

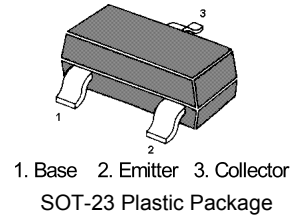
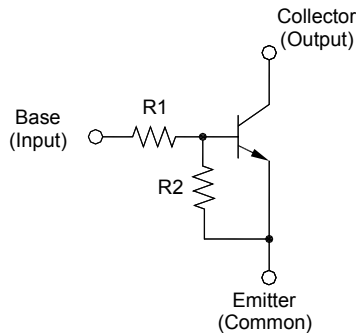
MMBTRC241SS...MMBTRC246SS

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

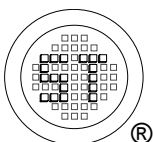


Resistor Values

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

Parameter	Symbol	Value	Unit
Output Voltage	V_o	50	V
Input Voltage	V_i	10, -10	V
		12, -10	
		20, -10	
		30, -10	
		10, -5	
		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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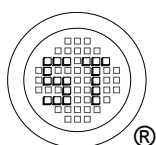


MMBTRC241SS...MMBTRC246SS

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_O = 5\text{ V}$, $I_O = 50\text{ mA}$	MMBTRC241SS MMBTRC242SS MMBTRC243SS MMBTRC244SS MMBTRC245SS MMBTRC246SS	33 39 47 56 56 56	- - - - - -	- - - - - -	- - - - - -
Output Cutoff Current at $V_O = 30\text{ V}$	$I_{O(OFF)}$	-	-	10	μA
Input Current at $V_I = 5\text{ V}$	MMBTRC241SS MMBTRC242SS MMBTRC243SS MMBTRC244SS MMBTRC245SS MMBTRC246SS	- - - - - -	- - - - - -	7.2 3.8 1.8 0.88 7.2 3.6	mA
Output Voltage at $I_O = 10\text{ mA}$, $I_I = 0.5\text{ mA}$	$V_{O(ON)}$	-	-	0.3	V
Input Voltage (ON) at $V_O = 0.3\text{ V}$, $I_O = 20\text{ mA}$	MMBTRC241SS MMBTRC242SS MMBTRC243SS MMBTRC244SS MMBTRC245SS MMBTRC246SS	- - - - - -	- - - - - -	3 3 3 3 3 2	V
Input Voltage (OFF) at $V_O = 5\text{ V}$, $I_O = 0.1\text{ mA}$	MMBTRC241SS~244SS MMBTRC245SS~246SS	0.5 0.3	- -	- -	V
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.

