

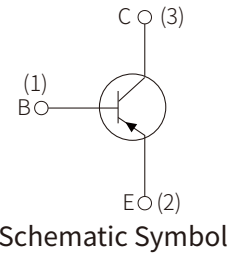
FEATURES

- | Complementary pair with S8050Q
- | Meet AEC-Q101 Requirements



APPLICATIONS

- | Power amplifier applications
- | Meet the stringent requirements of automotive applications



APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-40	V
Collector-Emitter Voltage	V _{CEO}	-25	
Emitter-Base Voltage	V _{EBO}	-6.0	
Collector Current	I _C	-800	mA
Base Current	I _B	-200	mA
Collector Power Dissipation	P _C	200	mW
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{STG}	-65~+150	°C

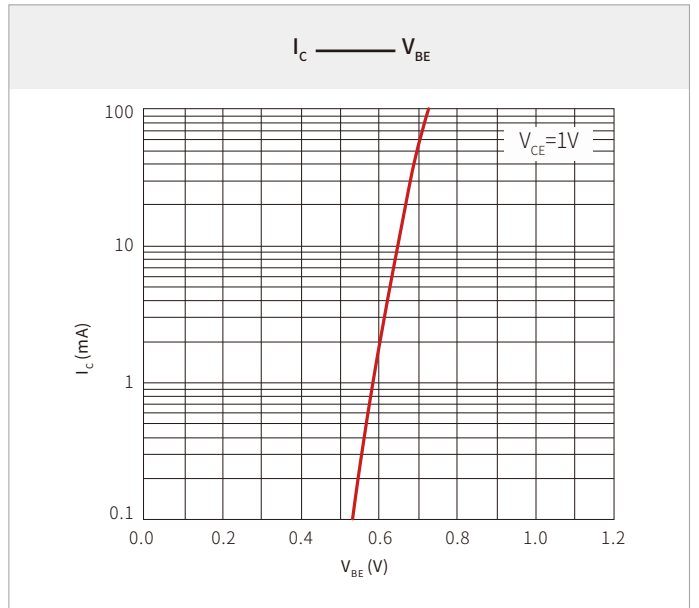
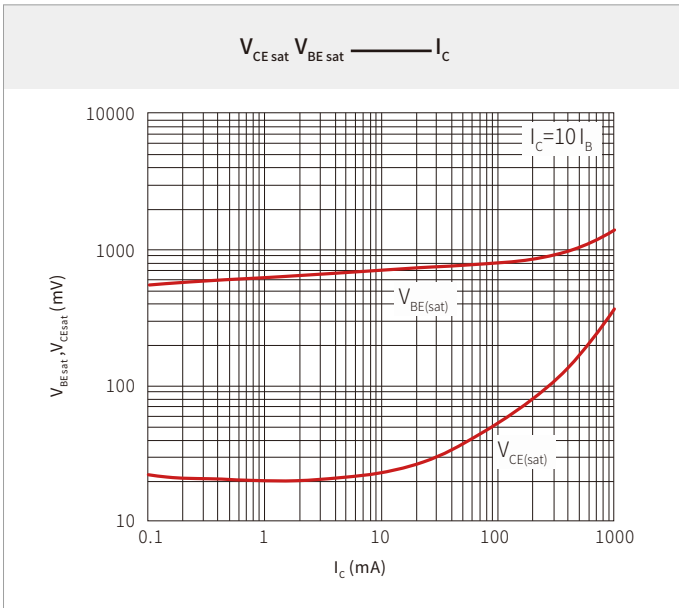
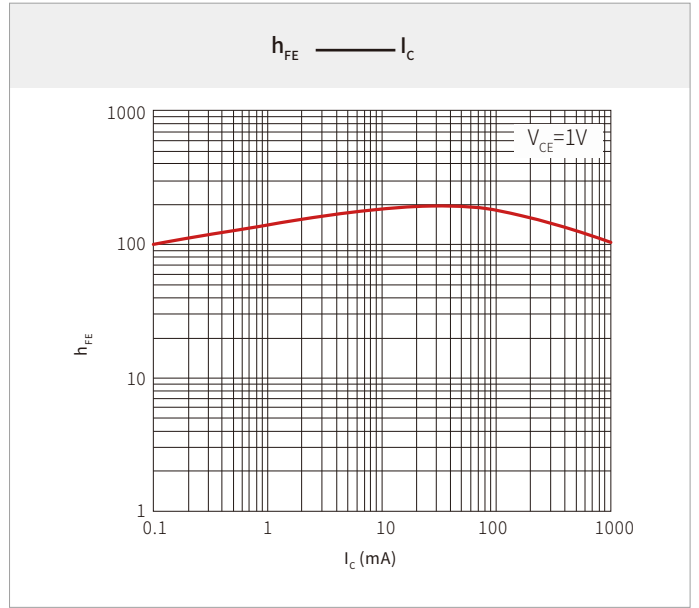
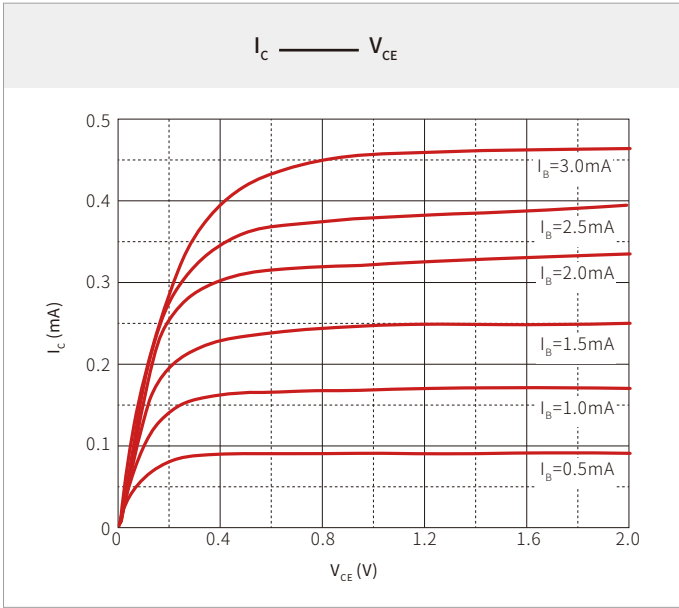
ELECTRICAL CHARACTERISTICS (T_A=25°C)

