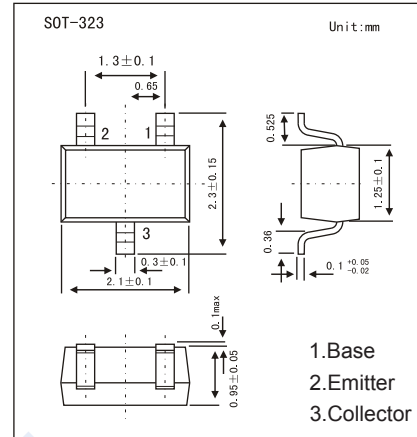


NPN Transistors

MMST5551 (KMST5551)

■ Features

- Small Surface Mount Package
- Ideal for Medium Power Amplification and Switching
- Complementary to MMST5401



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	180	V
Collector - Emitter Voltage	V_{CE0}	160	
Emitter - Base Voltage	V_{EB0}	6	
Collector Current - Continuous	I_c	600	mA
Collector Power Dissipation	P_c	200	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_c = 100 \mu\text{A}, I_E = 0$	180			V
Collector- emitter breakdown voltage	V_{CE0}	$I_c = 1 \text{ mA}, I_B = 0$ (Note.1)	160			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}, I_C = 0$	6			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 120 \text{ V}, I_E = 0$			50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4 \text{ V}, I_C = 0$			50	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 10 \text{ mA}, I_B = 1 \text{ mA}$			0.15	V
		$I_c = 50 \text{ mA}, I_B = 5 \text{ mA}$			0.2	
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 10 \text{ mA}, I_B = 1 \text{ mA}$			1	
		$I_c = 50 \text{ mA}, I_B = 5 \text{ mA}$			1	
DC current gain	$h_{FE(1)}$	$V_{CE} = 5 \text{ V}, I_c = 1 \text{ mA}$	80			
	$h_{FE(2)}$	$V_{CE} = 5 \text{ V}, I_c = 10 \text{ mA}$	80		300	
	$h_{FE(3)}$	$V_{CE} = 5 \text{ V}, I_c = 50 \text{ mA}$	30			
Collector output capacitance	C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$			6	pF
Transition frequency	f_T	$V_{CE} = 10 \text{ V}, I_c = 10 \text{ mA}, f = 100 \text{ MHz}$	100		300	MHz

Note.1: Pulse test: pulse width $\leq 300 \mu\text{s}$, duty cycle $\leq 2\%$.

■ Marking

Marking	K4N
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