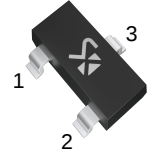


TRANSISTOR (NPN)

FEATURES

These devices are intended for use in audio frequency power amplifier and low speed switching applications

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1. BASE
2. EMITTER
3. COLLECTOR

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

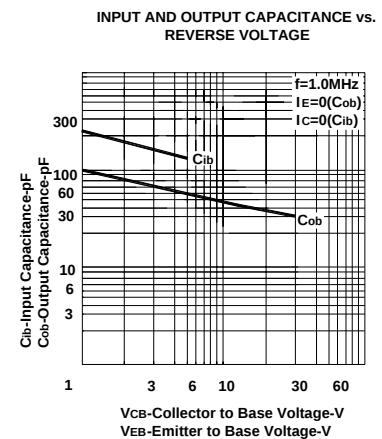
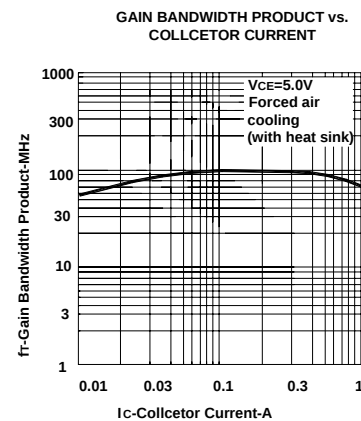
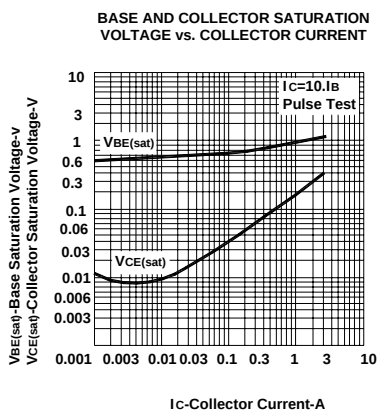
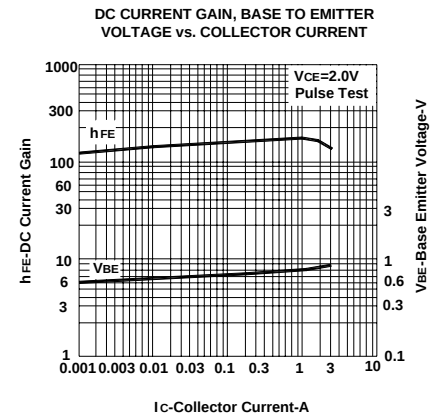
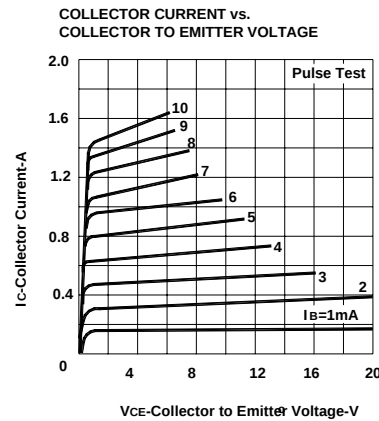
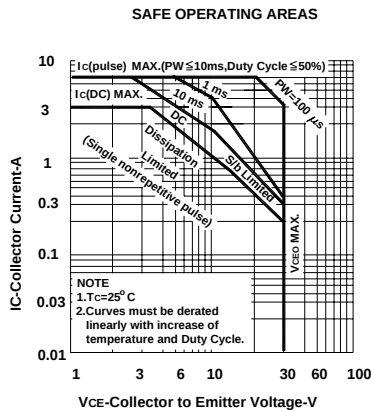
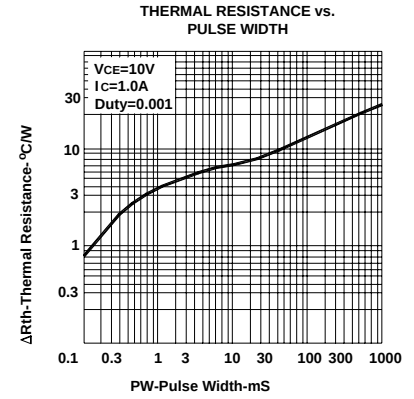
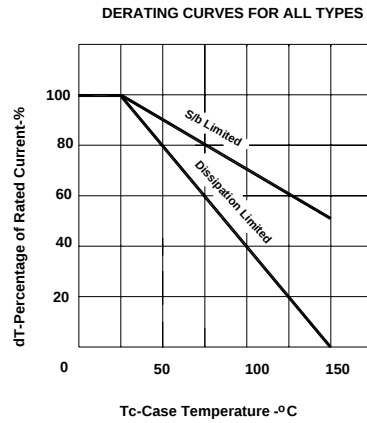
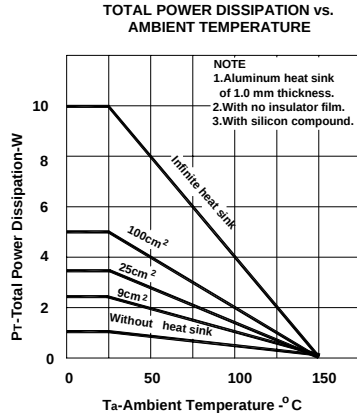
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	3	A
P_D	Total Power Dissipation@ $T_A=25^{\circ}\text{C}$	1	W
P_D	Total Power Dissipation@ $T_C=25^{\circ}\text{C}$	10	W
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-65-+150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=30\text{V}, I_E=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=3\text{V}, I_C=0$			1	μA
DC current gain	H_{FE}	$V_{CE}=2\text{V}, I_C=20\text{mA}$ $V_{CE}=2\text{V}, I_C=1\text{A}$ R Q P E	30 60 100 160 200		120 200 320 400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2\text{A}, I_B=200\text{mA}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=2\text{A}, I_B=200\text{mA}$			2	V
Transition frequency	f_T	$V_{CE}=5\text{V}, I_C=100\text{mA}$		90		MHz
Collector base capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		45		PF

