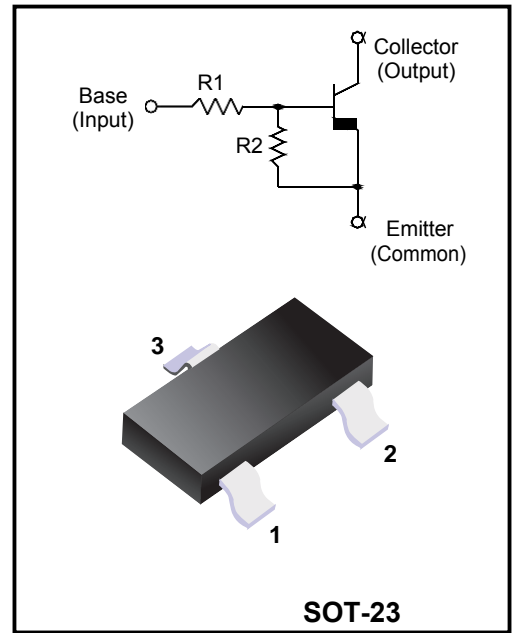


PNP Silicon Epitaxial Planar Transistor

for switching and interface circuit and drive circuit applications



Type	Marking	R1 (KΩ)	R2 (KΩ)
MMBTRA101SS	101	4.7	4.7
MMBTRA102SS	102	10	10
MMBTRA103SS	103	22	22
MMBTRA104SS	104	47	47
MMBTRA105SS	105	2.2	47
MMBTRA106SS	106	4.7	47

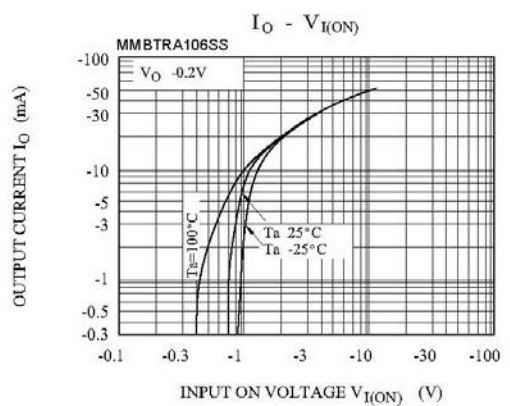
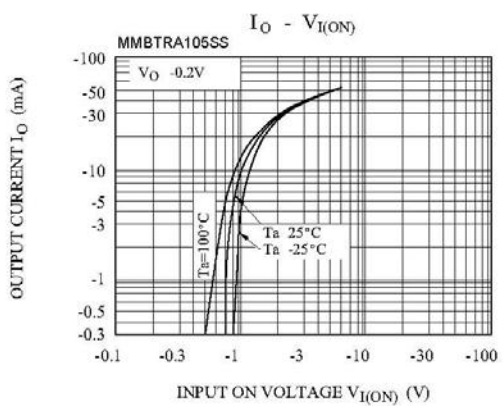
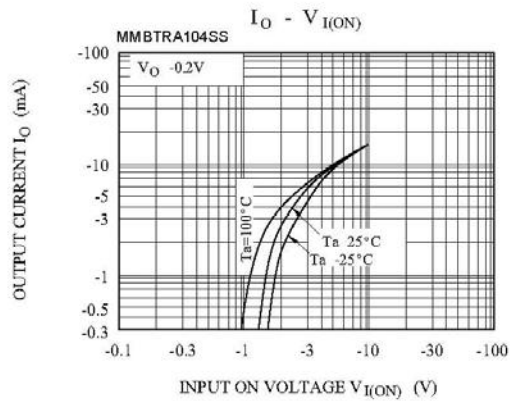
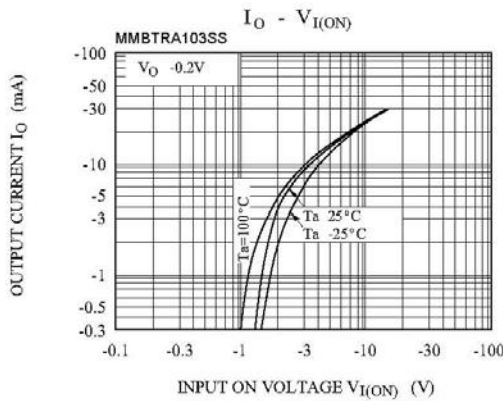
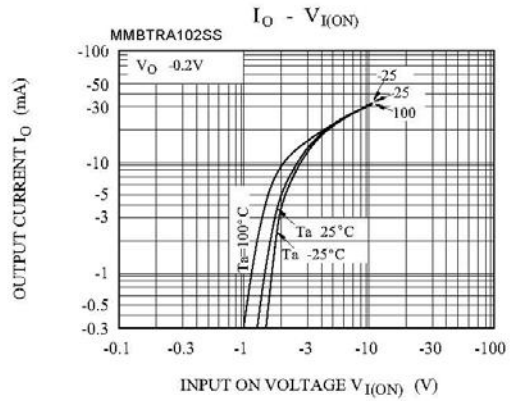
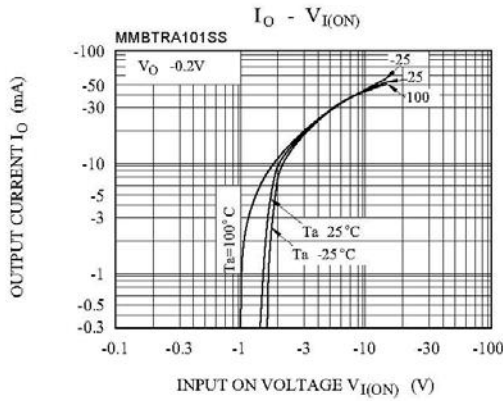
Absolute Maximum Ratings (Ta = 25 °C)

