TRANSISTOR (NPN) **Plastic-Encapsulate Transistors**

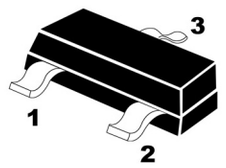
FEATURES

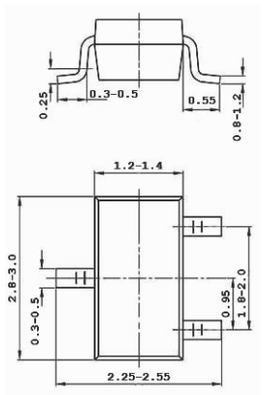
- Power dissipation

MARKING : RR1 , RO1 , RY1

SOT-23

1. BASE
2. EMITTER
3. COLLECTOR





Unit:mm

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

MAXIMUM RATINGS

Parameters	Symbols	Value	UNITS
Collector-Base Voltage	V_{CBO}	35	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current - Continuous	I_C	50	mA
Collector Dissipation	P_C	150	mW
Junction and Storage Temperature	T_J, T_{stg}	-55-150	℃

ELECTRICAL CHARACTERISTICS

Parameters	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	35			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	30			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	4			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=35V, I_E=0			0.1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=4V, I_C=0			0.1	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=12V, I_C=2mA	40		240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=10mA, I_B=1mA			0.4	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=10mA, I_B=1mA			1	V
Transition Frequency	f_T	V_{CE}=10V, I_C=1mA	100		400	MHz
Power Gain	Gpe	V_{CE}=6V, I_C=1mA, f=10.7MHz	27		33	pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	R	O	Y
Range	40-80	70-140	120-240