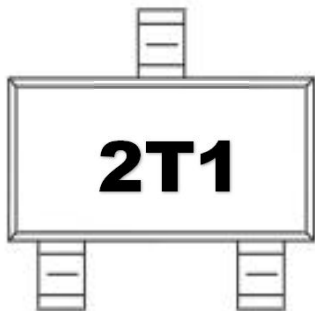


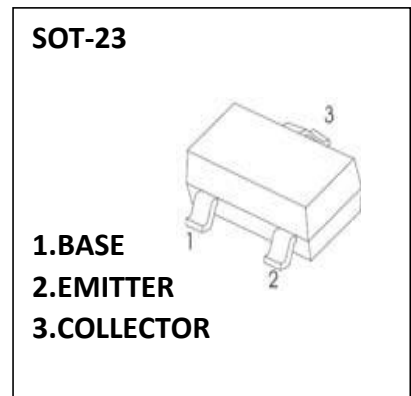
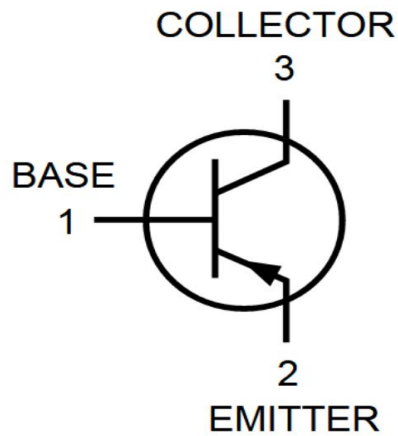
SOT-23 Plastic-Encapsulate MOSFETS

S9012 TRANSISTOR (PNP)

MARKING:



Equivalent Circuit:



FEATURES:

- ※ Complimentary to S9013
- ※ Collector Current: $I_c=0.5A$
- ※ Excellent Hfe Linearity

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---|--------|----------|------|
| Collector-Base Voltage | VCBO | -40 | V |
| Collector-Emitter Voltage | VCEO | -25 | V |
| Emitter-Base Voltage | VEBO | -5 | V |
| Collector Current | IC | -500 | mA |
| Collector Power Dissipation | PC | 300 | mW |
| Thermal Resistance From Junction To Ambient | ROJA | 416 | °C/W |
| Junction Temperature | Tj | 150 | °C |
| Storage Temperature | Tstg | -55~+150 | °C |