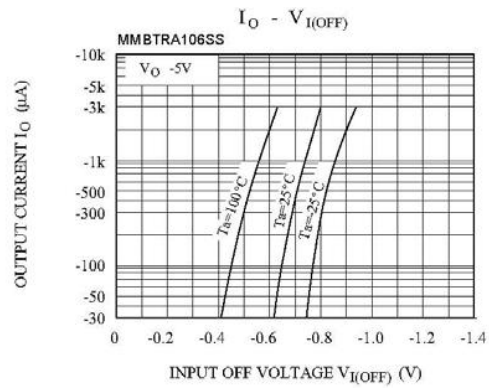
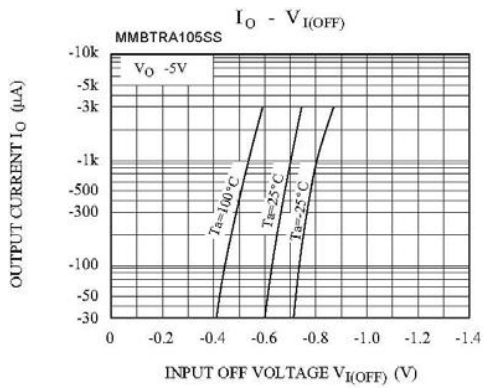
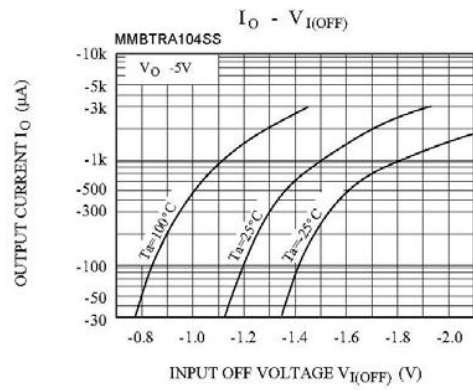
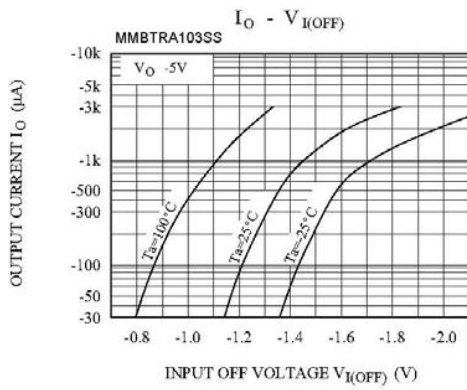
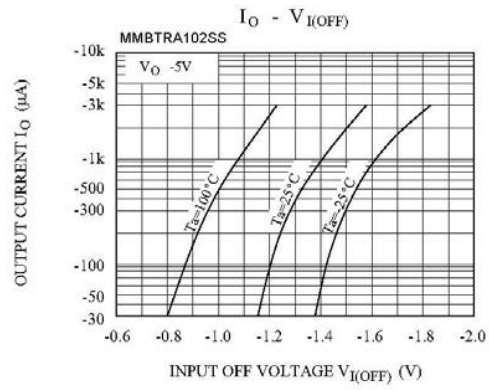
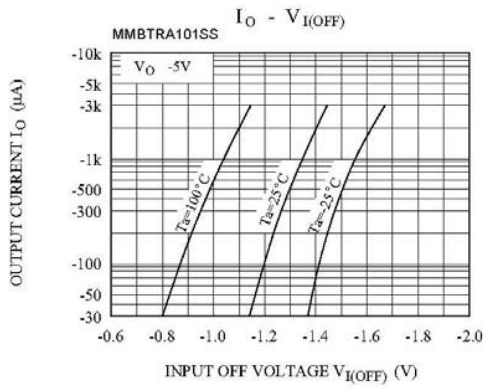
Parameter		Symbol	Value	Unit
Output Voltage		$-V_o$	50	V
Input Voltage	MMBTRA101SS	$-V_i$	20, -10	V
	MMBTRA102SS		30, -10	
	MMBTRA103SS		40, -10	
	MMBTRA104SS		40, -10	
	MMBTRA105SS		12, -5	
	MMBTRA106SS		20, -5	
Output Current		$-I_o$	100	mA
Total Power Dissipation		P_{tot}	200	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	- 55 to + 150	°C

