

# SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

# S1807

PRIMARYLY INTENDED FOR USE IN DRIVER AND  
OUTPUT STAGE OF AUDIO AMPLIFIERS.

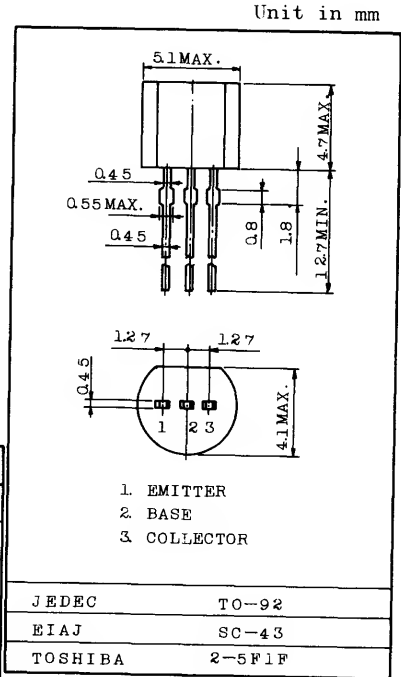
DESIGNED FOR COMPLEMENTARY USE WITH S1808.

**FEATURES:**

- Low Saturation Voltage :  $V_{CE(sat)}=0.5V(\text{Max.})$   
at  $I_C=500mA$
- Complementary to S1808.

**MAXIMUM RATINGS ( $T_a=25^\circ C$ )**

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	35	V
Collector-Emitter Voltage	$V_{CEO}$	30	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	800	mA
Base Current	$I_B$	200	mA
Collector Power Dissipation	$P_C$	625	mW
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$



Weight : 0.21g

**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )**

CHARACTERISTIC	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=20V, I_E=0$	-	-	100	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	100	nA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	30	-	-	V
DC Current Gain (1)	$h_{FE(1)}$	$V_{CE}=1V, I_C=100mA$	100	-	320	
DC Current Gain (2)	$h_{FE(2)}$	$V_{CE}=1V, I_C=700mA$	35	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=20mA$	-	-	0.5	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=1V, I_C=10mA$	0.5	-	0.8	V
Transition Frequency	$f_T$	$V_{CE}=5V, I_C=10mA$	-	120	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	13	-	pF

