

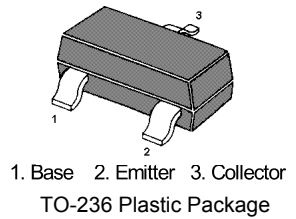
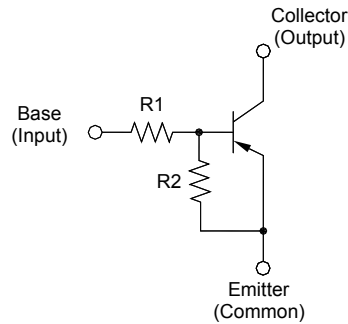
MMBTRA221SS...MMBTRA226SS

PNP Silicon Epitaxial Planar Transistor

for high current switching, interface circuit and driver circuit application.

Feature

- With built-in bias resistor
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process

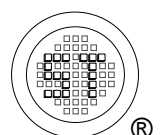


Resistor Values

Type	R1 (K Ω)	R2 (K Ω)
MMBTRA221SS	1	1
MMBTRA222SS	2.2	2.2
MMBTRA223SS	4.7	4.7
MMBTRA224SS	10	10
MMBTRA225SS	1	10
MMBTRA226SS	2.2	10

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter		Symbol	Value	Unit
Output Voltage		$-V_o$	50	V
Input Voltage	MMBTRA221SS	$-V_i$	10, -10	V
	MMBTRA222SS		12, -10	
	MMBTRA223SS		20, -10	
	MMBTRA224SS		30, -10	
	MMBTRA225SS		10, -5	
	MMBTRA226SS		12, -6	
Output Current		$-I_o$	300	mA
Total Power Dissipation		P_{tot}	200	mW
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	- 55 to + 150	$^\circ\text{C}$

