



版本	修订日期	有修订的页码	修订涉及的内容	拟制	审核
			特征栏增加无卤标示	谢小倩	刘晓荣
			P _C 改为	黄超	刘晓荣

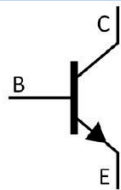
型号加 ，特征及应用增加
汽车产品描述（符合
标准高可靠性要求、满足汽车应
用的严格要求）印章 改为 ，
峰值温度 ，时间持续
为 更新为：峰值温度



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

 BRMMBT5401Q AEC-Q101
High voltage, complementary pair with BRMMBT5401Q, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

General purpose high voltage amplifier, Meet the stringent requirements of automotive applications.

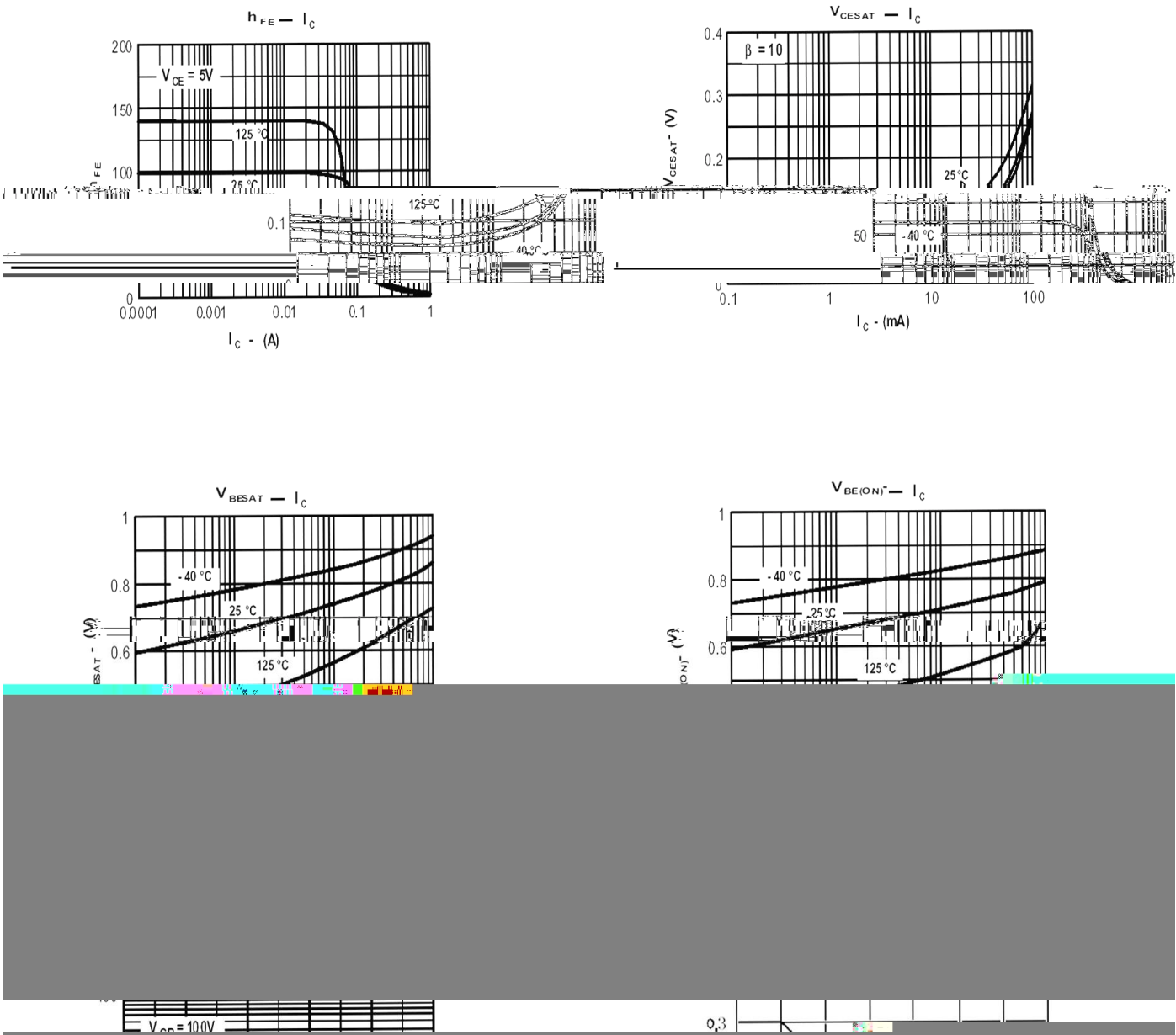


PIN1 Base PIN 2 Emitter PIN 3 Collector

h _{FE} Classifications Symbol	A	B	C
h _{FE} Range	50~150	100~300	200~400
Marking	QG1A	QG1B	QG1C



Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	180	V





SNT-23

单位: mm



Dimensions in Millimeters		Dimensions in Micrometers		Dimensions in Millimeters		Dimensions in Micrometers	
Symbol	Max	Symbol	Max	Symbol	Max	Symbol	Max
A	0.05	B	0.20	C	0.45	D	0.65
E	0.10	F	0.10	G	0.15	H	0.20
I	0.15	J	0.20	K	0.25	L	0.30
M	0.35	N	0.45	O	0.55	P	0.65
Q	0.75	R	0.85	S	0.95	T	1.05
U	1.15	V	1.25	W	1.35	X	1.45
Y	1.55	Z	1.65	AA	1.75	AB	1.85
AC	1.95	AD	2.05	AE	2.15	AF	2.25
AG	2.35	AH	2.45	AI	2.55	AJ	2.65
AK	2.75	AL	2.85	AM	2.95	AN	3.05
AO	3.15	AP	3.25	AQ	3.35	AR	3.45
AS	3.55	AT	3.65	AU	3.75	AV	3.85
AW	3.95	AX	4.05	AY	4.15	AZ	4.25
BA	4.35	BB	4.45	BC	4.55	BD	4.65
BE	4.75	BF	4.85	BG	4.95	BH	5.05
BI	5.15	BJ	5.25	BK	5.35	BL	5.45
BM	5.55	BN	5.65	BO	5.75	BP	5.85
BQ	5.95	BR	6.05	BS	6.15	BT	6.25
BU	6.35	BV	6.45	BW	6.55	BX	6.65
BY	6.75	BZ	6.85	CA	6.95	CB	7.05
CC	7.15	CD	7.25	CE	7.35	CF	7.45
CG	7.55	CH	7.65	CI	7.75	CJ	7.85
CK	7.95	CL	8.05	CM	8.15	CN	8.25
CO	8.35	CP	8.45	CQ	8.55	CR	8.65
CS	8.75	CT	8.85	CU	8.95	CV	9.05
CU	9.15	CV	9.25	CA	9.35	CB	9.45
CC	9.55	CD	9.65	CE	9.75	CF	9.85
CG	9.95	CH	10.05	CI	10.15	CJ	10.25
CK	10.35	CL	10.45	CM	10.55	CN	10.65
CO	10.75	CP	10.85	CQ	10.95	CR	11.05
CS	11.15	CT	11.25	CU	11.35	CV	11.45
CU	11.55	CV	11.65	CA	11.75	CB	11.85
CC	11.95	CD	12.05	CE	12.15	CF	12.25
CG	12.35	CH	12.45	CI	12.55	CJ	12.65
CK	12.75	CL	12.85	CM	12.95	CN	13.05
CO	13.15	CP	13.25	CQ	13.35	CR	13.45
CS	13.55	CT	13.65	CU	13.75	CV	13.85
CU	13.95	CV	14.05	CA	14.15	CB	14.25
CC	14.35	CD	14.45	CE	14.55	CF	14.65
CG	14.75	CH	14.85	CI	14.95	CJ	15.05
CK	15.15	CL	15.25	CM	15.35	CN	15.45
CO	15.55	CP	15.65	CQ	15.75	CR	15.85
CS	15.95	CT	16.05	CU	16.15	CV	16.25
CU	16.35	CV	16.45	CA	16.55	CB	16.65
CC	16.75	CD	16.85	CE	16.95	CF	17.05
CG	17.15	CH	17.25	CI	17.35	CJ	17.45
CK	17.55	CL	17.65	CM	17.75	CN	17.85
CO	17.95	CP	18.05	CQ	18.15	CR	18.25
CS	18.35	CT	18.45	CU	18.55	CV	18.65
CU	18.75	CV	18.85	CA	18.95	CB	19.05
CC	19.15	CD	19.25	CE	19.35	CF	19.45
CG	19.55	CH	19.65	CI	19.75	CJ	19.85
CK	19.95	CL	20.05	CM	20.15	CN	20.25
CO	20.35	CP	20.45	CQ	20.55	CR	20.65
CS	20.75	CT	20.85	CU	20.95	CV	21.05
CU	21.15	CV	21.25	CA	21.35	CB	21.45
CC	21.55	CD	21.65	CE	21.75	CF	21.85