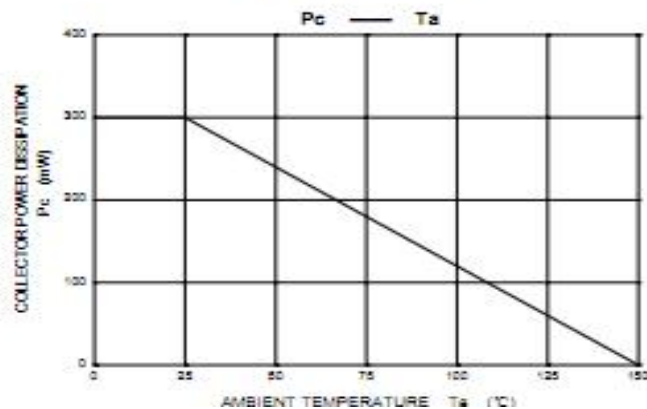
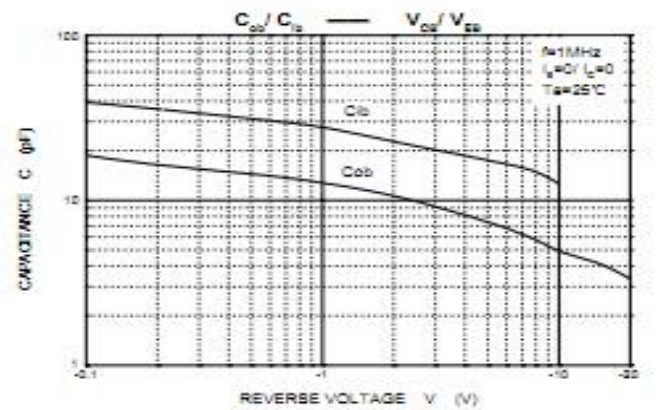
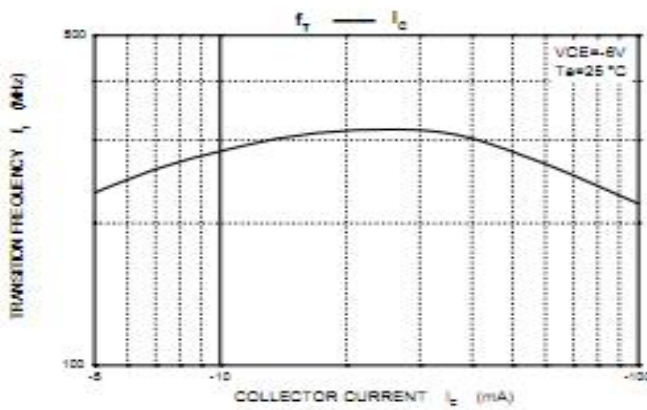
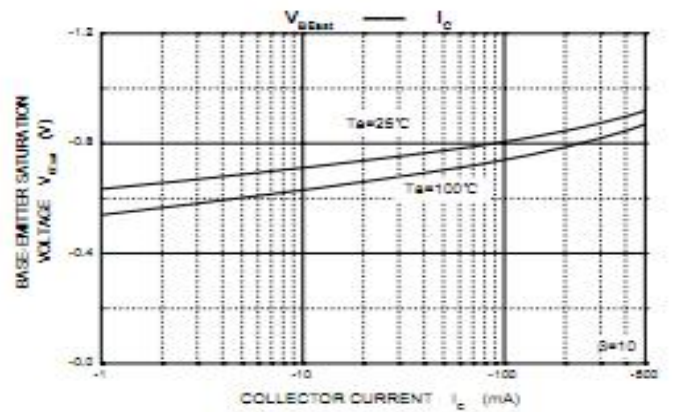
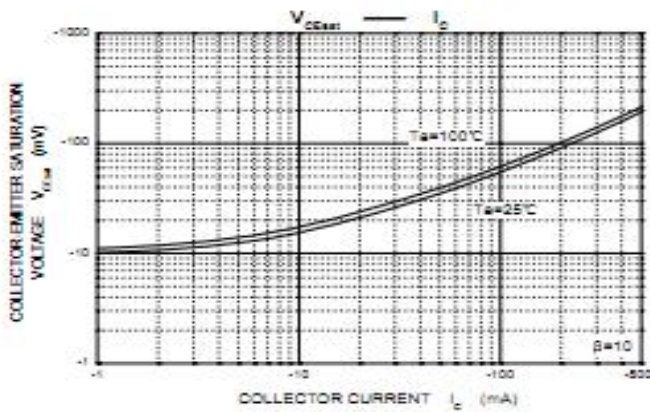
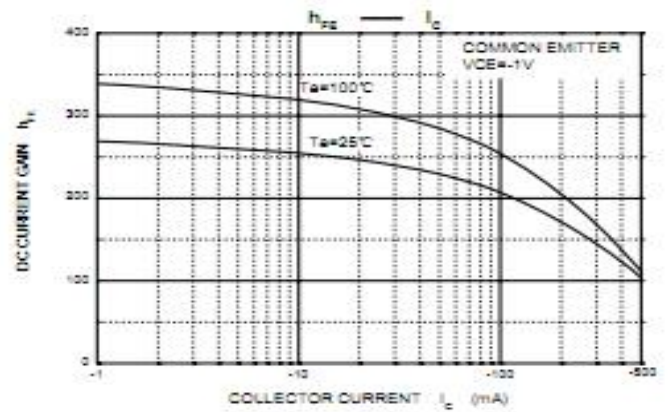
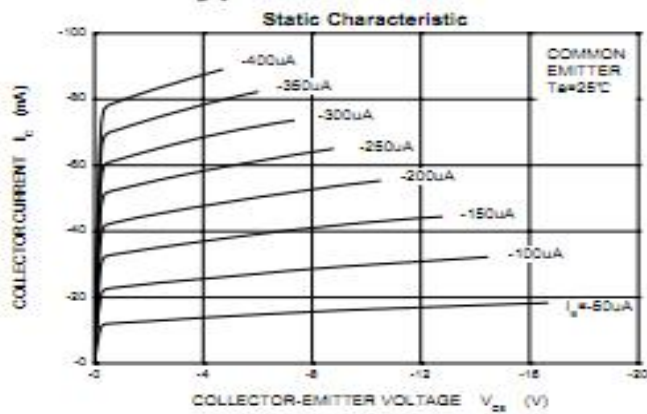
ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
|--------------------------------------|----------|-------------------------------|-----|-----|------|------|
| Collector-base breakdown voltage | V(BR)CBO | IC= -100μA, IE=0 | -40 | | | V |
| Collector-emitter breakdown voltage | V(BR)CEO | IC= -1mA, IB=0 | -25 | | | V |
| Emitter-base breakdown voltage | V(BR)EBO | IE=-100μA, IC=0 | -5 | | | V |
| Collector cut-off current | ICBO | VCB=-40 V , IE=0 | | | -0.1 | μA |
| Collector cut-off current | ICEO | VCB=-25V , IE=0 | | | -0.1 | μA |
| Emitter cut-off current | IEBO | VEB= -5V , IC=0 | | | -0.1 | μA |
| DC current gain | hFE | VCE=-1V, IC= -50mA | 120 | | 400 | |
| | hFE | VCE=-1V, IC= -500mA | 60 | | | |
| Collector-emitter saturation voltage | VCE(sat) | IC=-500 mA, IB= -50mA | | | -0.6 | V |
| Base-emitter saturation voltage | VBE(sat) | IC=-500 mA, IB= -50mA | | | -1.2 | V |
| Transition frequency | fT | VCE=-6V, IC= -20mA f=30MHz | 150 | | | MHz |
| Collector output capacitance | Cob | VCB=-10V, IE=0, f=1MHz | | | 5 | pF |