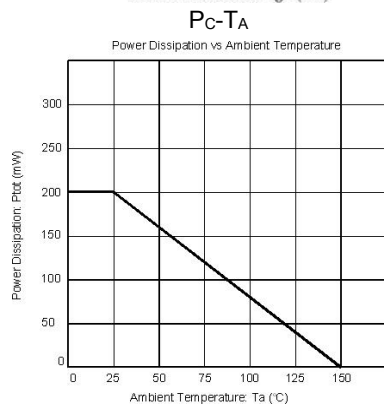
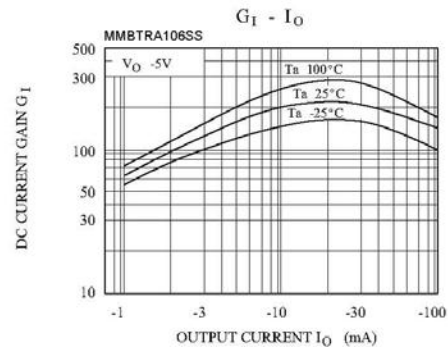
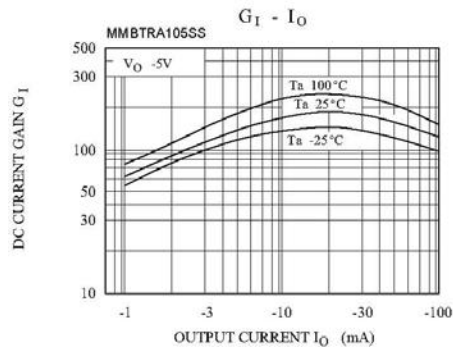
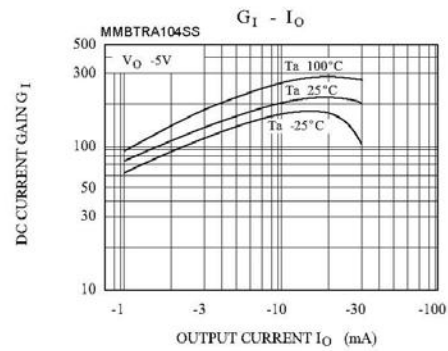
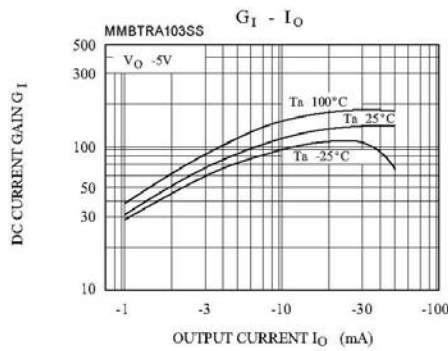
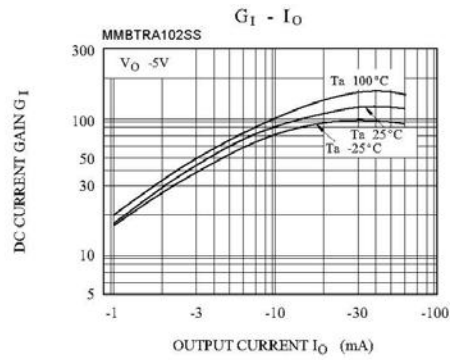
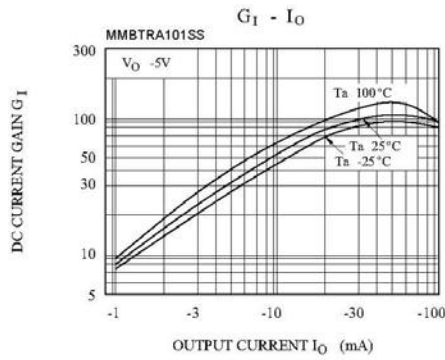
Characteristics at Ta = 25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_O = 5\text{ V}$, $-I_O = 10\text{ mA}$	MMBTRA101SS	30	-	-	-
	MMBTRA102SS	50	-	-	-
	MMBTRA103SS	70	-	-	-
	MMBTRA104SS	80	-	-	-
	MMBTRA105SS	80	-	-	-
	MMBTRA106SS	80	-	-	-
Output Cutoff Current at $-V_O = 50\text{ V}$	$-I_{O(OFF)}$	-	-	500	nA
Input Current at $-V_I = 5\text{ V}$	MMBTRA101SS	-	-	1.8	mA
	MMBTRA102SS	-	-	0.88	
	MMBTRA103SS	-	-	0.36	
	MMBTRA104SS	-	-	0.18	
	MMBTRA105SS	-	-	3.6	
	MMBTRA106SS	-	-	1.8	
