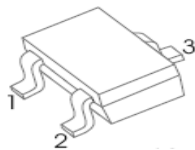
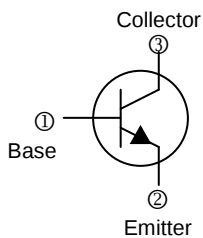


FEATURE

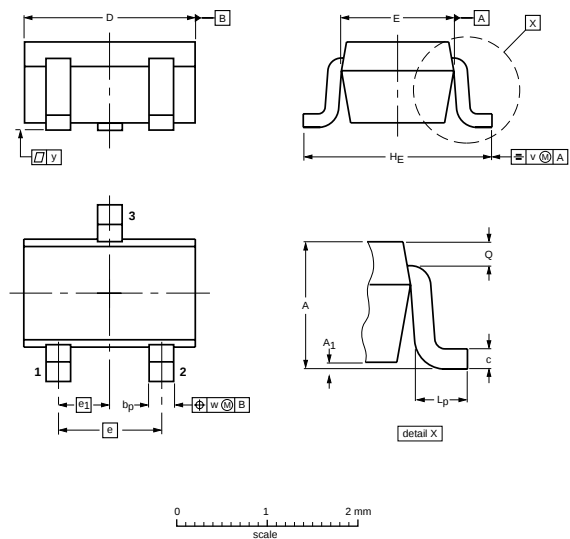
Ideal for Medium Power Amplification and Switching
Also Available in Lead Free Version
Complementary to MMBT5401W

MARKING: K4N



SOT-323

SOT-323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector to Base Voltage	V _{CBO}	180	V
Collector to Emitter Voltage	V _{CEO}	160	V
Emitter to Base Voltage	V _{EBO}	6	V
Collector Current-Continuous	I _C	200	mA
Collector Power Dissipation	P _C	200	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	625	°C/W
Operating & Storage Temperature	T _J , T _{STG}	150, -55 ~ 150	°C

MMST5551

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

CHARACTERISTIC	SYMBOL	MIN	MAX	UNIT	TEST CONDITION
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	180		V	$I_C=100\mu\text{A}$, $I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	160		V	$I_C = 1\text{mA}$, $I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6		V	$I_E=10\mu\text{A}$, $I_C=0$
Collector Cutoff Current	I_{CBO}		50	nA	$V_{CB}=120\text{V}$, $I_E=0$
Emitter Cutoff Current	I_{EBO}		50	nA	$V_{EB}=4\text{V}$, $I_C=0$
DC Current Gain	h_{FE1}	80			$V_{CE}=5\text{V}$, $I_C=1\text{mA}$
	h_{FE2}	80	250		$V_{CE}=5\text{V}$, $I_C=10\text{mA}$
	h_{FE3}	30			$V_{CE}=5\text{V}$, $I_C=50\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.15	V	$I_C=10\text{mA}$, $I_B=1\text{mA}$
	$V_{CE(sat)}$		0.2	V	$I_C=50\text{mA}$, $I_B=5\text{mA}$
Base-Emitter Voltage	$V_{BE(sat)}$		1	V	$I_C=10\text{mA}$, $I_B=1\text{mA}$
	$V_{BE(sat)}$		1	V	$I_C=50\text{mA}$, $I_B=5\text{mA}$
Transition Frequency	f_T	100	300	MHz	$V_{CE}=10\text{V}$, $I_C=10\text{mA}$, $f=100\text{MHz}$
Collector Output Capacitance	C_{ob}		6	pF	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$
Noise Figure	NF		8	dB	$V_{CE}=5\text{V}$, $I_C=0.2\text{mA}$, $f=1\text{KHz}$, $R_S=1\text{K}\Omega$

RATING AND CHARACTERISTIC CURVES (MMST5551)