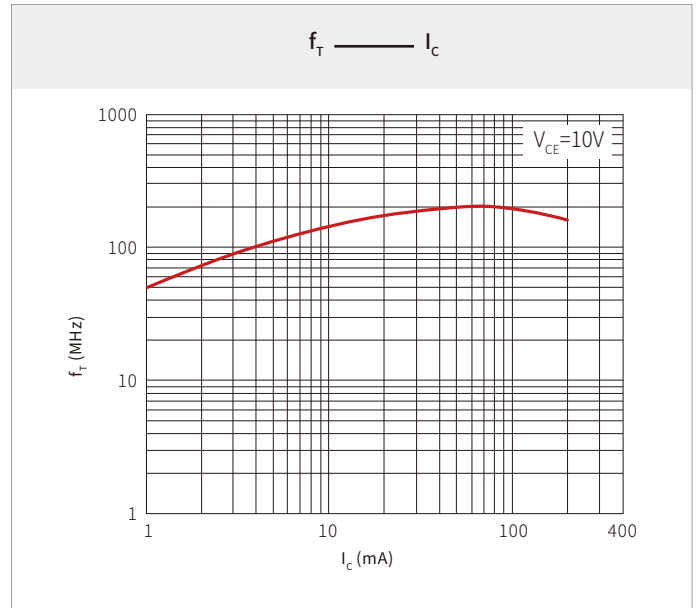
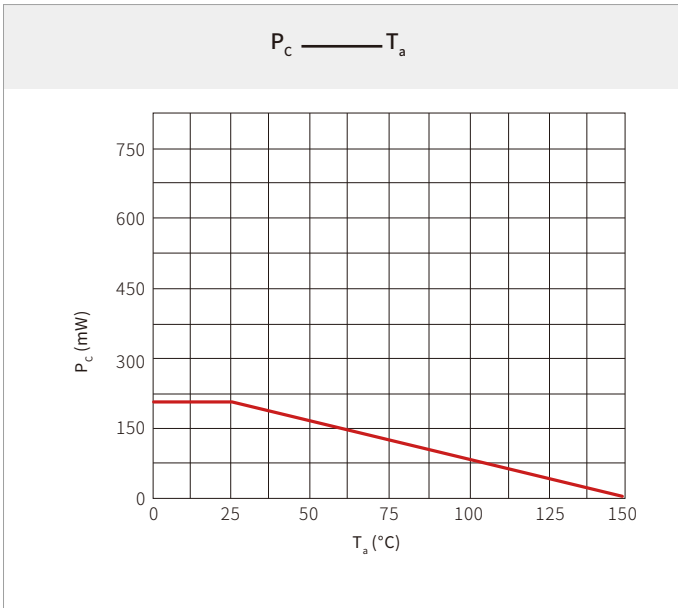
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	V _{CBO}	I _C =-0.1mA, I _E =0	-40			V
Collector-emitter breakdown voltage	V _{CEO}	I _C =-2.0mA, I _B =0	-25			
Emitter-base breakdown voltage	V _{EBO}	I _E =-0.1mA, I _C =0	-6.0			
Collector cut-off current	I _{CBO}	V _{CB} = -35V, I _E =0			-0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-6.0V, I _C =0			-0.1	
DC current gain	h _{FE(1)}	V _{CE} =-1.0V, I _C =-100mA	85		300	
	h _{FE(2)}	V _{CE} =-1.0V, I _C =-500mA	40			
	h _{FE(3)}	V _{CE} =-1.0V, I _C =-5.0mA	45			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-500mA, I _B =-50mA		-0.28	-0.6	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =-500mA, I _B =-50mA		-0.98	-1.2	
Base-emitter voltage	V _{BE}	V _{CE} =-1.0V, I _C =-10mA		-0.66	-1.0	
Collector Output Capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1.0MHz		15		pF
Transition frequency	f _T	V _{CE} =-10V, I _C =-50mA	100	200		MHz

