

MMST2222A TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM}: 0.2 \text{ W (Tamb=25}^{\circ}\text{C)}$$

Collector current

$$I_{CM}: 0.6 \text{ A}$$

Collector-base voltage

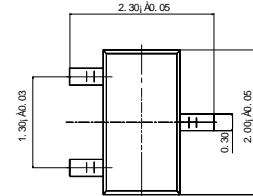
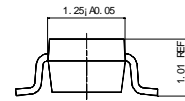
$$V_{(BR)CBO}: 75 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55^{\circ}\text{C to } +150^{\circ}\text{C}$$

SOT-323

1. BASE
2. EMITTER
3. COLLECTOR



Unit: mm

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

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	75		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0$	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	6		V
Collector cut-off current	I_{CBO}	$V_{CB} = 70\text{V}, I_E = 0$		0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 35\text{V}, I_B = 0$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 3\text{V}, I_C = 0$		0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 10\text{V}, I_C = 150\text{mA}$	100	300	
	$h_{FE(2)}$	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$		0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$		1.2	V
Transition frequency	f_T	$V_{CE} = 20\text{V}, I_C = 20\text{mA}$ $f = 100\text{MHz}$	300		MHz
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0$ $f = 1\text{MHz}$		8	pF
Delay time	t_d	$V_{CC} = 30\text{V}, I_C = 150\text{mA}$		10	nS
Rise time	t_r	$V_{BE(off)} = 0.5\text{V}, I_{B1} = 15\text{mA}$		25	nS
Storage time	t_s	$V_{CC} = 30\text{V}, I_C = 150\text{mA}$		225	nS
Fall time	t_f	$I_{B1} = I_{B2} = 15\text{mA}$		60	nS

Marking	K3P
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