

TRANSISTOR (PNP)

Plastic-Encapsulate Transistor

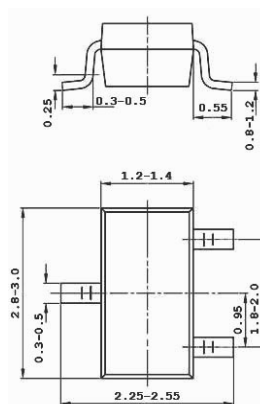
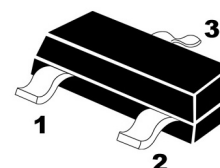
FEATURES

- Low noise: NF = 1dB(typ.), 10dB(max.)
- Complementary to 2SC2712
- Small package

MARKING: SO, SY, SG

SOT-23

1. BASE
2. EMITTER
3. COLLECTOR



Unit:mm

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

MAXIMUM RATINGS

Parameters	Symbols	Value	UNITS
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current - Continuous	I_C	150	mA
Total Device Dissipation	P_D	150	mW
Junction and Storage Temperature	T_J, T_{stg}	-55-125	°C

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

ELECTRICAL CHARACTERISTICS

Parameters	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-50			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-50			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -50V, I_E = 0$			-0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = -6V, I_C = -2mA$	70		400	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -10mA$			-0.3	V
Transition Frequency	f_T	$V_{CE} = -10V, I_C = -1mA$	80			MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$			7	pF
Noise Figure	NF	$V_{CE} = -6V, I_C = 0.1mA, f = 1KHz, R_g = 10K\Omega$			10	dB

CLASSIFICATION OF h_{FE}

Rank	O	Y	GR(G)
Range	70-140	120-240	200-400