Typical Characteristics

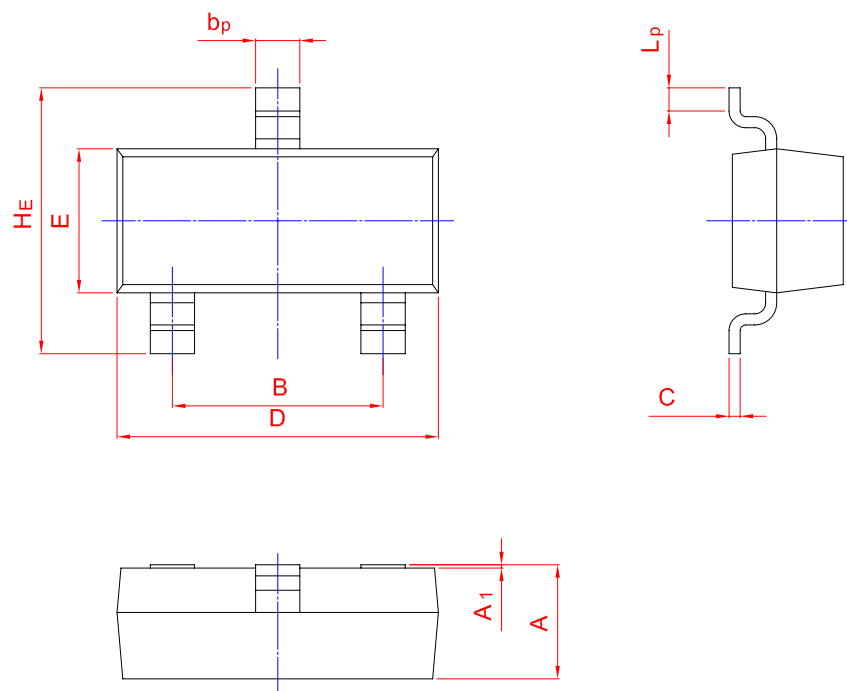
TYPICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

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UNIT	A	B	b_p	C	D	E	H_E	A_1	L_p
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20