

**BRPBSS4160TQ**  
Rev.A Mar.-2023

JF K\$) \*      E GE      Silicon NPN transistor in a SOT-23 Plastic Package.

8<: \$H(' (      Low  $V_{CE(sat)}$ , high current, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

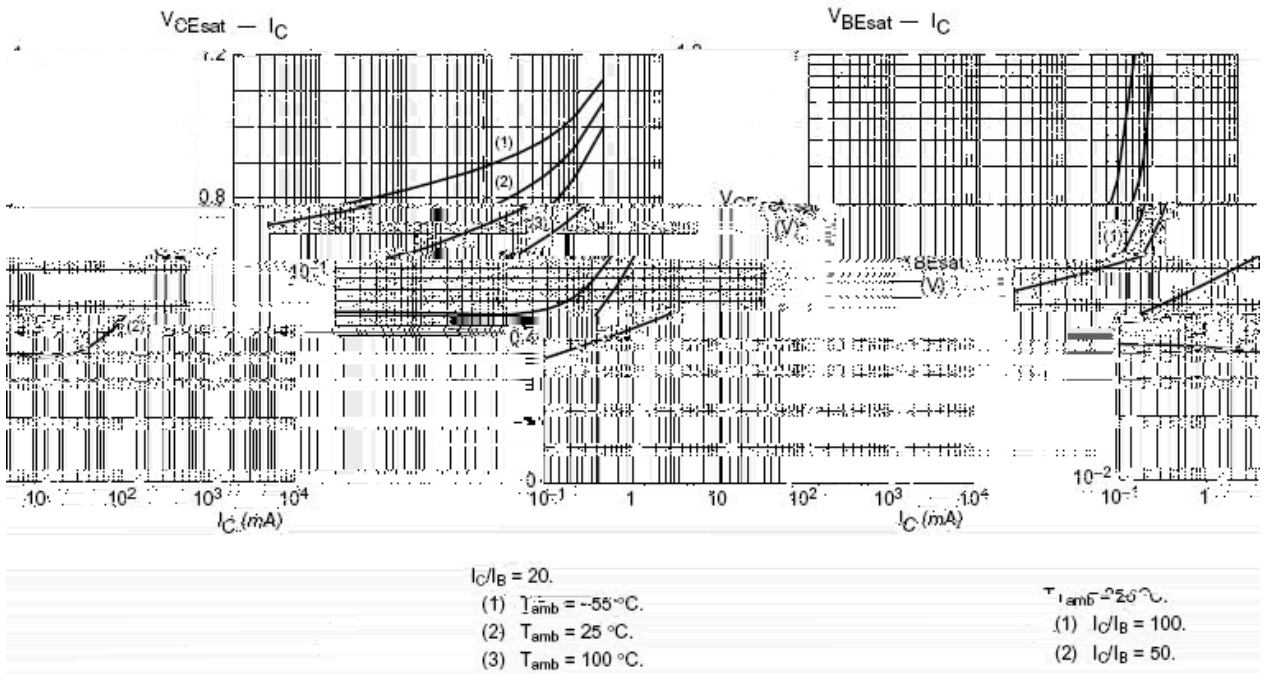
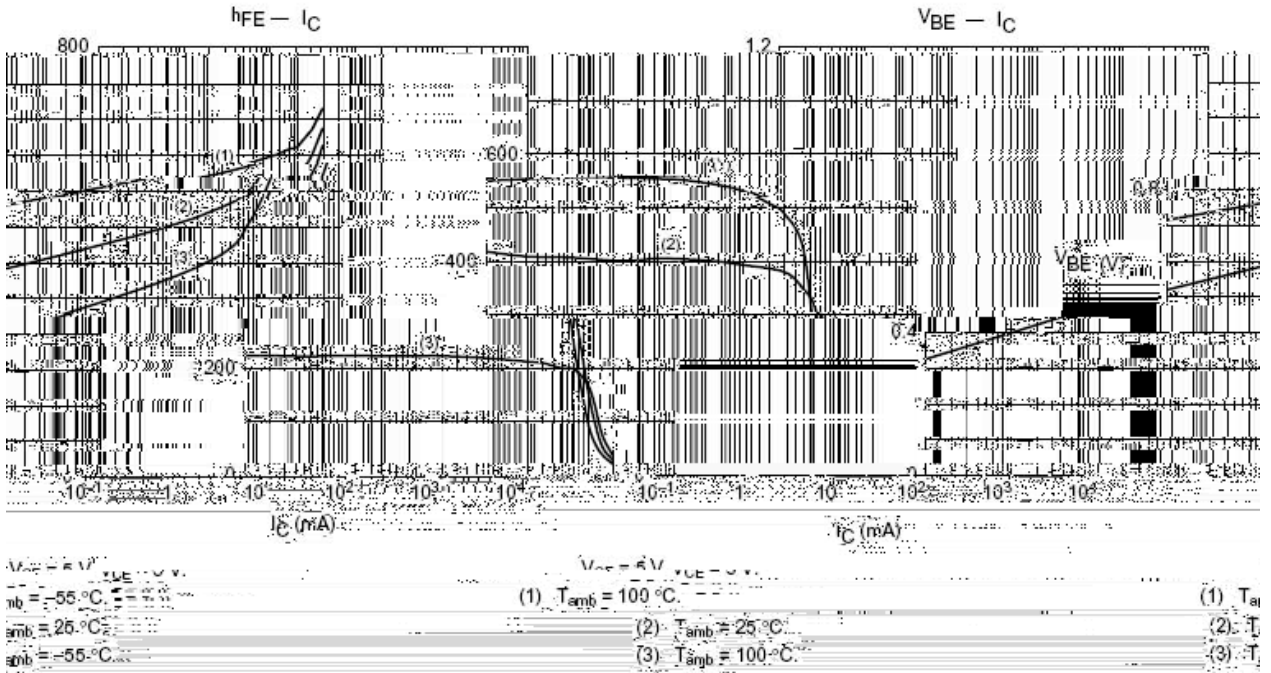
**Table 1 / Absolute Maximum Ratings(Ta=25 ; )**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	80	V
Collector to Emitter Voltage	$V_{CEO}$	60	V
Emitter to Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	1	A
Peak Collector Current	$I_{CM}$	2	A
Base Current	$I_B$	0.3	A
Peak Base Current	$I_{BM}$	1	A
Collector Power Dissipation	$P_C$	400	mW
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

