

PNP High Voltage Amplifier

MMBTA93

FEATURES

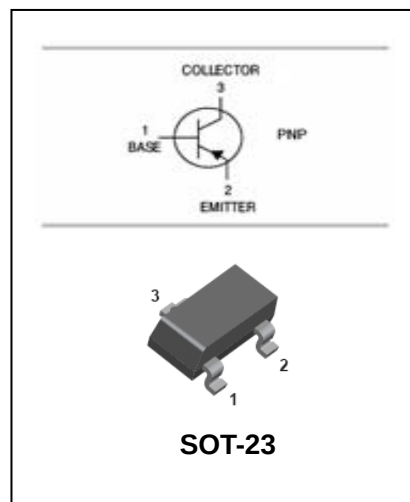
- Epitaxial planar die construction.
- Complementary NPN type available (MMBTA42).
- Ideal for medium power amplification and switching.



Lead-free

APPLICATIONS

- High voltage driver applications.



ORDERING INFORMATION

Type No.	Marking	Package Code
MMBTA93	YW	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	UNIT
V_{CBO}	collector-base voltage	-200	V
V_{CEO}	collector-emitter voltage	-200	V
V_{EBO}	emitter-base voltage	-5	V
I_C	collector current (DC)	-0.5	A
P_C	Collector dissipation	0.35	W
T_j, T_{stg}	junction and storage temperature	-55 to +150	°C



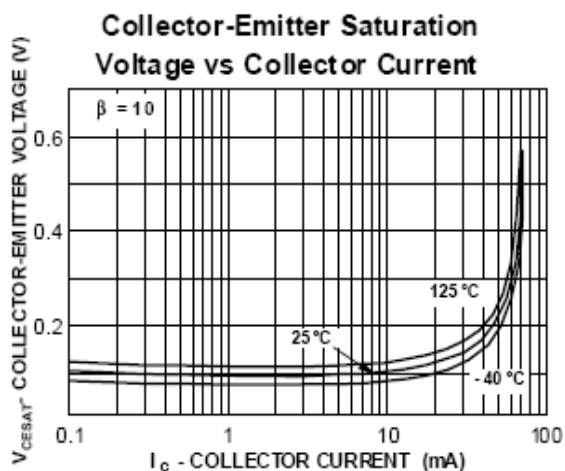
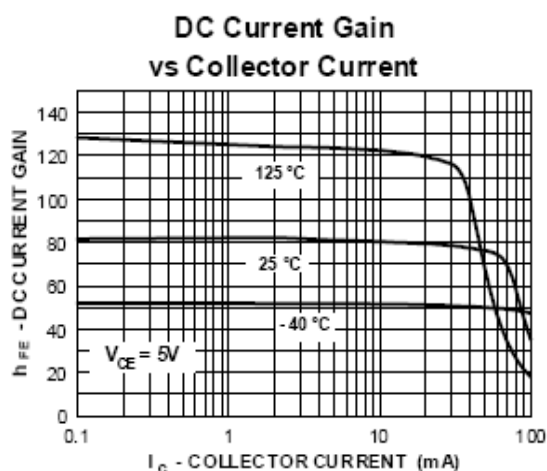
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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

