

BRDTC114YKAQ

Rev.A Nov.-2024



DATA SHEET

SOT-23 NPN

Silicon NPN Digital transistor in a SOT-23 Plastic Package.

AEC-Q101

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

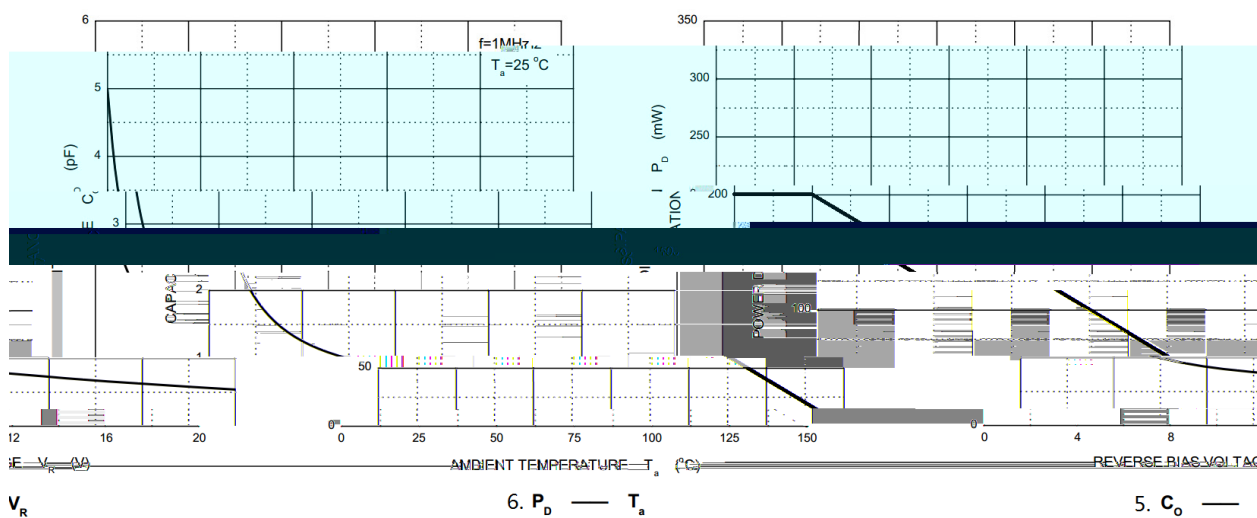
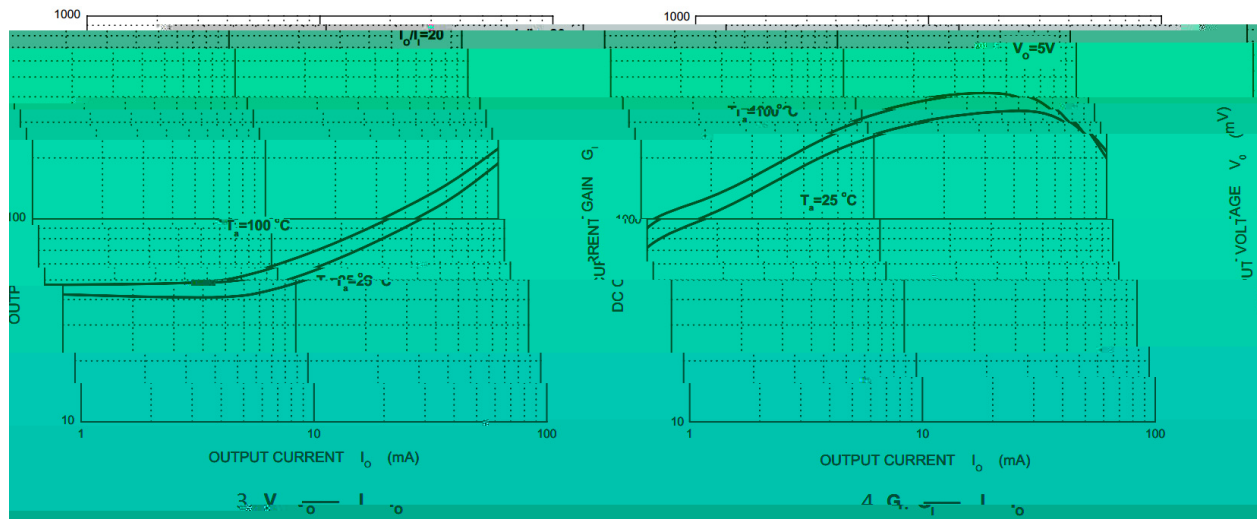
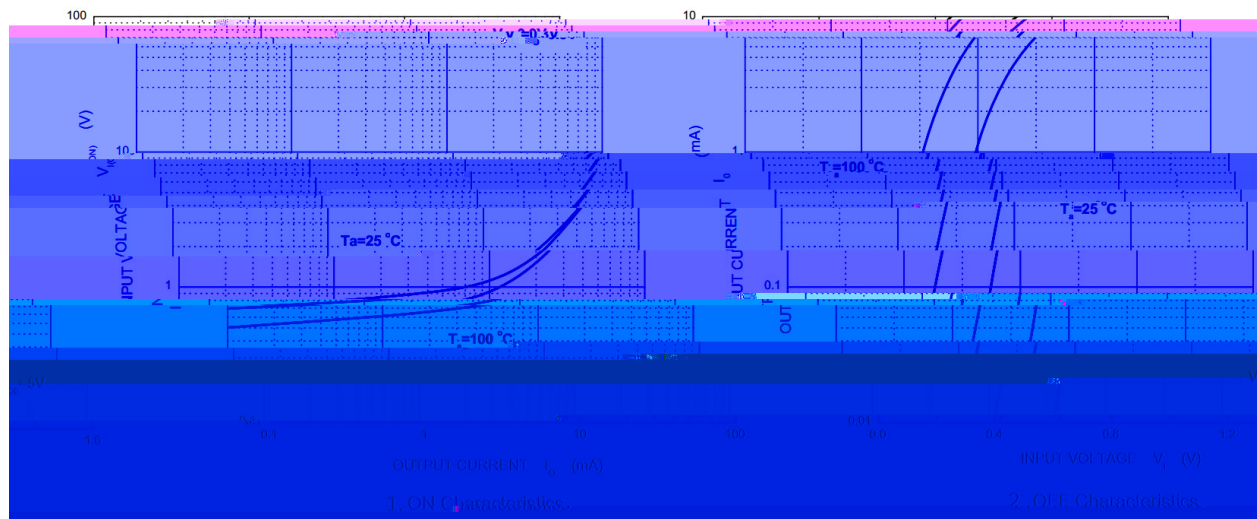
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Supply Voltage	V_{CC}	50	V
Input Voltage	V_{IN}	-6~40	V
Output Current	I_O	70	mA
Peak Collector Current	I_{CM}	100	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 ~ 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage(OFF)	$V_{I(off)}$	$V_{CC}=5.0V$ $I_O=100\text{ A}$	0.3			V
Input Voltage(ON)	$V_{I(on)}$	$V_O=0.3V$ $I_O=1mA$			1.4	V
Output Voltage	$V_{O(on)}$	$I_O=5mA$ $I_I=0.25mA$		0.1	0.3	V
Input Current	I_I	$V_I=5.0V$			0.88	mA
Output Cut-off Current	$I_{O(off)}$	$V_{CC}=50V$ $V_I=0V$			0.5	A
DC Current Gain	G_I	$V_O=5.0V$ $I_O=5.0mA$	68			
Transition Frequency	f_T	$V_{CE}=10V$ $I_C=5.0mA$ $f=100MHz$		250		MHz
Resistance1	R_1		7	10	13	K
Resistance Ratio	R_2/R_1		3.7	4.7	5.7	

/ Electrical Characteristic Curve





/ Marking Instructions



Q

64

Note:

Q: Automobile halogen-free product Code

64 Product Type Code

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Note:

- 1

150 200

60 120sec;

1.Preheating:150~200 , Time:60~120sec.
- 2

255±5

5±0.5sec;

2.Peak Temp.:255±5 , Duration:5±0.5sec.
- 3

2 10

/sec.

3.Cooling Speed: 2~10 /sec.

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