

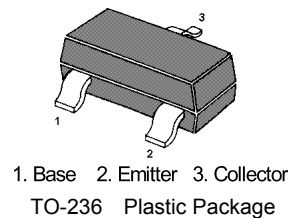
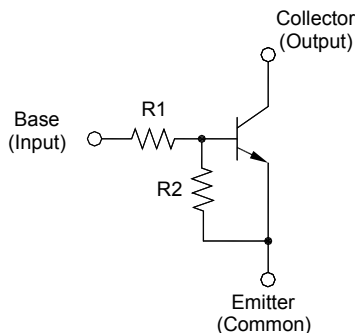
MMBTRC241SS...MMBTRC246SS

NPN Silicon Epitaxial Planar Transistor

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

Feature

- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing Process

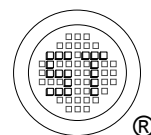


Resistor Values

Type	R1 (KΩ)	R2 (KΩ)
MMBTRC241SS	1	1
MMBTRC242SS	2.2	2.2
MMBTRC243SS	4.7	4.7
MMBTRC244SS	10	10
MMBTRC245SS	1	10
MMBTRC246SS	2.2	10

Absolute Maximum Ratings (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Output Voltage		V _O	50	V
Input Voltage	MMBTRC241SS	V _I	10, -10	V
	MMBTRC242SS		12, -10	
	MMBTRC243SS		20, -10	
	MMBTRC244SS		30, -10	
	MMBTRC245SS		10, -5	
	MMBTRC246SS		12, -6	
Output Current		I _O	300	mA
Total Power Dissipation		P _{tot}	200	mW
Junction Temperature		T _J	150	°C
Storage Temperature Range		T _{stg}	- 55 to + 150	°C