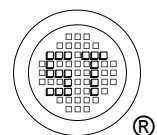


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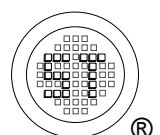
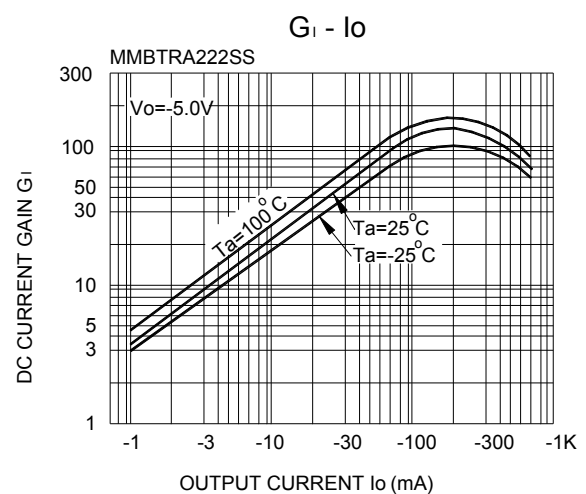
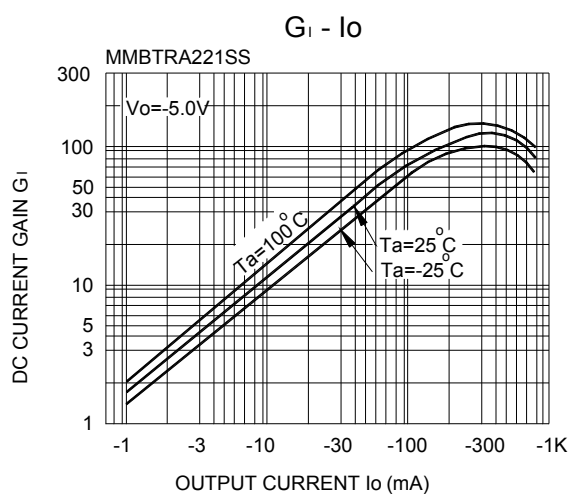
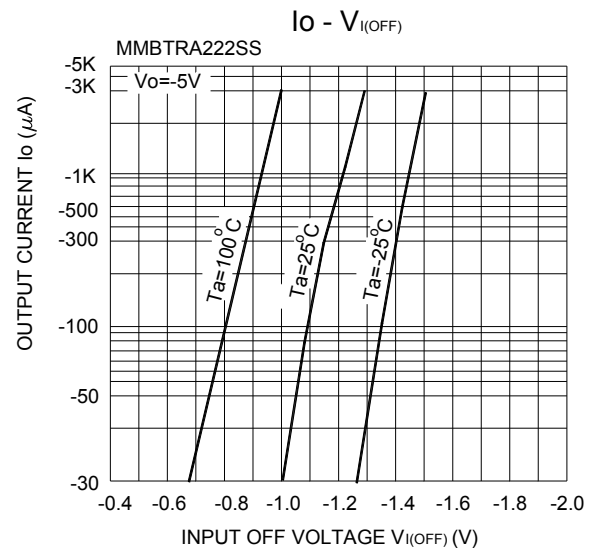
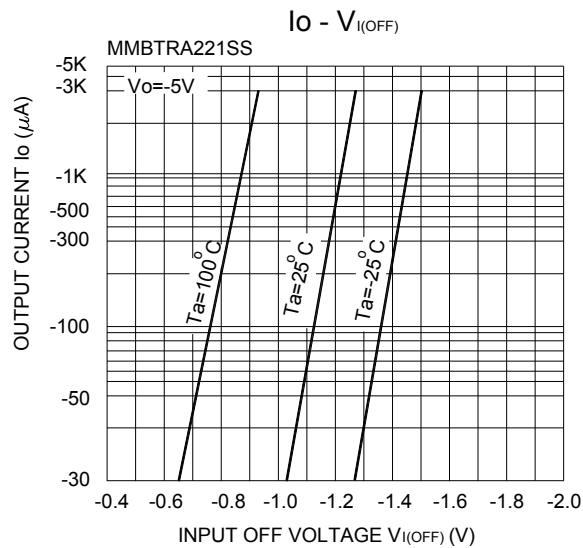
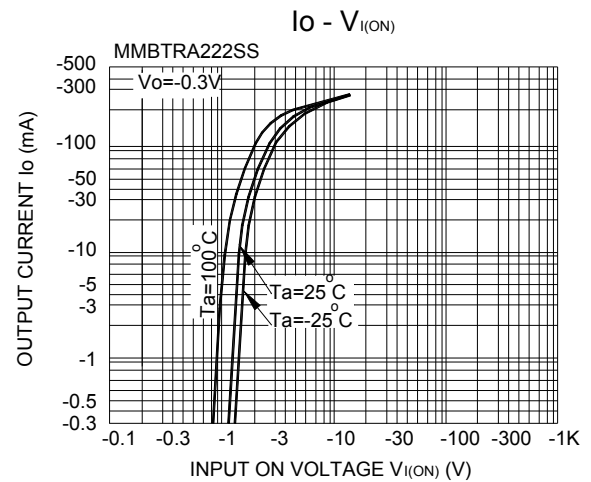
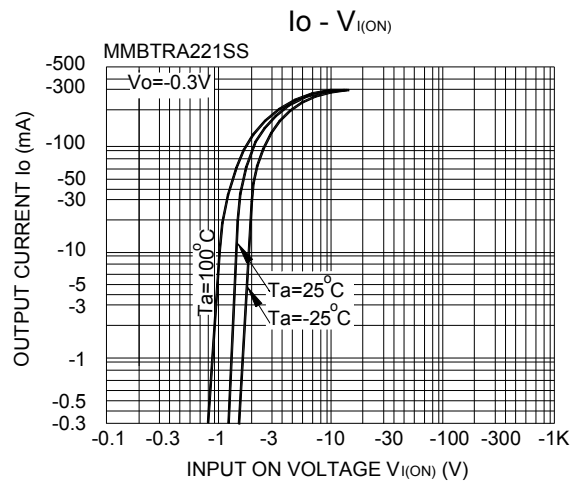
Characteristics at $T_a = 25\text{ }^{\circ}\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_O = 5\text{ V}$, $-I_O = 50\text{ mA}$	G_I	33	-	-	-
MMBTRA221SS		39	-	-	-
MMBTRA222SS		47	-	-	-
MMBTRA223SS		56	-	-	-
MMBTRA224SS		56	-	-	-
MMBTRA225SS		56	-	-	-
MMBTRA226SS					
Output Cutoff Current at $-V_O = 30\text{ V}$	$-I_{O(OFF)}$	-	-	10	μA
