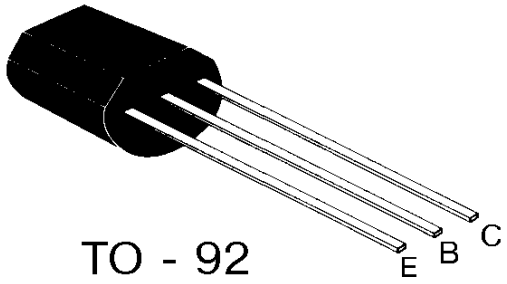
KT525-5
(9013)

NPN Epitaxial Silicon Transistor

revised October 1999

1W OUTPUT AMPLIFIER OF PORTABLE RADIOS IN CLASS B PUSH-PULL OPERATION

- High total power dissipation (PT=625mW)
- High Collector Current (I_C =500mA)
- Excellent h_{FE} linearity.



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CLASSIFICATION h_{FE} (1)

Classification	D	E	F	G	H
h_{FE} (1)	64-91	78-112	96-135	112-166	144-202

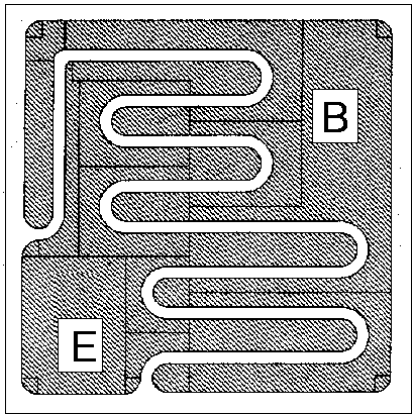
Absolute Maximum Ratings (Ta=25^{0}C)

Symbol	Parameter	Rating	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	625	mW
T_j	Junction Temperature	150	^{0}C
Tstg	Storage Temperature	-55 ÷ 150	^{0}C

Electrical Characteristics (T_a = 25^{o}C)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C =100μA, I_E =0	40			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C =1mA, I_B =0	20			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E =100μA, I_C =0	5			V
I_{CBO}	Collector Cutoff Current	V_{CB}=25V, I_E =0			100	nA
I_{EBO}	Emitter Cutoff Current	V_{EB}=3V, I_C =0			100	nA
$h_{FE}1$	DC Current Gain	V_{CE}=1V, I_C =50mA	64	120	202	
$h_{FE}2$		V_{CE}=1V, I_C =500mA	40	120		
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C =500mA, I_B =50mA		0.16	0.6	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C =500mA, I_B =50mA		0.91	1.2	V
$V_{BE(on)}$	Base-Emitter On Voltage	V_{CE}=1V, I_C =10mA	0.6	0.67	0.7	V

Pad Location



- DIE SIZE 495 X 495μm
- DIE THICKNESS Typ. 470 μm

- BONDING PAD SIZE
  Emitter 85 x 114 μm
  Base 85 x 154 μm