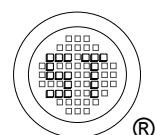


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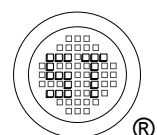
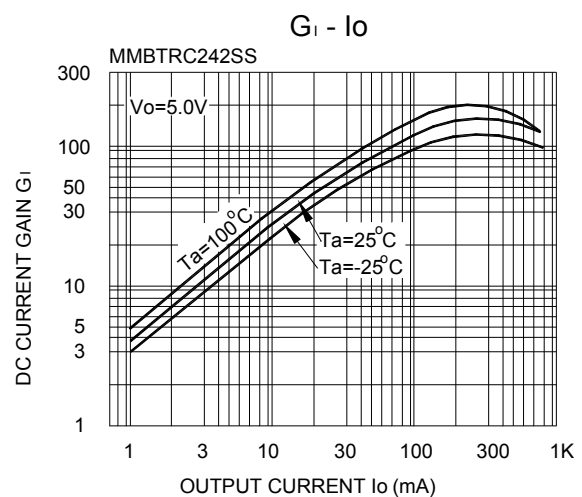
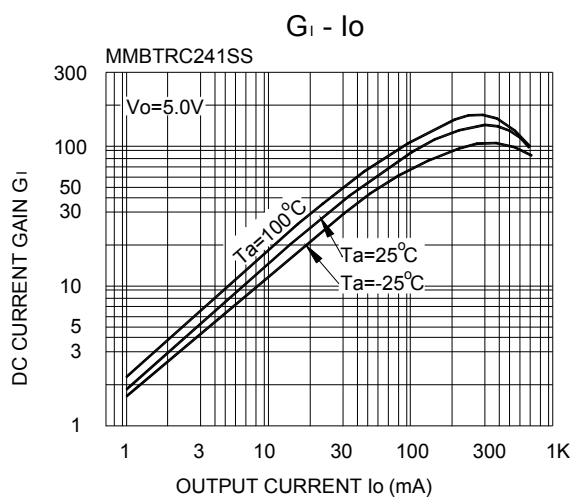
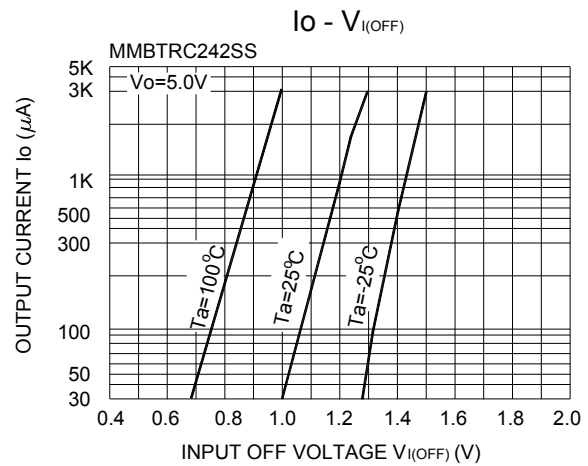
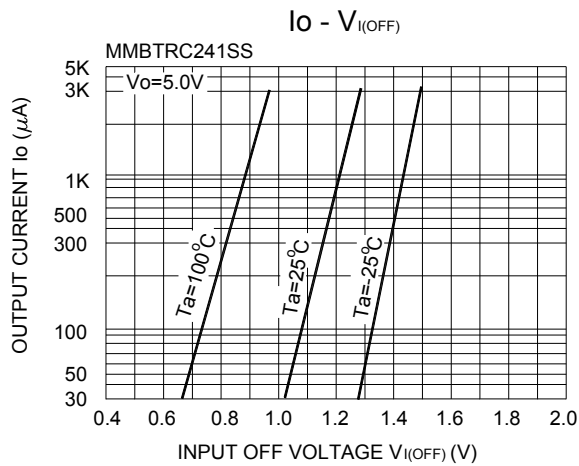
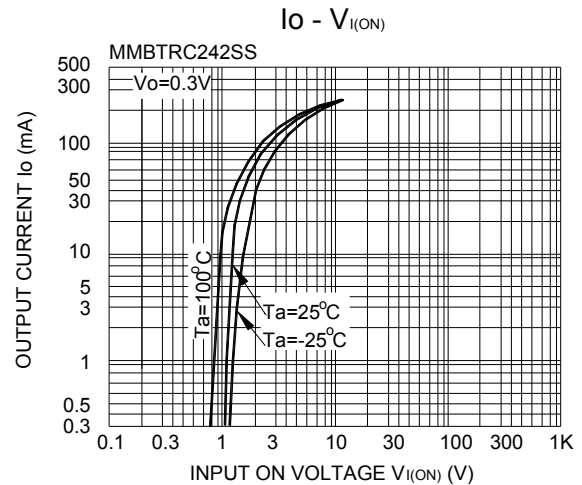
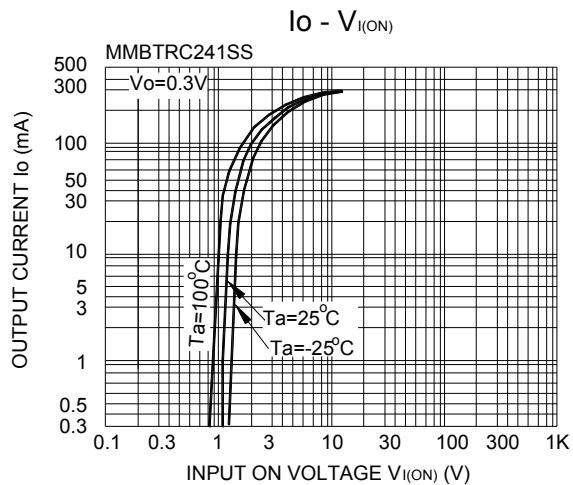
Characteristics at $T_a = 25\text{ }^{\circ}\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_O = 5\text{ V}$, $I_O = 50\text{ mA}$	G_I	33	-	-	-
MMBTRC241SS		39	-	-	-
MMBTRC242SS		47	-	-	-
MMBTRC243SS		56	-	-	-
MMBTRC244SS		56	-	-	-
MMBTRC245SS		56	-	-	-
MMBTRC246SS					
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
MMBTRC241SS		-	-	3.8	
MMBTRC242SS		-	-	1.8	
MMBTRC243SS		-	-	0.88	
MMBTRC244SS		-	-	7.2	
MMBTRC245SS		-	-	3.6	
MMBTRC246SS					
Output Voltage at $I_O = 10\text{ mA}$, $I_I = 0.5\text{ mA}$	$V_{O(ON)}$	-	-	0.3	V
Input Voltage (ON) at $V_O = 0.3\text{ V}$, $I_O = 20\text{ mA}$	$V_{I(ON)}$	-	-	3	V
MMBTRC241SS		-	-	3	
MMBTRC242SS		-	-	3	
MMBTRC243SS		-	-	3	
MMBTRC244SS		-	-	3	
MMBTRC245SS		-	-	3	
MMBTRC246SS				2	
Input Voltage (OFF) at $V_O = 5\text{ V}$, $I_O = 0.1\text{ mA}$	$-V_{I(OFF)}$	0.5	-	-	V
MMBTRC241SS~244SS		0.3	-	-	
MMBTRC245SS~246SS					
Transition Frequency at $V_O = 10\text{ V}$, $I_O = 5\text{ mA}$, $f = 100\text{ MHz}$	$f_T^{1)}$	-	200	-	MHz

