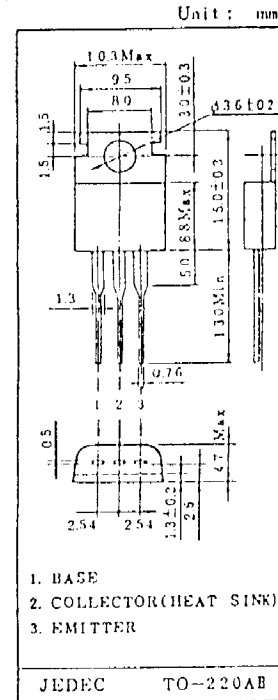


2SC2098

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	70	V
Collector-Emitter Voltage ($R_{EB}=10\Omega$)	V_{CER}	70	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_C	6	A
Total Device Dissipation ($T_C=50^\circ\text{C}$)	P_C	20	W
Operating Junction Temperature Range	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cutoff Current	I_{CBO}	$V_{CB}=40V$ $I_E=0$	—	—	0.1	mA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA$ $I_E=0$	70	—	—	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CER}$	$I_C=10mA$ $R_{EB}=10\Omega$	70	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA$ $I_C=0$	4	—	—	V
DC Current Gain (Note 1)	h_{FE}	$V_{CE}=5V$ $I_C=4A$	20	—	100	—
Collector-Emitter Saturation Voltage (Note 1)	$V_{CE(sat)}$	$I_C=4A$ $I_B=0.4A$	—	—	1.5	V
Current-Gain-Bandwidth Product	f_T	$V_{CE}=5V$ $I_C=0.5A$	100	—	—	MHz
Output Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1MHz$	—	80	120	pF

NOTE 1: Pulse Test: Pulse Width $\leq 100\mu s$, Duty Cycle $\leq 3\%$

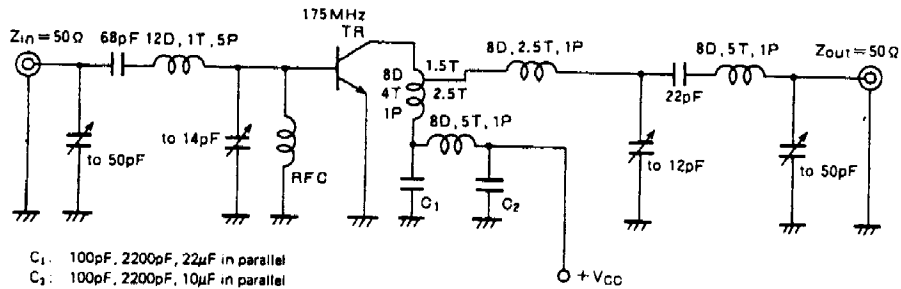


NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

NPN EPITAXIAL PLANAR TYPE

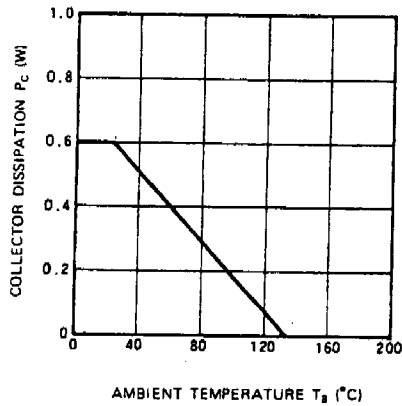
TEST CIRCUIT



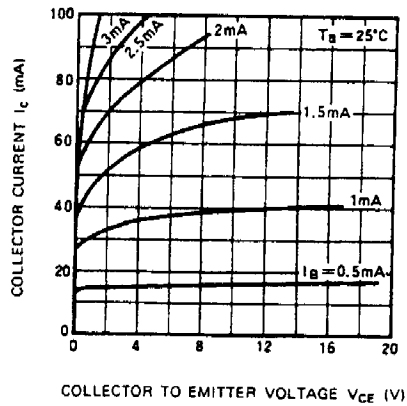
C_1 : 100pF, 2200pF, 22 μ F in parallel
 C_2 : 100pF, 2200pF, 10 μ F in parallel
 Notes: All coils are made from 1.5mm silver plated copper wire
 Coil dimensions in milli-meter
 D: Inner diameter of coil
 T: Turn number of coil
 P: Pitch of coil

TYPICAL PERFORMANCE DATA

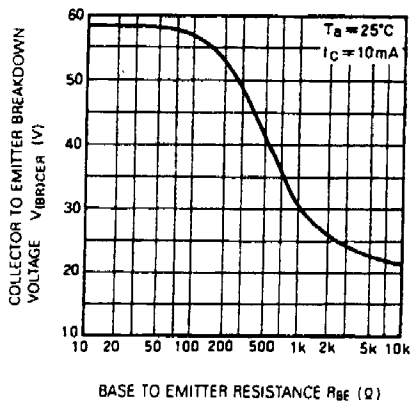
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



COLLECTOR CURRENT VS. COLLECTOR TO EMITTER VOLTAGE



COLLECTOR TO EMITTER BREAKDOWN VOLTAGE VS. BASE TO EMITTER RESISTANCE



DC CURRENT GAIN VS. COLLECTOR CURRENT