CG	21.95	CH	22.05	CI	22.15	CJ	22.25
CK	22.35	CL	22.45	CM	22.55	CN	22.65
CO	22.75	CP	22.85	CQ	22.95	CR	23.05
CS	23.15	CT	23.25	CU	23.35	CV	23.45
CU	23.55	CV	23.65	CA	23.75	CB	23.85
CC	23.95	CD	24.05	CE	24.15	CF	24.25
CG	24.35	CH	24.45	CI	24.55	CJ	24.65
CK	24.75	CL	24.85	CM	24.95	CN	25.05
CO	25.15	CP	25.25	CQ	25.35	CR	25.45
CS	25.55	CT	25.65	CU	25.75	CV	25.85
CU	25.95	CV	26.05	CA	26.15	CB	26.25
CC	26.35	CD	26.45	CE	26.55	CF	26.65
CG	26.75	CH	26.85	CI	26.95	CJ	27.05
CK	27.15	CL	27.25	CM	27.35	CN	27.45
CO	27.55	CP	27.65	CQ	27.75	CR	27.85
CS	27.95	CT	28.05	CU	28.15	CV	28.25
CU	28.35	CV	28.45	CA	28.55	CB	28.65
CC	28.75	CD	28.85	CE	28.95	CF	29.05
CG	29.15	CH	29.25	CI	29.35	CJ	29.45
CK	29.55	CL	29.65	CM	29.75	CN	29.85
CO	29.95	CP	30.05	CQ	30.15	CR	30.25
CS	30.35	CT	30.45	CU	30.55	CV	30.65
CU	30.75	CV	30.85	CA	30.95	CB	31.05
CC	31.15	CD	31.25	CE	31.35	CF	31.45
CG	31.55	CH	31.65	CI	31.75	CJ	31.85
CK	31.95	CL	32.05	CM	32.15	CN	32.25
CO	32.35	CP	32.45	CQ	32.55	CR	32.65
CS	32.75	CT	32.85	CU	32.95	CV	33.05
CU	33.15	CV	33.25	CA	33.35	CB	33.45
CC	33.55	CD	33.65	CE	33.75	CF	33.85
CG	33.95	CH	34.05	CI	34.15	CJ	34.25
CK	34.35	CL	34.45	CM	34.55	CN	34.65
CO	34.75	CP	34.85	CQ	34.95	CR	35.05
CS	35.15	CT	35.25	CU	35.35	CV	35.45
CU	35.55	CV	35.65	CA	35.75	CB	35.85
CC	35.95	CD	36.05	CE	36.15	CF	36.25
CG	36.35	CH	36.45	CI	36.55	CJ	36.65
CK	36.75	CL	36.85	CM	36.95	CN	37.05
CO	37.15	CP	37.25	CQ	37.35	CR	37.45
CS	37.55	CT	37.65	CU	37.75	CV	37.85
CU	37.95	CV	38.05	CA	38.15	CB	38.25
CC	38.35	CD	38.45	CE	38.55	CF	38.65
CG	38.75	CH	38.85	CI	38.95	CJ	39.05
CK	39.15	CL	39.25	CM	39.35	CN	39.45
CO	39.55	CP	39.65	CQ	39.75	CR	39.85
CS	39.95	CT	40.05	CU	40.15	CV	40.25
CU	40.35	CV	40.45	CA	40.55	CB	40.65
CC	40.75	CD	40.85	CE	40.95	CF	41.05
CG	41.15	CH	41.25	CI	41.35	CJ	41.45
CK	41.55	CL	41.65	CM	41.75	CN	41.85
CO	41.95	CP	42.05	CQ	42.15	CR	42.25
CS	42.35	CT	42.45	CU	42.55	CV	42.65
CU	42.75	CV	42.85	CA	42.95	CB	43.05
CC	43.15	CD	43.25	CE	43.35	CF	43.45
CG	43.55	CH	43.65	CI	43.75	CJ	43.85
CK	43.95	CL	44.05	CM	44.15	CN	44.25
CO	44.35	CP	44.45	CQ	44.55	CR	44.65
CS	44.75	CT	44.85	CU	44.95	CV	45.05
CU	45.15	CV	45.25	CA	45.35	CB	45.45
