs. Collector Current (II)

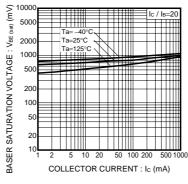


Fig.5 Base-Emitter Saturation Voltage vs.Collecter Current

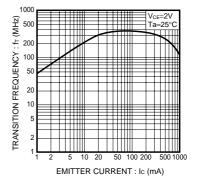


Fig.6 Gain Bandwidth Product vs. Emitter Current

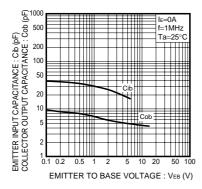


Fig.7 Collector Output Capacitance vs. Collector-Base Voltage Emitter Input Capacitance vs. Emitter-Base Voltage

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