

Plastic-Encapsulate Transistors

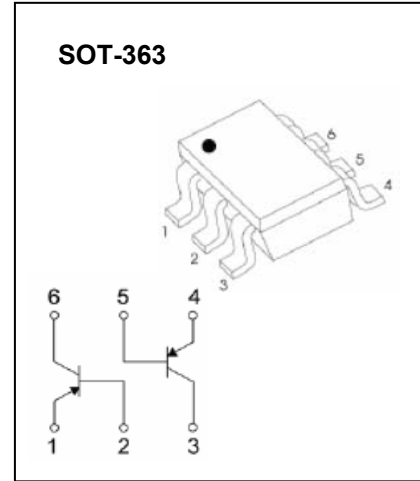
DUAL TRANSISTOR (PNP+PNP)

FEATURE

- For AF input stages and drive applications
- High h_{FE}
- Low $V_{CE(sat)}$
- Tow (galvanic) internal isolated transistors with good matching in one package

MARKING: S5B

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)



Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	-50	V
V_{CE0}	Collector-Emitter Voltage	-45	V
V_{EB0}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-0.5	A
P_C	Collector Power Dissipation	0.3	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	417	$^\circ\text{C}/\text{W}$
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^\circ\text{C}$

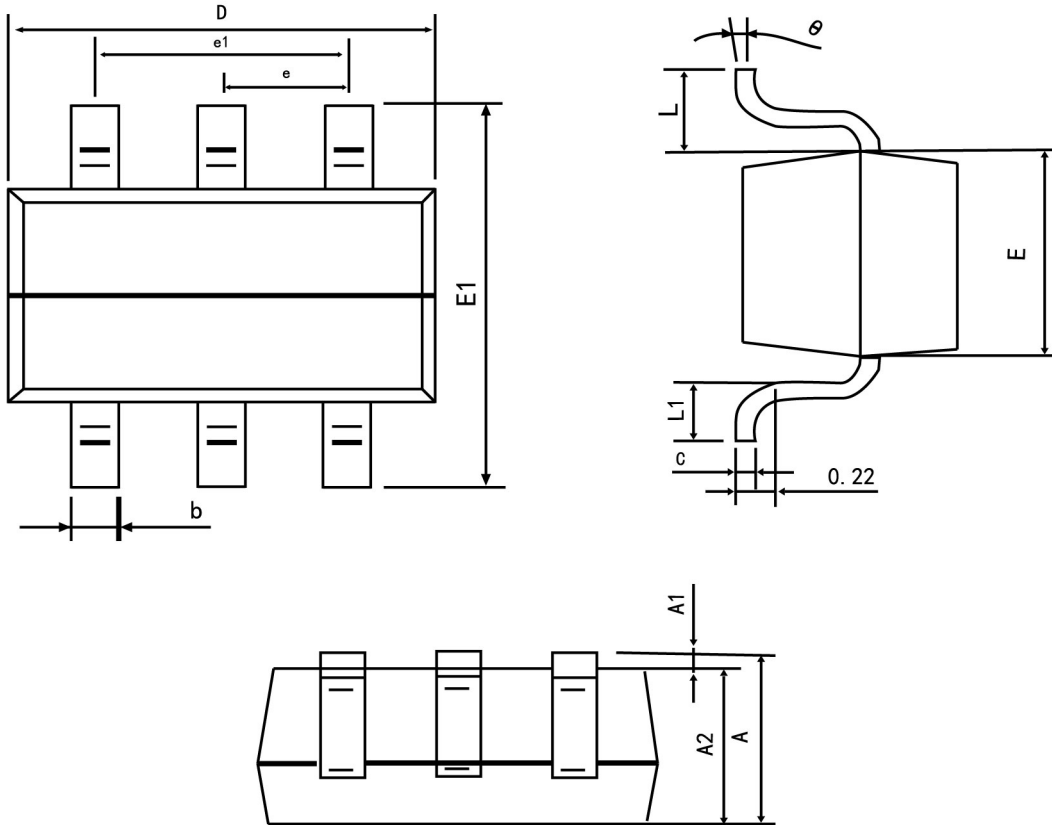
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CB0}$	$I_C=-10\mu\text{A}, I_E=0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CE0}$	$I_C=-10\text{mA}, I_B=0$	-45			V
Emitter-base breakdown voltage	$V_{(BR)EB0}$	$I_E=-10\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	I_{CB0}	$V_{CB}=-25\text{V}, I_E=0$			-0.1	μA
Emitter cut-off current	I_{EB0}	$V_{EB}=-4\text{V}, I_C=0$			-0.1	μA
DC current gain	$h_{FE(1)}$ *	$V_{CE}=-1\text{V}, I_C=-100\text{mA}$	160		400	
	$h_{FE(2)}$ *	$V_{CE}=-1\text{V}, I_C=-500\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$ *	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$ *	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-1.2	V
Transition frequency	f_T	$V_{CE}=-5\text{V}, I_C=-50\text{mA}, f=20\text{MHz}$		200		MHz
Collector-base capacitance	C_{cb}	$V_{CB}=-10\text{V}, f=1\text{MHz}$		10		pF
Emitter-base capacitance	C_{eb}	$V_{EB}=-0.5\text{V}, f=1\text{MHz}$		60		pF

*Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycles $\leq 2.0\%$.



SOT-363-Package Outline Dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP	
e1	1.200	1.400
L	0.525 REF	
L1	0.260	0.460
θ	0°	8°