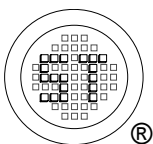
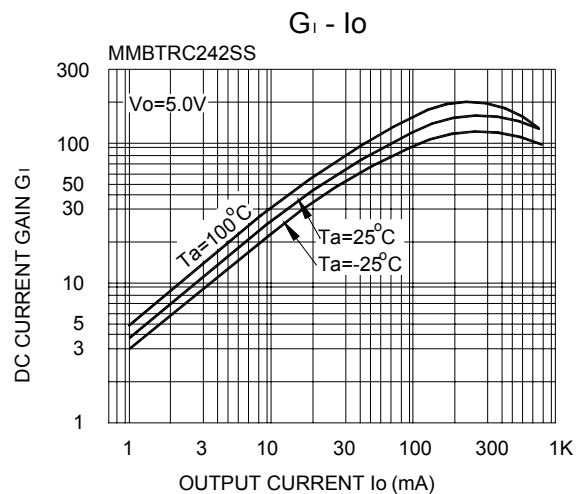
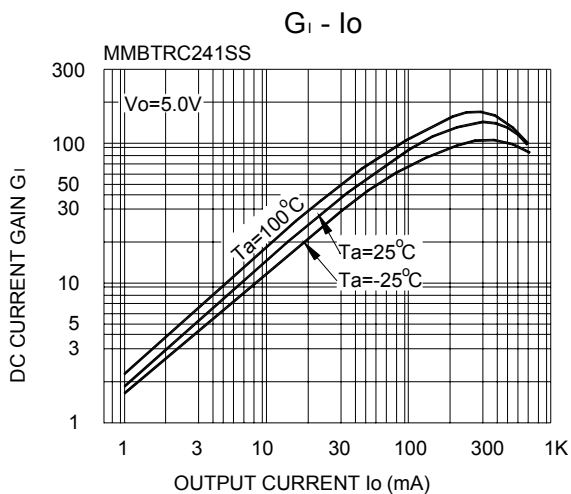
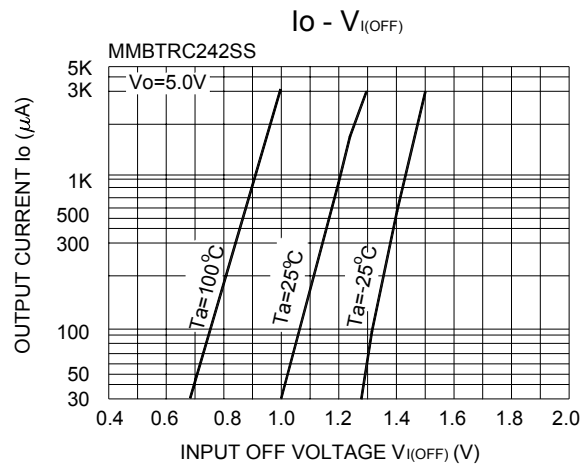
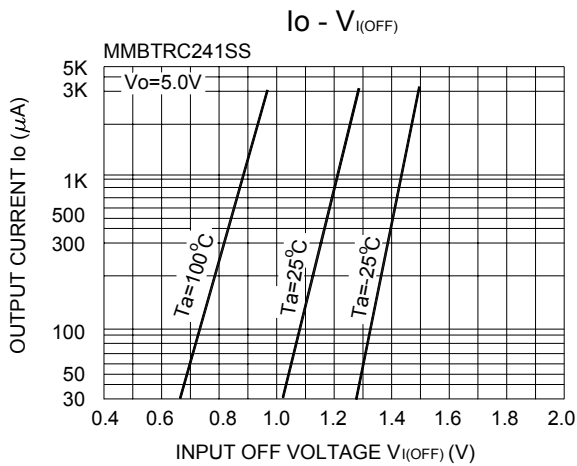
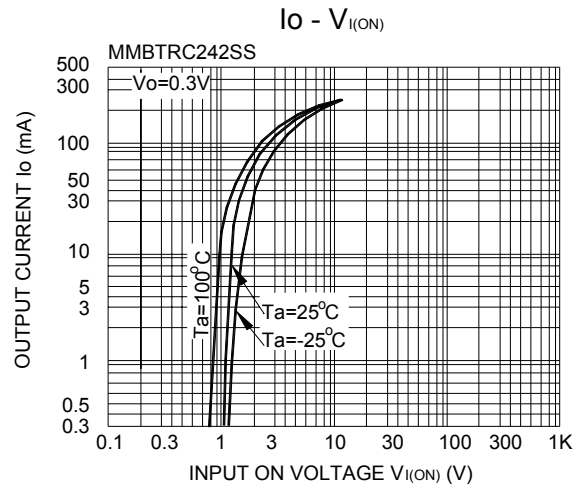
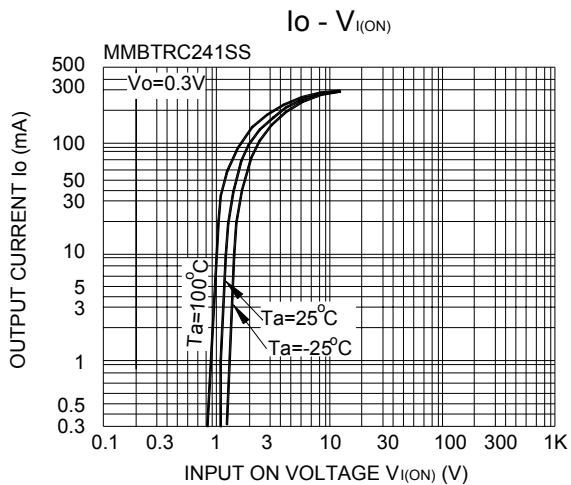


