

/ Descriptions

Silicon NPN transistor in a SOT-23 Plastic Package.

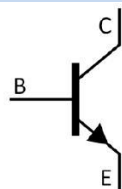
/ Features

High voltage, high current, high h_{FE} , low noise, excellent h_{FE} linearity, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

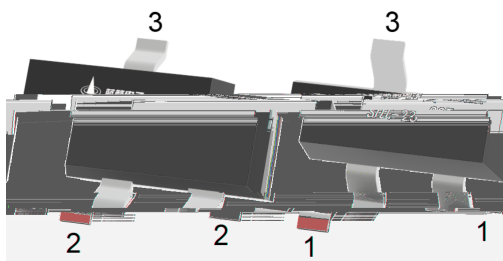
/ Applications

Audio frequency general purpose amplifier applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	O	Y	GR	BL
h_{FE} Range	70~140	120~240	200~400	350~700
Marking	QLO	QLY	QLG	QLL

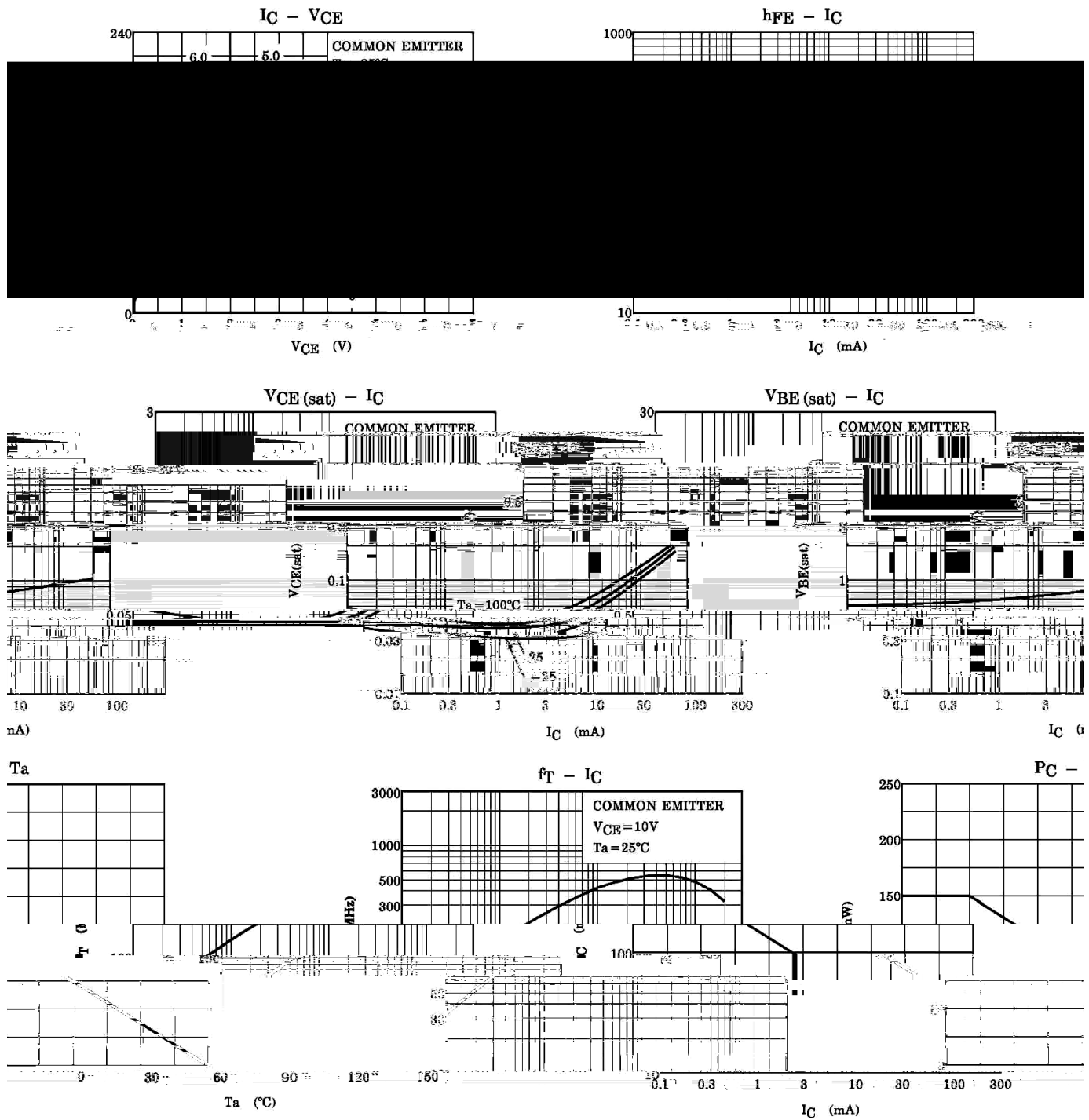
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	150	mA
Base Current	I_B	30	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55~150	

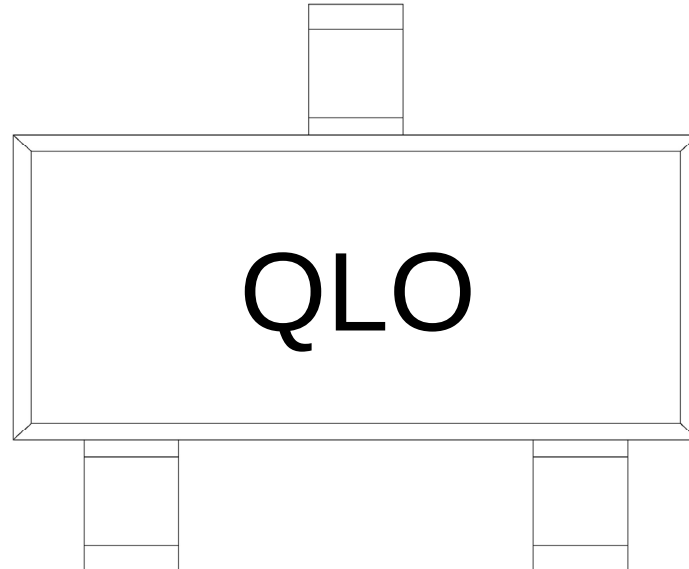
/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=60V$ $I_E=0$			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=6.0V$ $I_C=2.0mA$	70		700	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA$ $I_B=10mA$		0.1	0.25	V
Transition Frequency	f_T	$V_{CE}=10V$ $I_C=1.0mA$	80			MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $f=1.0MHz$ $I_E=0$		2.0	3.5	pF
Noise Figure	NF	$V_{CE}=6.0V$ $R_g=10K\Omega$ $I_C=0.1mA$ $f=1.0KHz$		1.0	10	dB

/ Electrical Characteristic Curve



/ Marking Instructions



h_{FE}

Note:

Product Type Code

h_{FE} Classifications Symbol

Soldering(Pb-Free)

0~200℃, Time:60~120sec.
255±5℃, Duration:5~0.5sec.
Cooling: 2~10℃/sec.

Inspection

50% Time:10±1 sec

Dimension	(unit: mm ³)
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