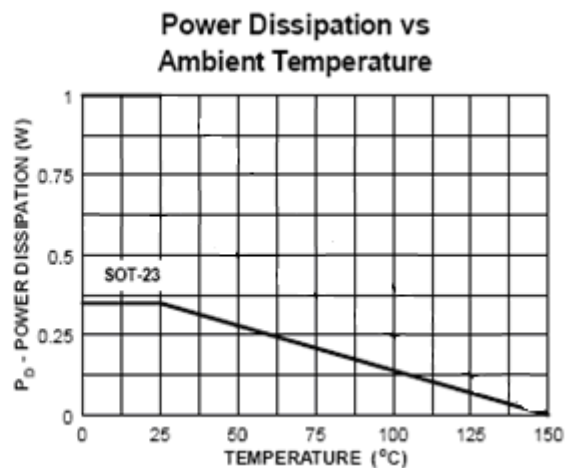
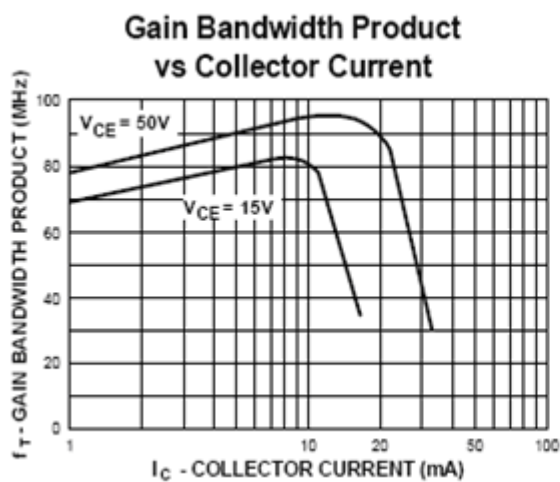
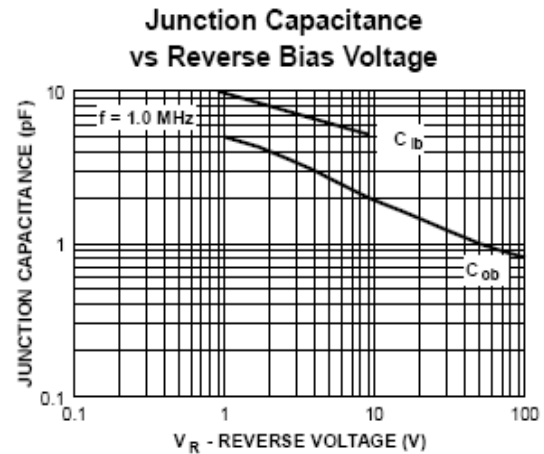
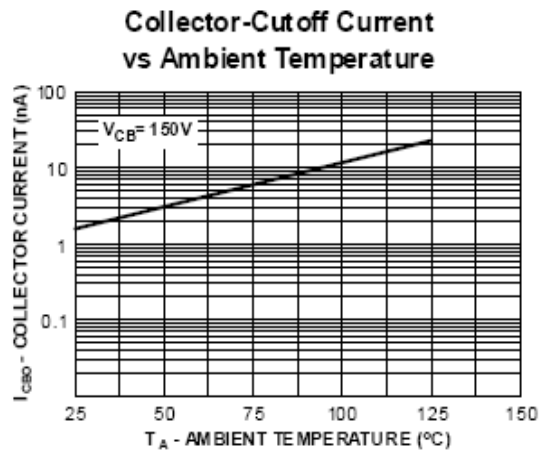
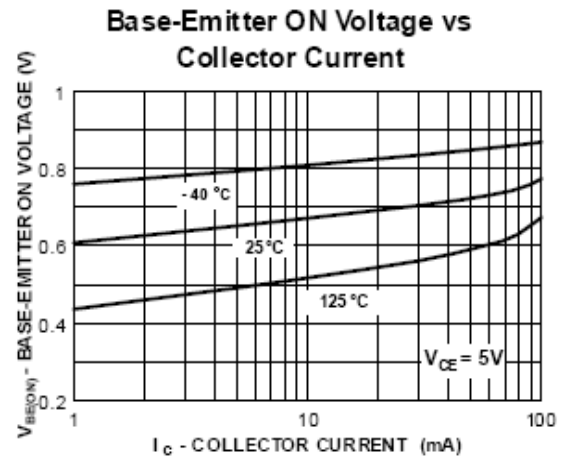
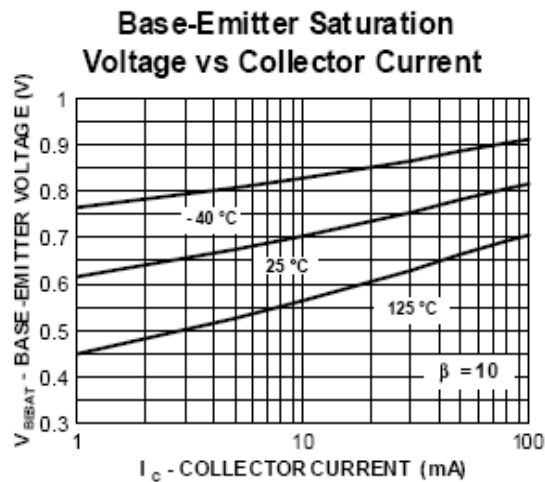
Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -100\mu A, I_E = 0$	-200		
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1mA, I_B = 0$	-200		
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -100\mu A, I_C = 0$	-5		
I_{CBO}	collector cut-off current	$I_E = 0; V_{CB} = -160V$	-	-0.25	μA
I_{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = -3V$	-	-0.1	μA
h_{FE}	DC current gain	$V_{CE} = -10V; I_C = -1mA$ $V_{CE} = -10V; I_C = -10mA$ $V_{CE} = -10V; I_C = -30mA$	25 40 25	-	
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C = -20mA; I_B = -2mA$	-	-0.5	V
$V_{BE(sat)}$	base-emitter saturation voltage	$I_C = -20mA; I_B = -2mA$	-	-0.9	V
C_{ob}	Collector output capacitance	$V_{CB} = -20V, f = 1.0MHz$	-	6.0	pF
f_T	transition frequency	$I_C = -10mA; V_{CE} = -20V;$ $f = 100MHz$	50	-	MHz