Input Current at $-V_I = 5\text{ V}$	$-I_I$	-	-	7.2	mA
MMBTRA221SS		-	-	3.8	
MMBTRA222SS		-	-	1.8	
MMBTRA223SS		-	-	0.88	
MMBTRA224SS		-	-	7.2	
MMBTRA225SS		-	-	3.6	
MMBTRA226SS					
Output Voltage at $-I_O = 10\text{ mA}$, $-I_I = 0.5\text{ mA}$	$-V_{O(ON)}$	-	-	0.6	V
Input Voltage (ON) at $-V_O = 0.3\text{ V}$, $-I_O = 20\text{ mA}$	$-V_{I(ON)}$	-	-	3	V
MMBTRA221SS		-	-	3	
MMBTRA222SS		-	-	3	
MMBTRA223SS		-	-	3	
MMBTRA224SS		-	-	3	
MMBTRA225SS		-	-	3	
MMBTRA226SS				2	
Input Voltage (OFF) at $-V_O = 5\text{ V}$, $-I_O = 0.1\text{ mA}$	$-V_{I(OFF)}$	0.5	-	-	V
MMBTRA221SS~224SS		0.3	-	-	
MMBTRA225SS~226SS					
Transition Frequency at $-V_O = 10\text{ V}$, $-I_O = 5\text{ mA}$, $f = 100\text{ MHz}$	$f_T^{1)}$	-	200	-	MHz