**Table 2 / Typical Characteristics (Ta=25 ; )**

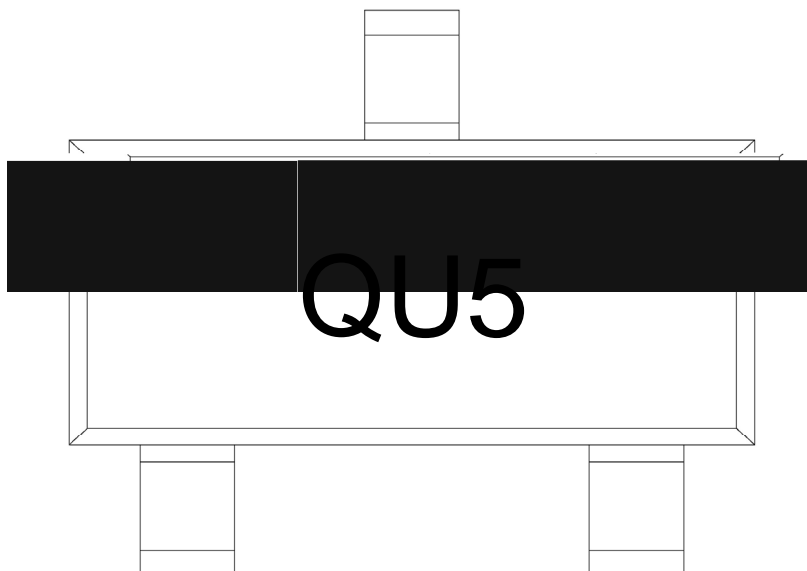
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=60V$ $I_E=0A$			100	nA
		$V_{CB}=60V$ $I_E=0A$ $T_j=150$			50	A
Collector Cut-Off Current	$I_{CES}$	$V_{CE}=60V$ $V_{BE}=0V$			100	nA
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=5.0V$ $I_C=0A$			100	nA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5.0V$ $I_C=500mA$	200	350		
	$h_{FE(2)}$	$V_{CE}=5.0V$ $I_C=1.0mA$	250	400		
	$h_{FE(3)}$	$V_{CE}=5.0V$ $I_C=1.0A$	100	150		
Collector-Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=100mA$ $I_B=1.0mA$		90	110	mV
	$V_{CE(sat)(2)}$	$I_C=500mA$ $I_B=50mA$		110	140	mV
	$V_{CE(sat)(3)}$	$I_C=1.0A$ $I_B=100mA$		200	250	mV
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1.0A$ $I_B=50mA$		0.95	1.1	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=5.0V$ $I_C=1.0A$		0.82	0.9	V
Transition Frequency	$f_T$	$V_{CE}=10V$ $I_C=50mA$ $f=100MHz$	150	220		MHz
Output Capacitance	$C_C$	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		5.5	10	pF

Electrical Characteristic Curve





My / Marking Instructions



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U5

Note:

Q: Automobile halogen-free product Code

U5 Product Type Code

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