

FEATURES

Low $V_{CE(sat)}$, high current



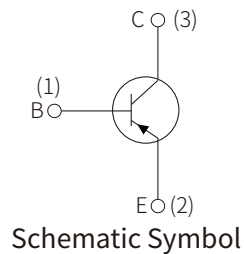
APPLICATIONS

General purpose switching and muting, LCD back-lighting, supply line switching circuits.



APPROVALS

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



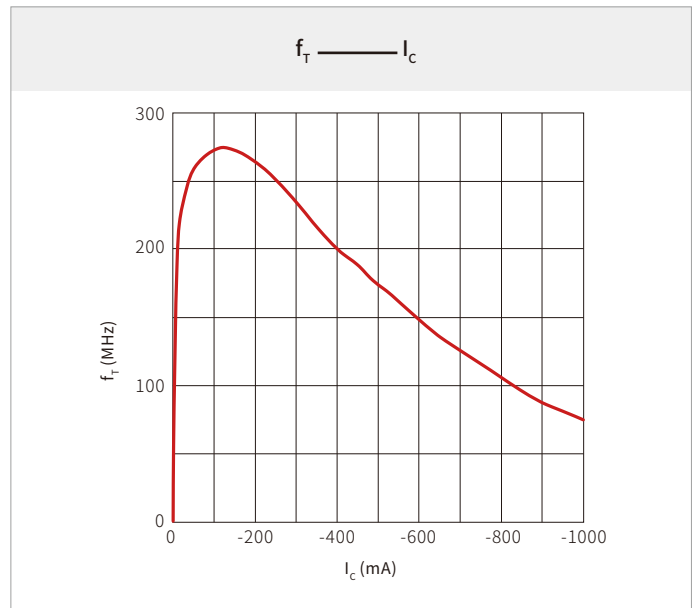
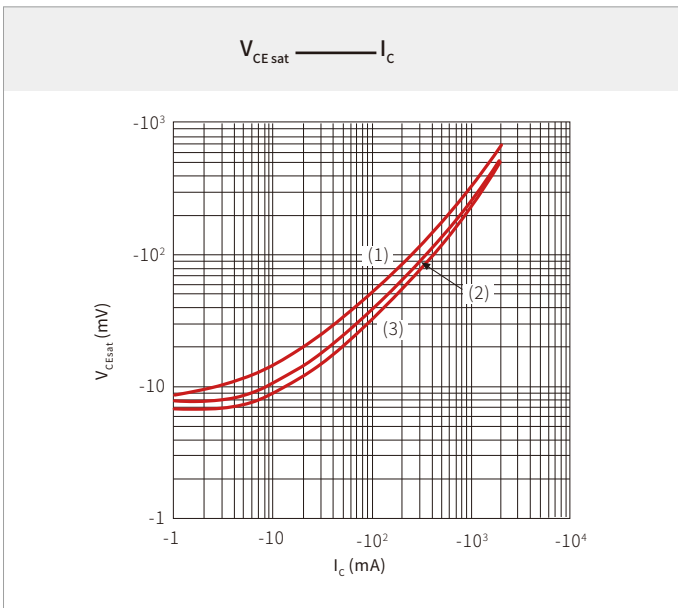
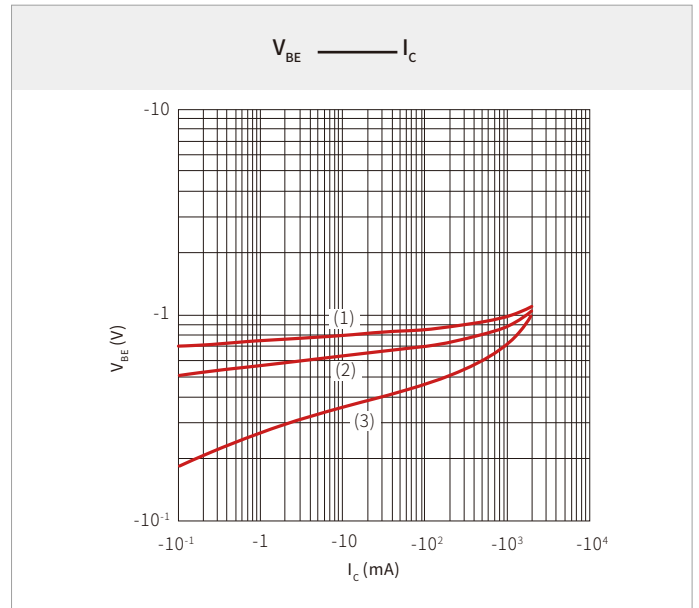
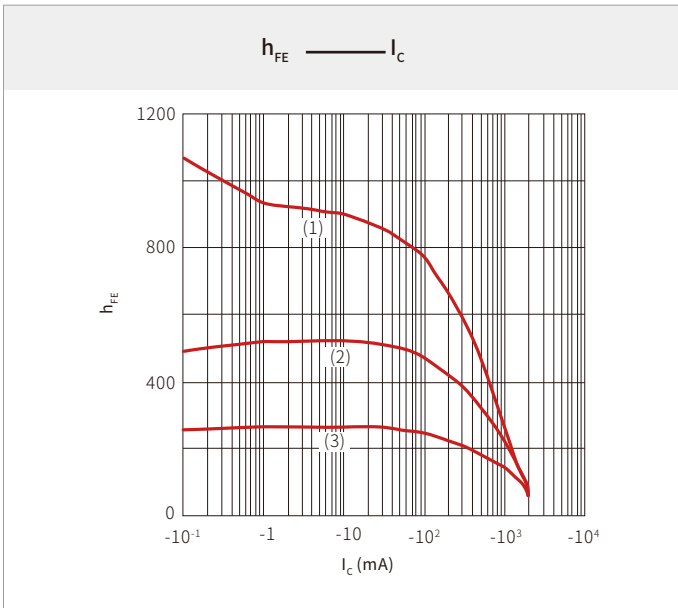
MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Collector to Base Voltage	V_{CBO}	-80	V
Collector to Emitter Voltage	V_{CEO}	-60	
Emitter to Base Voltage	V_{EBO}	-5	
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
Total Power Dissipation	P_C	400	mW
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS (T_A=25°C)

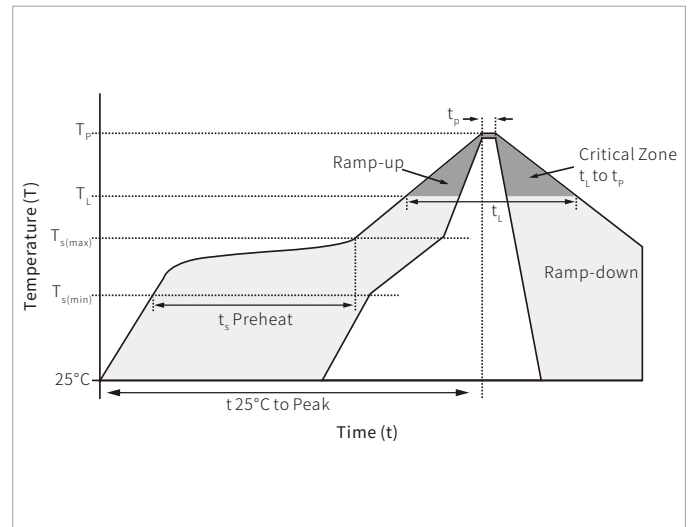
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector Cut-Off Current	I _{CBO}	V _{CB} =-60V, I _E =0A			-100	nA
		V _{CB} =-60V, I _E =0A, T _J =150°C			-50	μA
Collector-Emitter Cut-Off Current	I _{CES}	V _{CE} =-60V, V _{BE} =0A			-100	nA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =-5V, I _C =0A			-100	nA
DC Current Gain	h _{FE(1)}	V _{CE} =-5V, I _C =-500mA	150	250		
	h _{FE(2)}	V _{CE} =-5V, I _C =-1mA	200	350		
	h _{FE(3)}	V _{CE} =-5V, I _C =-1A	100	160		
Collector-Emitter Saturation Voltage	V _{CE(sat)(1)}	I _C =-100mA, I _B =-1mA		-110	-160	mV
	V _{CE(sat)(2)}	I _C =-500mA, I _B =-50mA		-120	-175	mV
	V _{CE(sat)(3)}	I _C =-1A, I _B =-100mA		-220	-330	mV
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =-1A, I _B =-50mA		-0.95	-1.1	V
Base-Emitter Voltage	V _{BE}	V _{CE} =-5V, I _C =-1A		-0.82	-0.9	V
Transition Frequency	f _T	V _{CE} =-10V, I _C =-50mA, f=100MHz	150	220		MHz
Collector Capacitance	C _C	V _{CB} =-10V, I _E =0A, f=1MHz		9	15	pF

TYPICAL CHARACTERISTICS

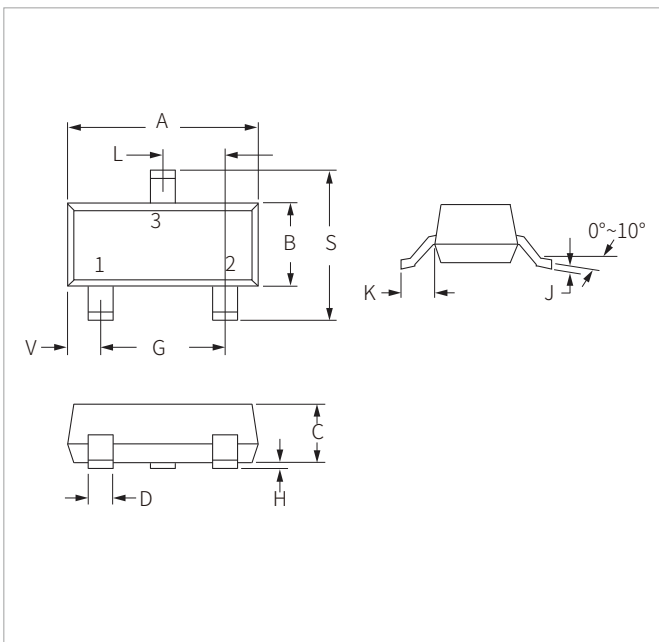


SOLDERING PARAMETERS

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_i) (Liquidus)	217°C
	Time (min to max) (t_i)	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

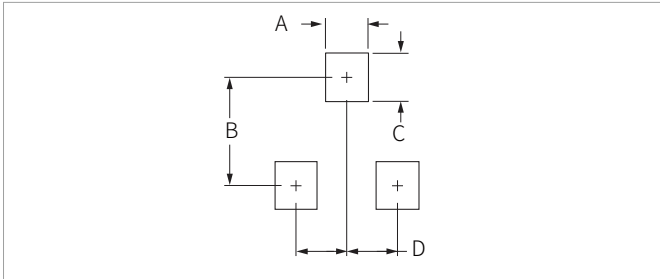


SOT-23 PACKAGE INFORMATION



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
PBSS5160T	SOT-23	3000PCS	7"

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