CC	45.55	CD	45.65	CE	45.75	CF	45.85
CG	45.95	CH	46.05	CI	46.15	CJ	46.25
CK	46.35	CL	46.45	CM	46.55	CN	46.65
CO	46.75	CP	46.85	CQ	46.95	CR	47.05
CS	47.15	CT	47.25	CU	47.35	CV	47.45
CU	47.55	CV	47.65	CA	47.75	CB	47.85
CC	47.95	CD	48.05	CE	48.15	CF	48.25
CG	48.35	CH	48.45	CI	48.55	CJ	48.65
CK	48.75	CL	48.85	CM	48.95	CN	49.05
CO	49.15	CP	49.25	CQ	49.35	CR	49.45
CS	49.55	CT	49.65	CU	49.75	CV	49.85
CU	49.95	CV	50.05	CA	50.15	CB	50.25
CC	50.35	CD	50.45	CE	50.55	CF	50.65
CG	50.75	CH	50.85	CI	50.95	CJ	51.05
CK	51.15	CL	51.25	CM	51.35	CN	51.45
CO	51.55	CP	51.65	CQ	51.75	CR	51.85
CS	51.95	CT	52.05	CU	52.15	CV	52.25
CU	52.35	CV	52.45	CA	52.55	CB	52.65
CC	52.75	CD	52.85	CE	52.95	CF	53.05
CG	53.15	CH	53.25	CI	53.35	CJ	53.45
CK	53.55	CL	53.65	CM	53.75	CN	53.85
CO	53.95	CP	54.05	CQ	54.15	CR	54.25
CS	54.35	CT	54.45	CU	54.55	CV	54.65
CU	54.75	CV	54.85	CA	54.95	CB	55.05
CC	55.15	CD	55.25	CE	55.35	CF	55.45
CG	55.55	CH	55.65	CI	55.75	CJ	55.85
CK	55.95	CL	56.05	CM	56.15	CN	56.25
CO	56.35	CP	56.45	CQ	56.55	CR	56.65
CS	56.75	CT	56.85	CU	56.95	CV	57.05
CU	57.15	CV	57.25	CA	57.35	CB	57.45
CC	57.55	CD	57.65	CE	57.75	CF	57.85
CG	57.95	CH	58.05	CI	58.15	CJ	58.25
CK	58.35	CL	58.45	CM	58.55	CN	58.65
CO	58.75	CP	58.85	CQ	58.95	CR	59.05
CS	59.15	CT	59.25	CU	59.35	CV	59.45
CU	59.55	CV	59.65	CA	59.75	CB	59.85
CC	59.95	CD	60.05	CE	60.15	CF	60.25
CG	60.35	CH	60.45	CI	60.55	CJ	60.65
CK	60.75	CL	60.85	CM	60.95	CN	61.05
CO	61.15	CP	61.25	CQ	61.35	CR	61.45
CS	61.55	CT	61.65	CU	61.75	CV	61.85
CU	61.95	CV	62.05	CA	62.15	CB	62.25
CC	62.35	CD	62.45	CE	62.55	CF	62.65
CG	62.75	CH	62.85	CI	62.95	CJ	63.05
CK	63.15	CL	63.25	CM	63.35	CN	63.45
CO	63.55	CP	63.65	CQ	63.75	CR	63.85
CS	63.95	CT	64.05	CU	64.15	CV	64.25
CU	64.35	CV	64.45	CA	64.55	CB	64.65
CC	64.75	CD	64.85	CE	64.95	CF	65.05
CG	65.15	CH	65.25	CI	65.35	CJ	65.45
CK	65.55	CL	65.65	CM	65.75	CN	65.85
CO	65.95	CP	66.05	CQ	66.15	CR	66.25
CS	66.35	CT	66.45	CU	66.55	CV	66.65
CU	66.75	CV	66.85	CA	66.95	CB	67.05
CC	67.15	CD	67.25	CE	67.35	CF	67.45
CG	67.55	CH	67.65	CI	67.75	CJ	67.85
CK	67.95	CL	68.05	CM	68.15	CN	68.25
CO	68.35	CP	68.45	CQ	68.55	CR	68.65
CS	68.75	CT	68.85	CU	68.95	CV	69.05
CU	69.15						