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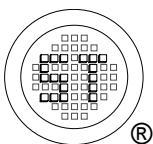
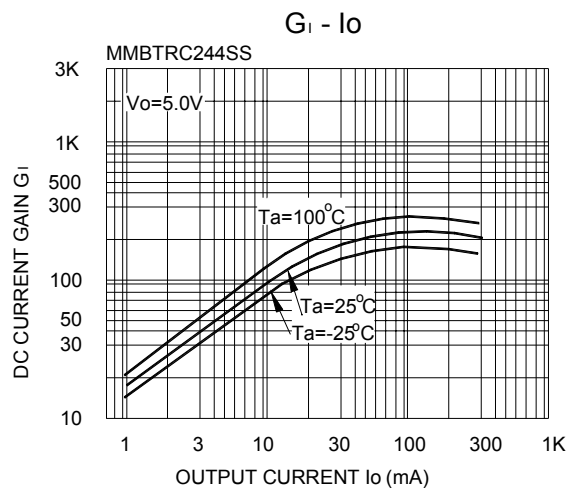
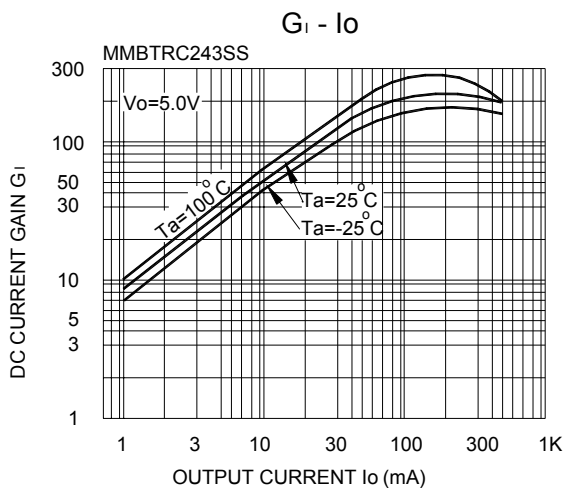
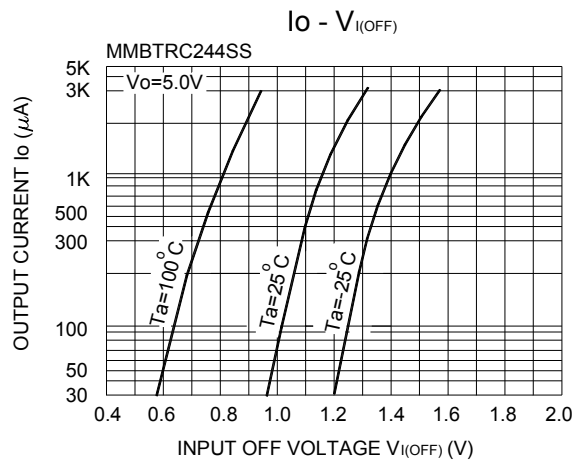
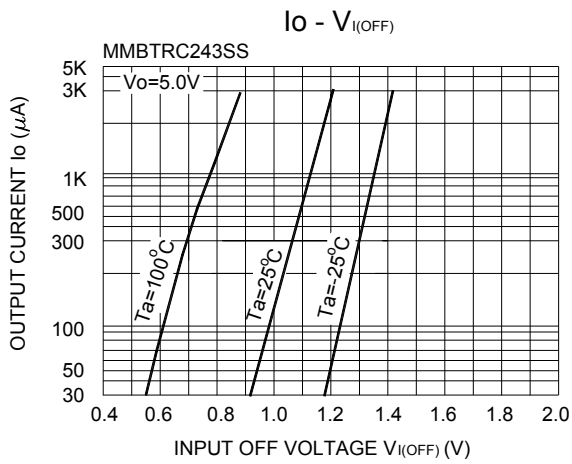