CLASSIFICATION OF H_{FE(1)}

Rank	B	C	D
Range	85-160	120-200	160-300
Marking	QY4B	QY4C	QY4D

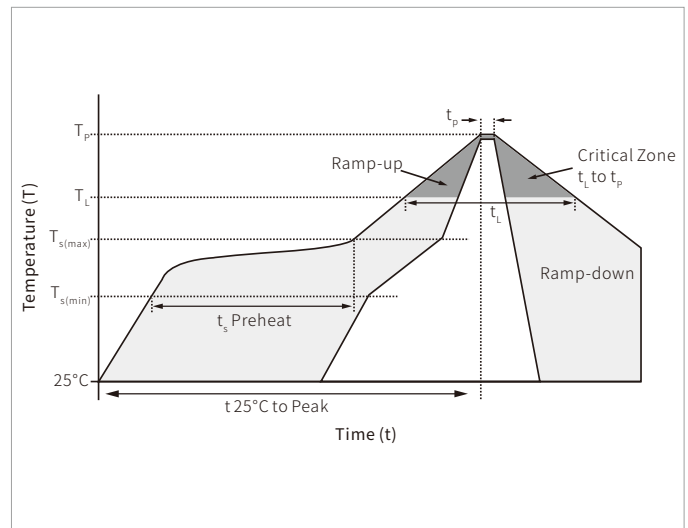
TYPICAL CHARACTERISTICS



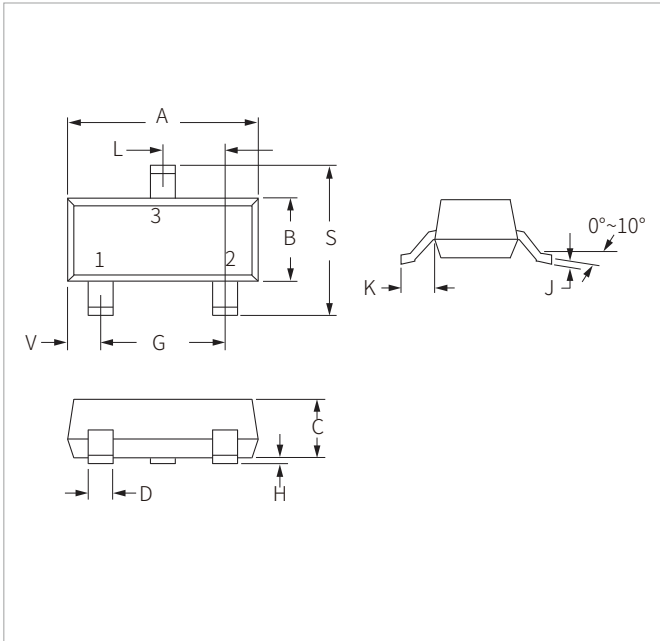


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

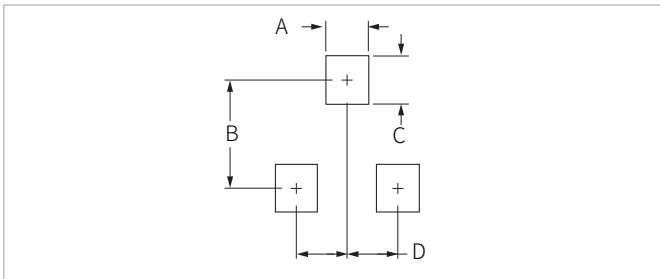


SOT-23 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.05	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.90	1.15	0.035	0.045
D	0.37	0.50	0.015	0.020
G	1.75	2.05	0.069	0.081
H	0.01	0.100	0.001	0.004
J	0.085	0.180	0.003	0.007
K	0.35	0.69	0.014	0.029
L	0.89	1.02	0.035	0.040
S	2.10	2.65	0.083	0.104
V	0.45	0.60	0.018	0.024

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
S8550Q	SOT-23	3000PCS	7"

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