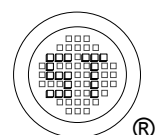
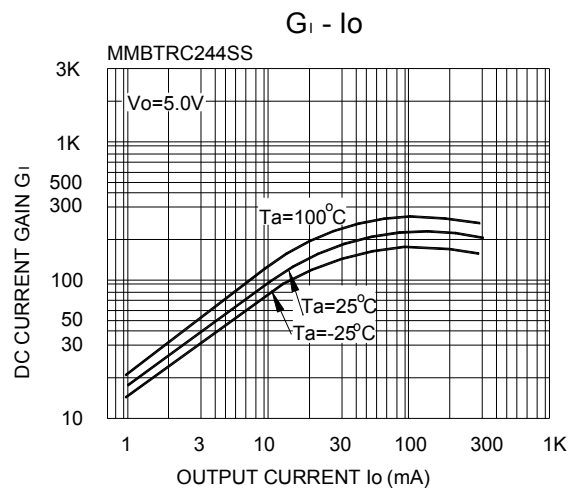
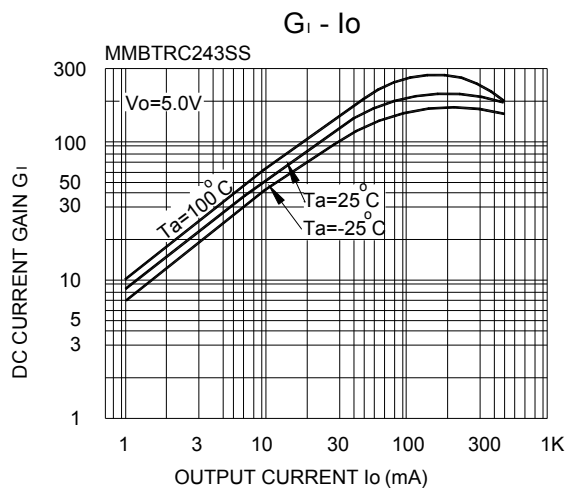
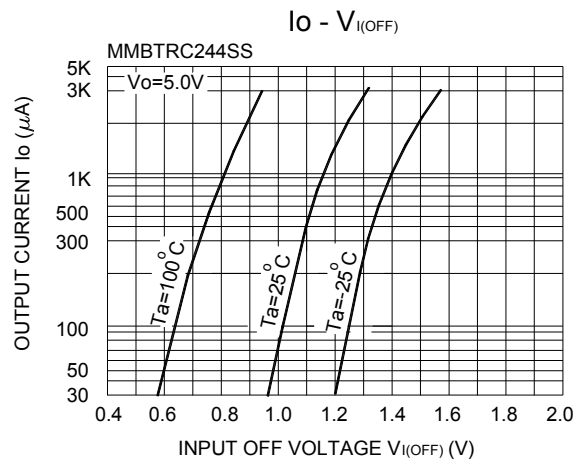
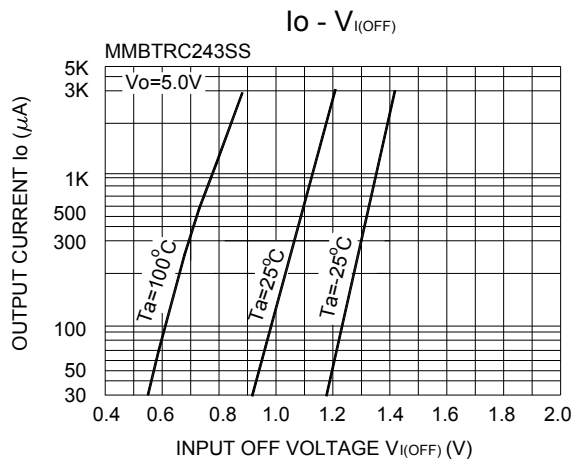
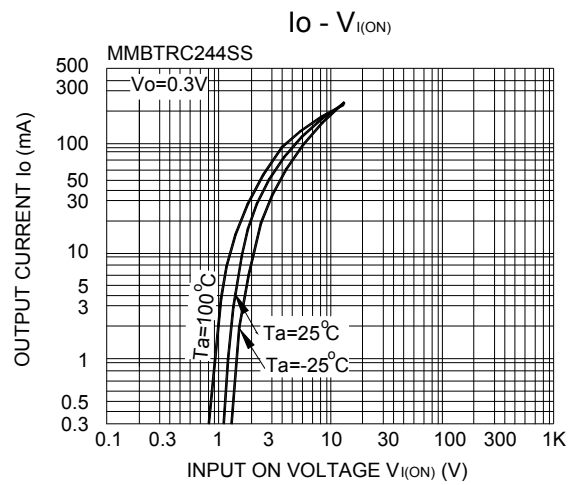
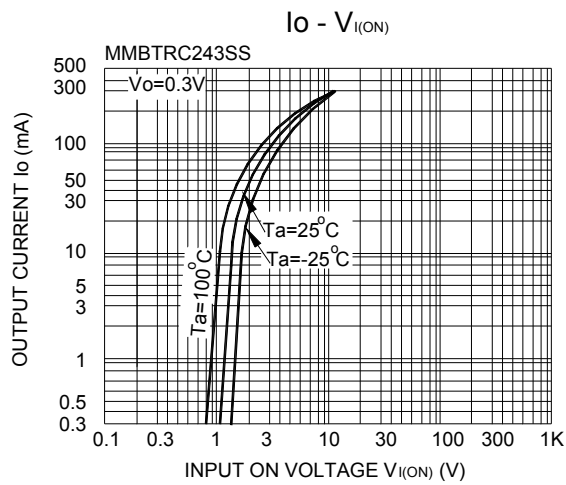
¹⁾ Characteristic of transistor only.



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