Output Voltage at $-I_O = 10\text{ mA}$, $-I_I = 0.5\text{ mA}$	$-V_{O(ON)}$	-	-	0.3	V
Input Voltage (ON) at $-V_O = 0.2\text{ V}$, $-I_O = 5\text{ mA}$	MMBTRA101SS	-	-	2	V
	MMBTRA102SS	-	-	2.4	
	MMBTRA103SS	-	-	3	
	MMBTRA104SS	-	-	5	
	MMBTRA105SS	-	-	1.1	
	MMBTRA106SS	-	-	1.3	
Input Voltage (OFF) at $-V_O = 5\text{ V}$, $-I_O = 0.1\text{ mA}$	MMBTRA101SS~104SS MMBTRA105SS~106SS	$-V_{I(OFF)}$	1 0.5	- -	V
Transition Frequency at $-V_O = 10\text{ V}$, $-I_O = 5\text{ mA}$	f_T ¹⁾	-	200	-	MHz

1) Characteristic of transistor only.







Ordering information

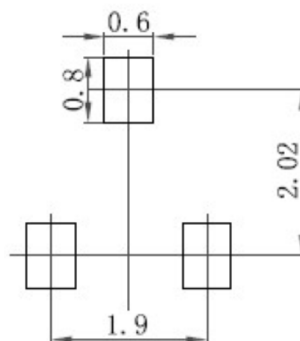
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel,7"reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



Disclaimer

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