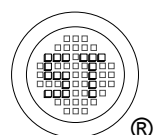
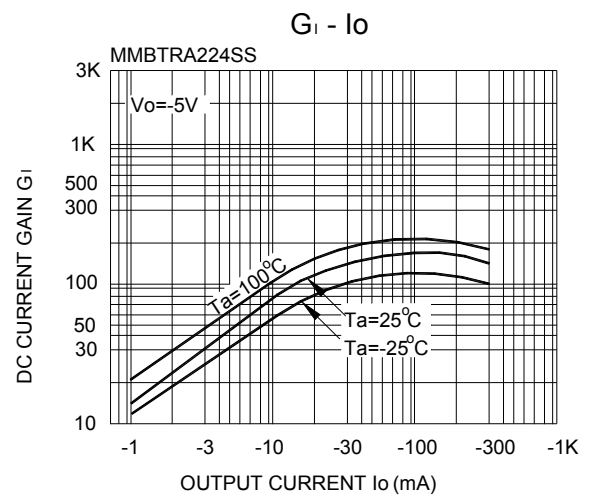
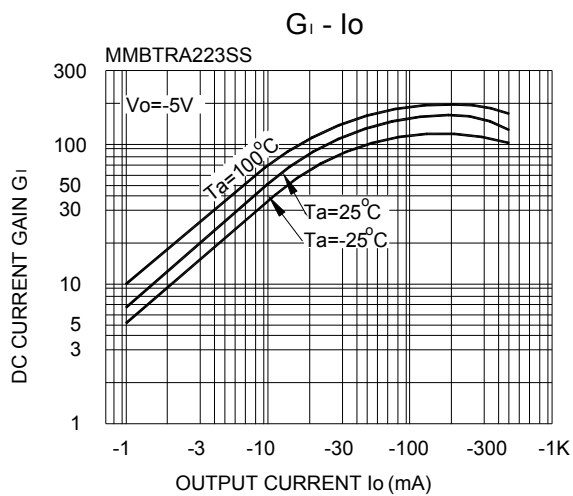
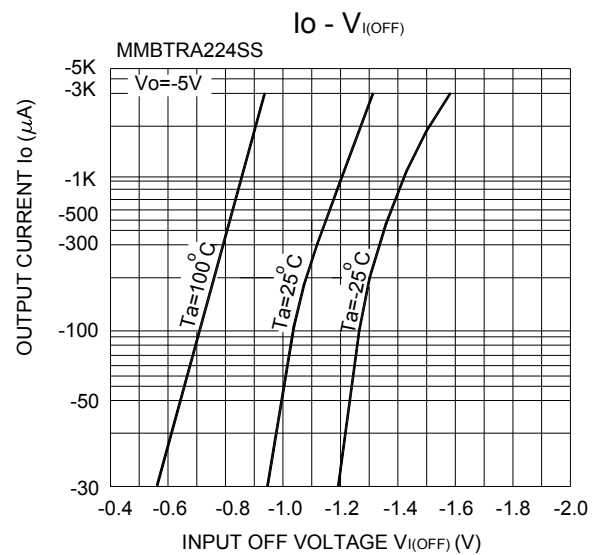
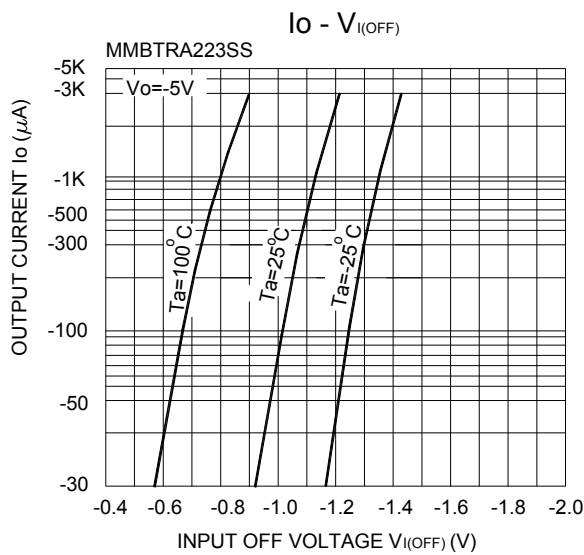
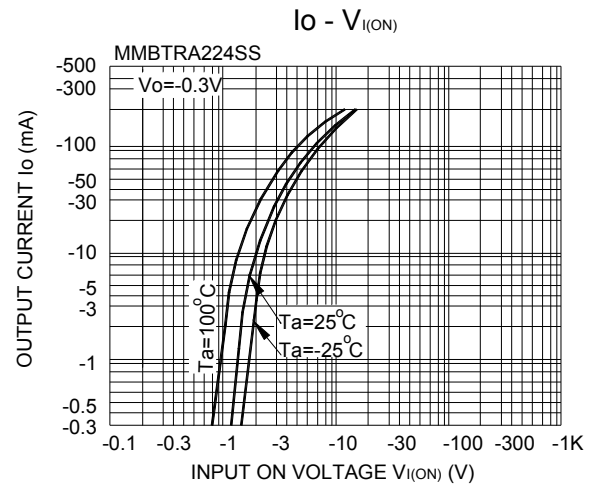
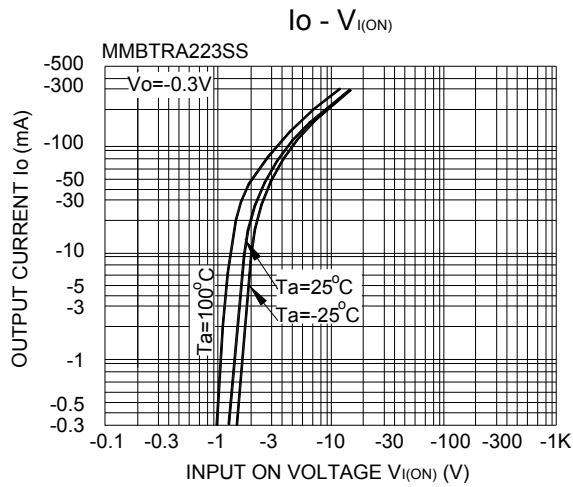
¹⁾ Characteristic of transistor only.



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