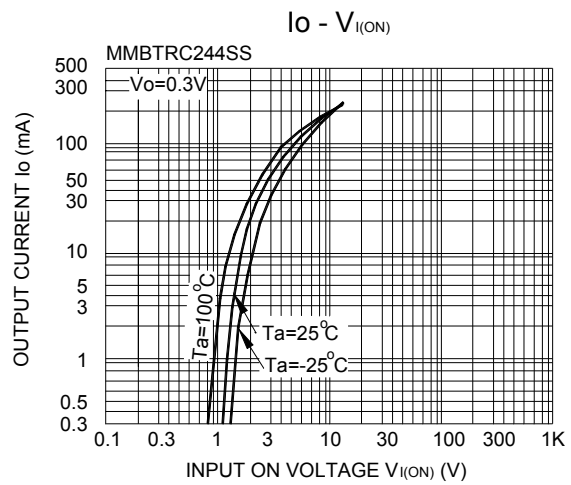
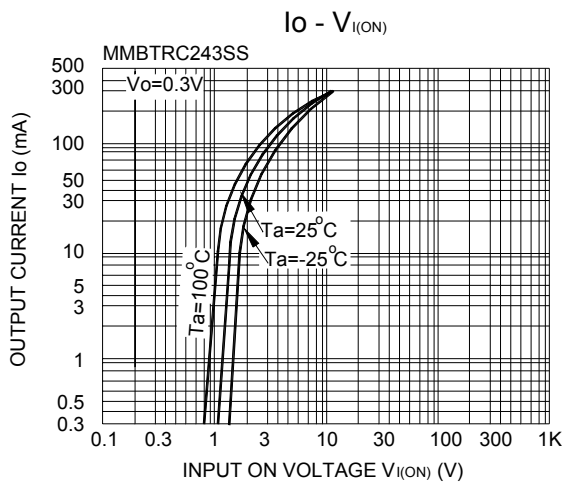
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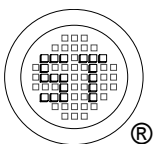
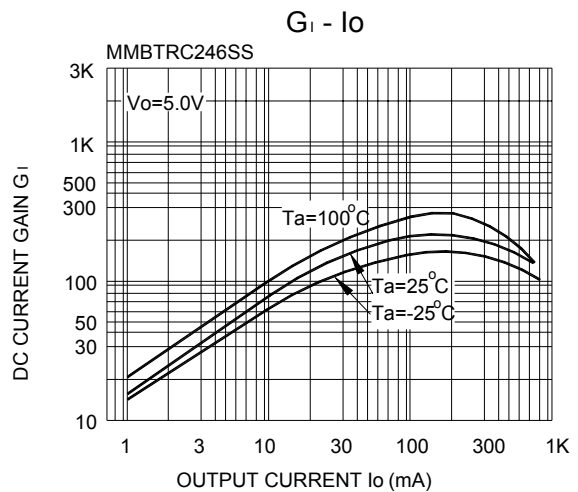