Q

G1

A h_{FE}

Note:

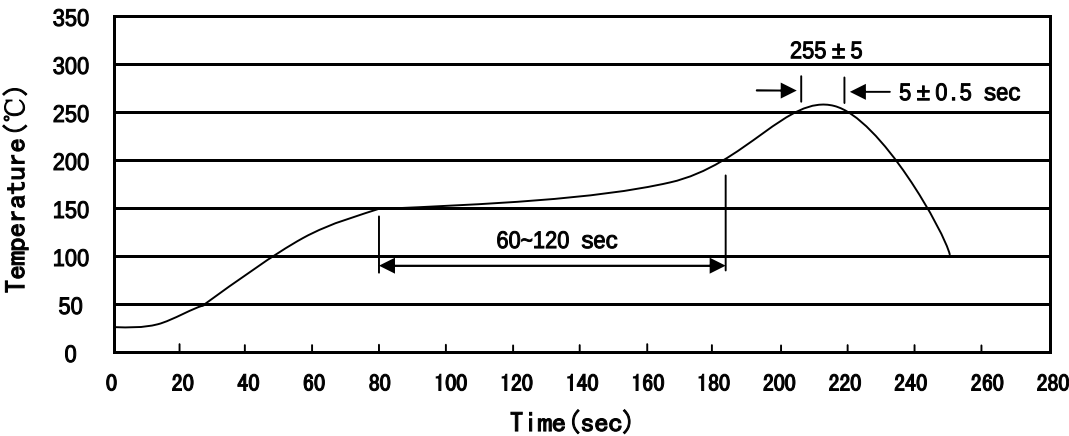
Q: Automobile halogen-free product Code

G1 Product Type Code

A h_{FE} Classifications Symbol Code



Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 200

60 120sec;

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

255±5

5±0.5sec;

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

2 10°C/sec.

3. Cooling Speed: 2~10°C/sec.

260±5°C

10±1 sec.

Temp.:260±5°C

Time:10±1 sec

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205