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



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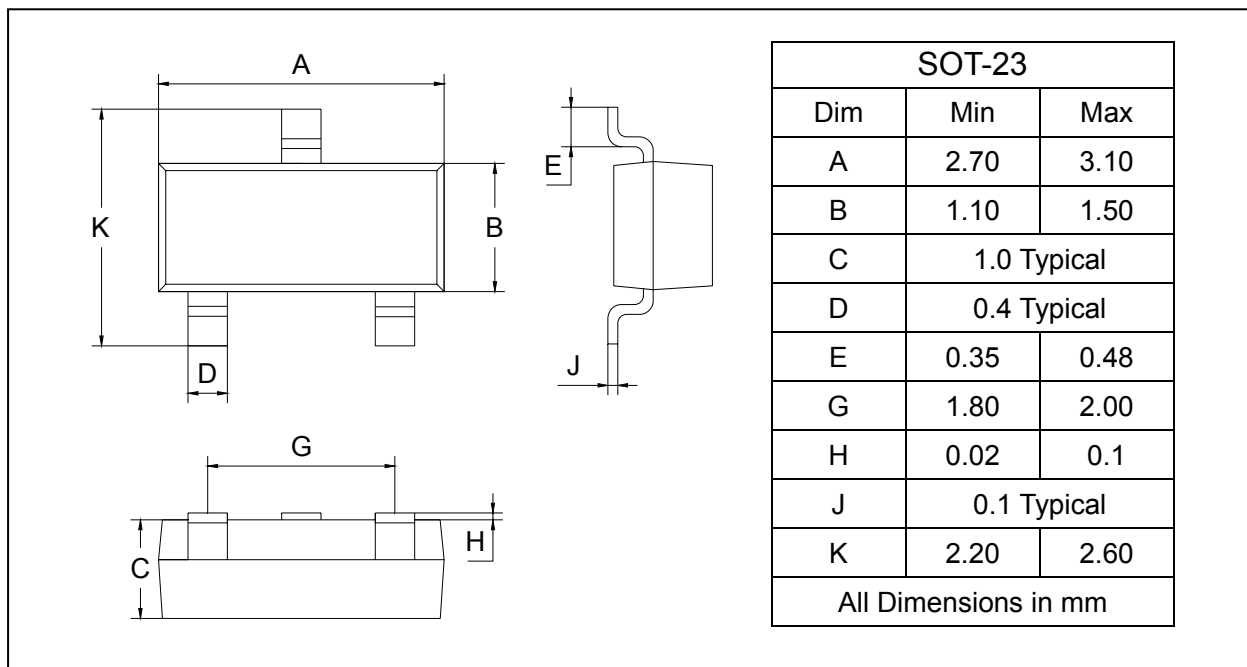
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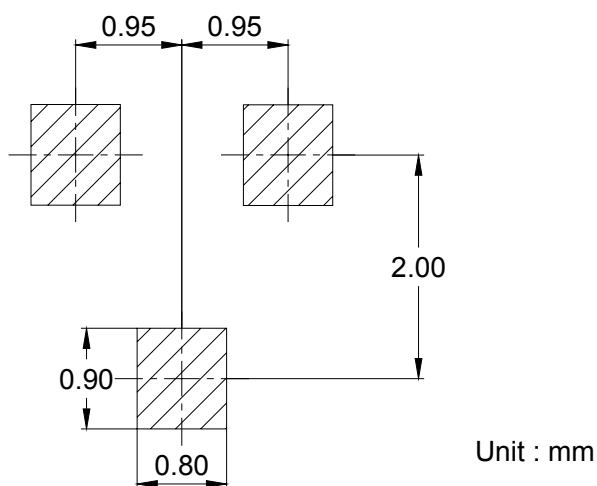
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
MMBTA93	SOT-23	3000/Tape&Reel