

FUKUCOM COMPANY LTD.

福靈有限公司

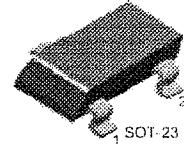
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KWUN TONG, KOWLOON, HONG KONG.

TEL: 2790-0314 FAX: 2790-0206

S9013S

1W Output Amplifier of Portable Radios in Class B Push-Pull Operation

*Complement to S9012S



SOT-23
1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector Dissipation	225	mW
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 noted

Symbol	Parameter	Test Condition	Min.	Typ	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=100\ \mu\text{A}, I_E=0$	40			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}, I_B=0$	20			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=100\ \mu\text{A}, I_C=0$	5			V
I_{EBO}	Emitter Cut-off Current	$V_{CB}=25\text{V}, I_E=0$			100	ηA
I_{CBO}	Collector Cut-off Current	$V_{CE}=3\text{V}, I_C=0$			100	ηA
h_{FE}	DC Current Gain	$V_{CE}=1\text{V}, I_C=50\text{mA}$ $V_{CE}=1\text{V}, I_C=500\text{mA}$	64 30	120	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$		0.16	0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$		0.91	1.2	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE}=1\text{V}, I_C=10\text{mA}$	0.6	0.67	0.7	V

Classification h_{FE}

h_{FE}	177-250
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Marking