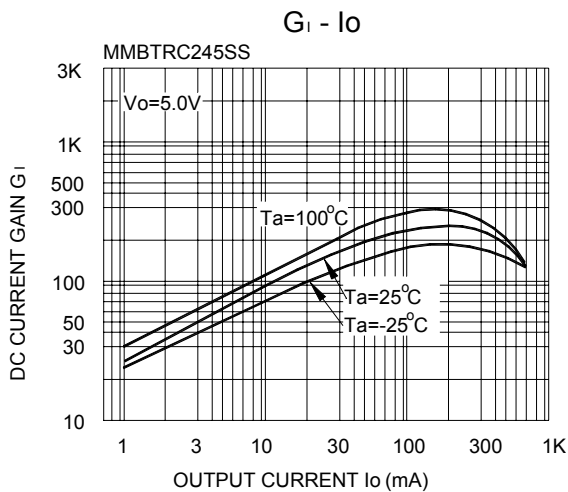
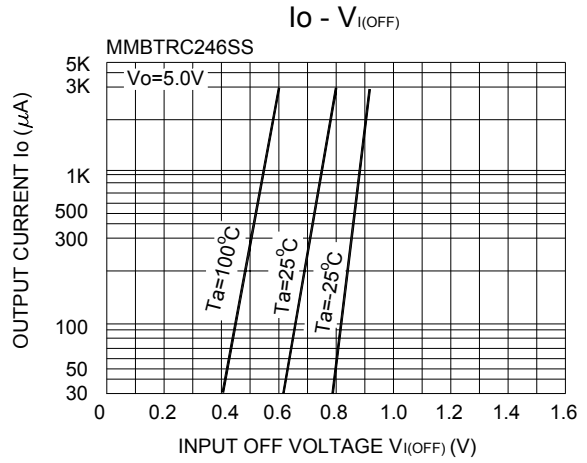
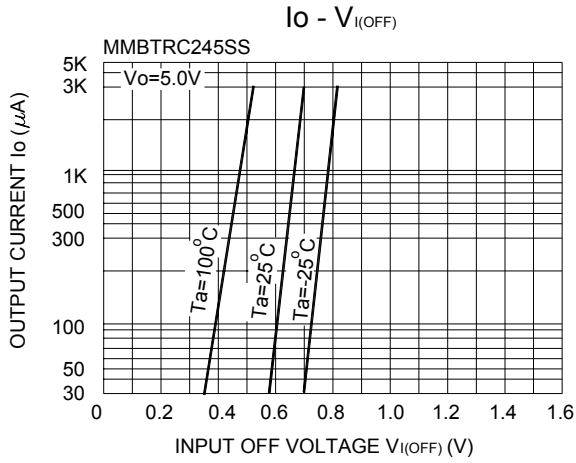
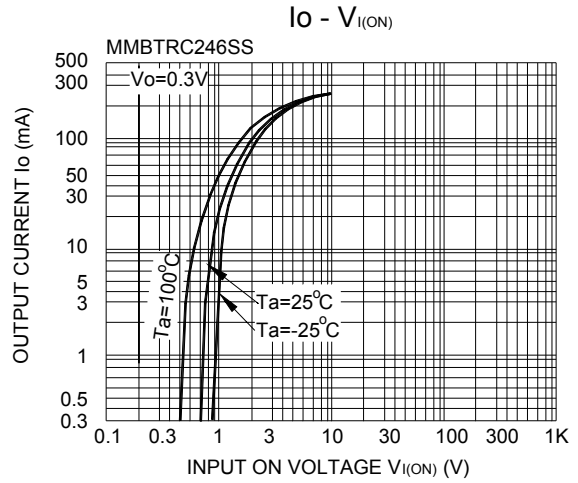
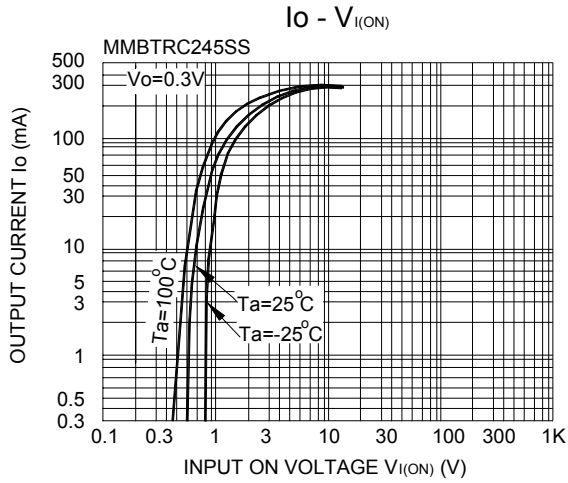
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