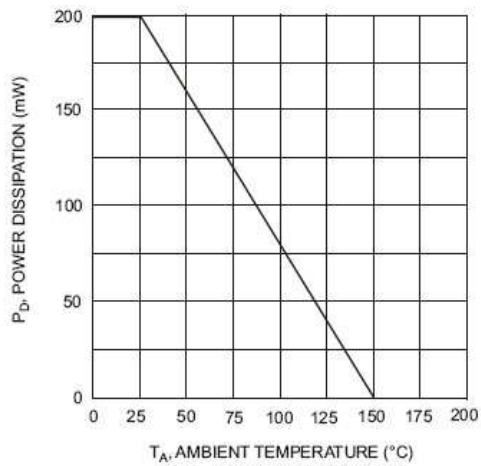


Fig. 1, Max Power Dissipation vs Ambient Temperature

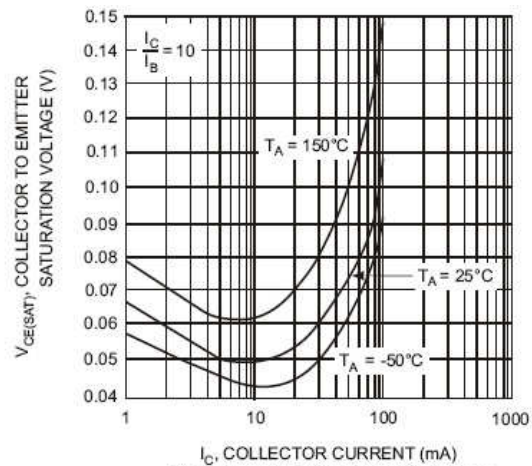


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

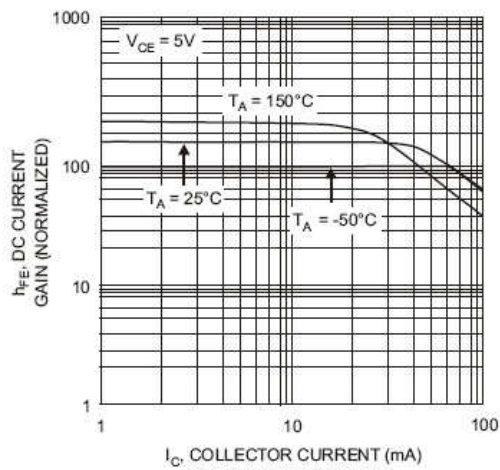


Fig. 3, DC Current Gain vs Collector Current

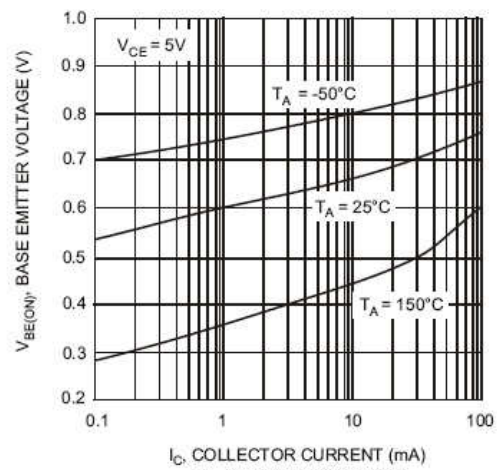


Fig. 4, Base Emitter Voltage vs. Collector Current

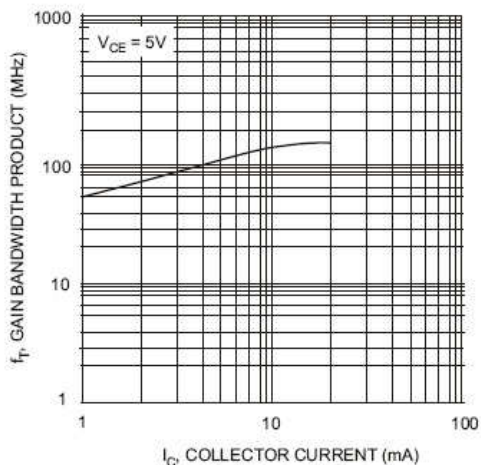


Fig. 5, Gain Bandwidth Product vs. Collector Current