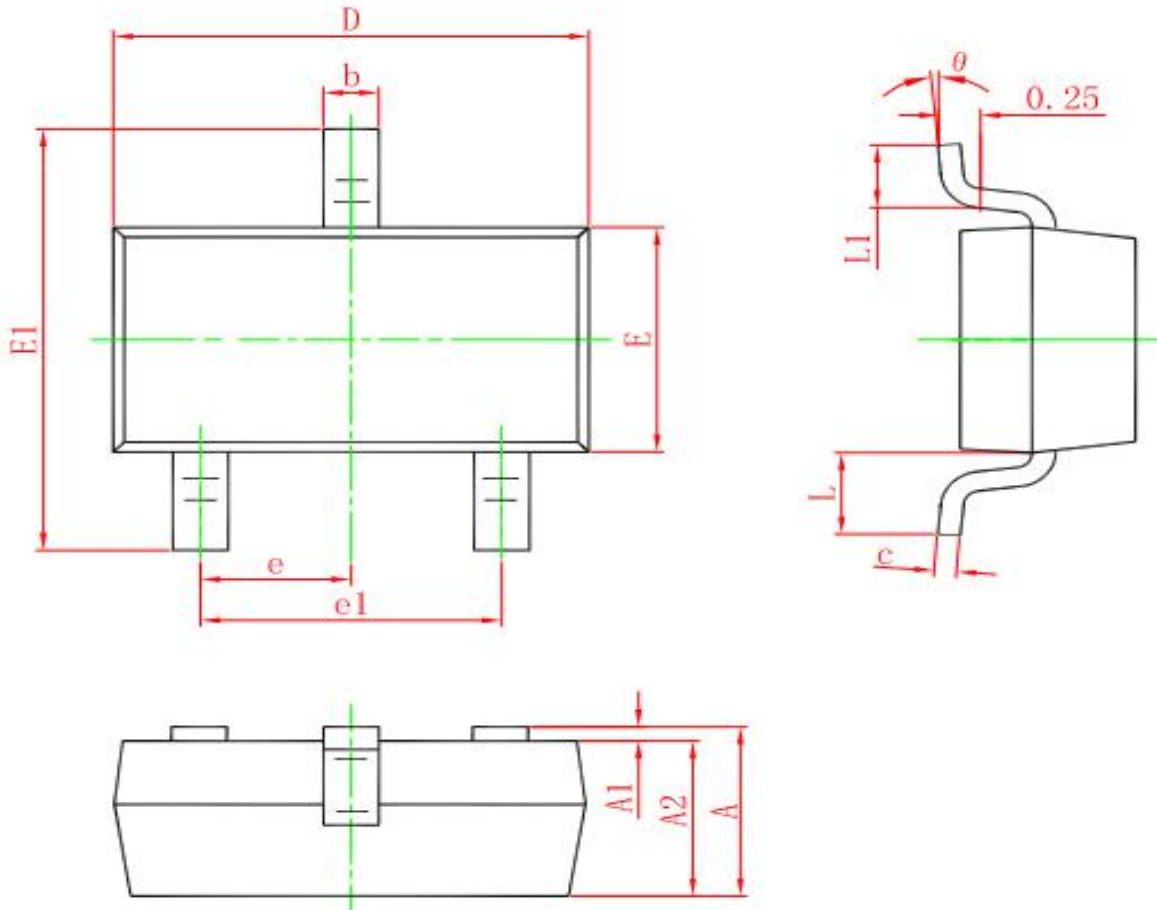
CLASSIFICATION OF hFE

| Rank | L | H | J |
|-------|---------|---------|---------|
| Range | 120-200 | 200-350 | 300-400 |

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS



SOT-23 PACKAGE OUTLINE DIMENSIONS



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950 TYP. | | 0.037 TYP. | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 REF. | | 0.022 REF. | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |