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PNP Epitaxial Silicon Transistor

SS8550

Features

- 2 W Output Amplifier of Portable Radios in Class B Push–Pull Operation
- Complementary to SS8050
- Collector Current: $I_C = 1.5 A$
- These Devices are Pb–Free, Halogen Free/BFR Free and are RoHS Compliant

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-40	V
Collector-Emitter Voltage	V _{CEO}	-25	V
Emitter-Base Voltage	V _{EBO}	-6	V
Collector Current	۱ _C	-1.5	А
Junction Temperature	Т _Ј	150	°C
Storage Temperature	T _{STG}	-65 to 150	°C

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

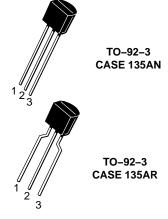
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS (Note 1)

 $(T_A = 25^{\circ}C \text{ unless otherwise noted})$

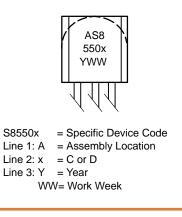
Parameter	Symbol	Value	Unit
Power Dissipation	PD	1	W
Power Dissipation Derate Above 25°C	PD	8	mW/°C
Thermal Resistance, Junction-to-Ambient	R_{\thetaJA}	125	°C/W

1. PCB size: FR-4, 76 mm x 114 mm x 1.57 mm (3.0 inch x 4.5 inch x 0.062 inch) with minimum land pattern size.





- 2. Base
- 3. Collector



MARKING DIAGRAM

ORDERING INFORMATION

See detailed ordering and shipping information on page 2 of this data sheet.

SS8550

Symbol	Parameter	Conditions	Min.	Тур.	Max.	Unit
BV _{CBO}	Collector-Base Breakdown Voltage	$I_{C} = -100 \ \mu A, \ I_{E} = 0$	-40			V
BV _{CEO}	Collector-Emitter Breakdown Voltage	$I_{\rm C} = -2 {\rm mA}, I_{\rm B} = 0$	-25			V
BV_{EBO}	Emitter–Base Breakdown Voltage	$I_{E} = -100 \ \mu A, \ I_{C} = 0$	-6			V
I _{CBO}	Collector Cut–Off Current	$V_{CB} = -35 \text{ V}, \text{ I}_{E} = 0$			-100	nA
I _{EBO}	Emitter Cut–Off Current	$V_{EB} = -6 \text{ V}, \text{ I}_{C} = 0$			-100	nA
h _{FE1}	DC Current Gain	$V_{CE} = -1 \text{ V}, I_{C} = -5 \text{ mA}$	45	170		
h _{FE2}	7	$V_{CE} = -1 \text{ V}, I_{C} = -100 \text{ mA}$	85	160	300	
h _{FE3}	7	$V_{CE} = -1 \text{ V}, I_C = -800 \text{ mA}$	40	80		
V _{CE} (sat)	Collector-Emitter Saturation Voltage	$I_{\rm C} = -800 \text{ mA}, I_{\rm B} = -80 \text{ mA}$		-0.28	-0.50	V
V _{BE} (sat)	Base–Emitter Saturation Voltage	$I_{\rm C} = -800 \text{ mA}, I_{\rm B} = -80 \text{ mA}$		-0.98	-1.20	V
V _{BE} (on)	Base-Emitter On Voltage	$V_{CE} = -1 \text{ V}, I_{C} = -10 \text{ mA}$		-0.66	-1.00	V
C _{ob}	Output Capacitance	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		15		pF
f _T	Current Gain Bandwidth Product	$V_{CE} = -10 \text{ V}, I_{C} = -50 \text{ mA}$	100	200		MHz

ELECTRICAL CHARACTERISTICS ($T_C = 25^{\circ}C$ unless otherwise noted)

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

h_{FE} CLASSIFICATION

Classification	С	D
h _{FE2}	120 ~ 200	160 ~ 300

ORDERING INFORMATION

Part Number	Top Mark	Package	Shipping
SS8550CBU	S8550C	TO-92-3, case 135AN (Pb-Free)	10,000 Units/ Bulk Box
SS8550CTA	S8550C	TO-92-3, case 135AR (Pb-Free)	2,000 Units/ Fan-Fold
SS8550DBU	S8550D	TO-92-3, case 135AN (Pb-Free)	10,000 Units/ Bulk Box
SS8550DTA	S8550D	TO-92-3, case 135AR (Pb-Free)	2,000 Units/ Fan-Fold

SS8550

TYPICAL PERFORMANCE CHARACTERISTICS

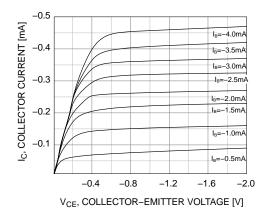


Figure 1. Static Characteristic

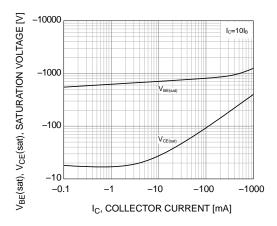


Figure 3. Base–Emitter Saturation Voltage and Collector–Emitter Saturation Voltage

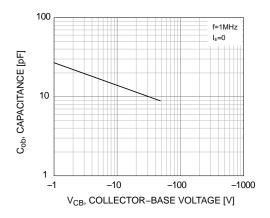


Figure 5. Collector Output Capacitance

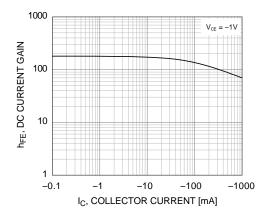


Figure 2. DC Current Gain

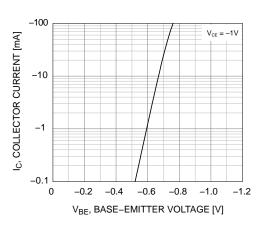


Figure 4. Base-Emitter On Voltage

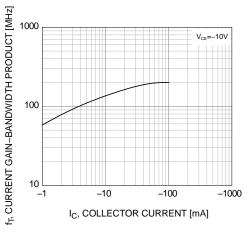


Figure 6. Current Gain Bandwidth Product

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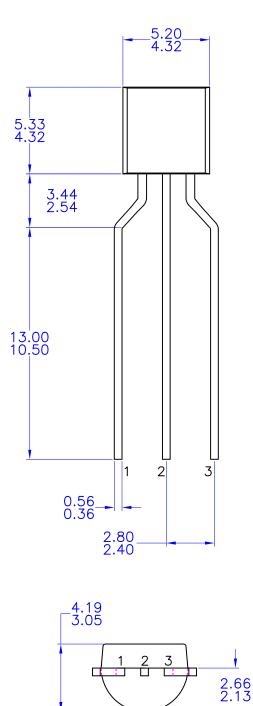
TO-92 3 4.825x4.76 CASE 135AN ISSUE O DATE 31 JUL 2016 _5.20_ ______ 5.33 (0.81) 15.62 2 3 1 0.52 0.56 0.36 1.27 NOTES: UNLESS OTHERWISE SPECIFIED 2.54 A) DRAWING WITH REFERENCE TO JEDEC TO-92 RECOMMENDATIONS. B) ALL DIMENSIONS ARE IN MILLIMETERS. с́э DRAWING CONFORMS TO ASME Y14.5M-2009. 4.19 3.05 2.66 2.13 2 3 1 Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red. **DOCUMENT NUMBER:** 98AON13880G **DESCRIPTION:** TO-92 3 4.825X4.76 PAGE 1 OF 1

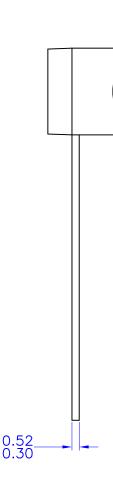
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