

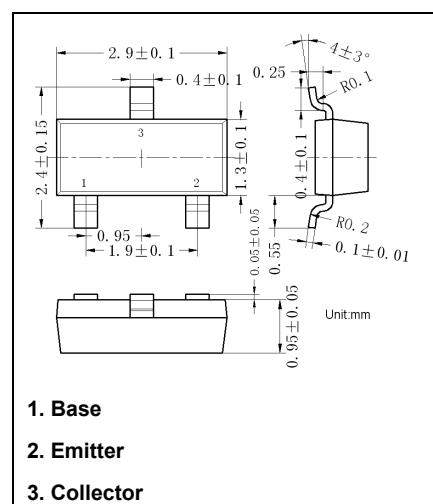
SOT-23 Plastic-Encapsulate Transistors

M28S

NPN Transistors

Features

- Excellent h_{FE} Linearity
- High DC Current Gain

Marking: 28S

Maximum Ratings (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector Base Voltage	40	V
V_{CEO}	Collector Emitter Voltage	20	V
V_{EBO}	Emitter Base Voltage	6	V
I_c	Collector Current	1	A
P_c	Collector Power Dissipation	200	mW
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55 ~ +150	°C
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	625	°C/W

Electrical Characteristics (T_a=25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = 100\mu A, I_E = 0$	40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = 1mA, I_B = 0$	20			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = 100\mu A, I_C = 0$	6			V
I_{CBO}	Collector cut-off current	$V_{CB} = 35V, I_E = 0$			100	nA
I_{CEO}	Collector cut-off current	$V_{CE} = 20V, I_B = 0$			5	μA
I_{EBO}	Emitter cut-off current	$V_{EB} = 5V, I_C = 0$			100	nA
$h_{FE(1)}$	DC current gain	$V_{CE} = 5V, I_C = 1mA$	300			
$h_{FE(2)}$		$V_{CE} = 1V, I_C = 1mA$	290			
$h_{FE(3)}$		$V_{CE} = 1V, I_C = 100mA$	300		1000	
$h_{FE(4)}$		$V_{CE} = 1V, I_C = 300mA$	300			
$h_{FE(5)}$		$V_{CE} = 1V, I_C = 500mA$	300			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = 600mA, I_B = 20mA$			0.55	V
f_T	Transition frequency	$V_{CE} = 10V, I_C = 50mA, f = 1MHz$	100			MHz
C_{ob}	Collector output capacitance	$V_{CB} = 10V, I_E = 0, f = 1MHz$		9		pF

Classification OF $h_{FE(1)}$

Rank	B	C	D
Range	300-550	500-700	650-1000

Typical Characteristics

Static Characteristic

