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2SC510
2SC512

SILICON NPN TRIPLE DIFFUSED TRANSISTOR (PCT PROCESS)

- o High Frequency Power Amplifier Applications.
- o High Voltage Switching and Regulator Applications.

$V_{CBO} = 140V$ 2SC510
 $V_{CEO} = 100V$ 2SC512

$I_C = 1.5A$ (Max.), $P_C = 800mW$ (Max.)

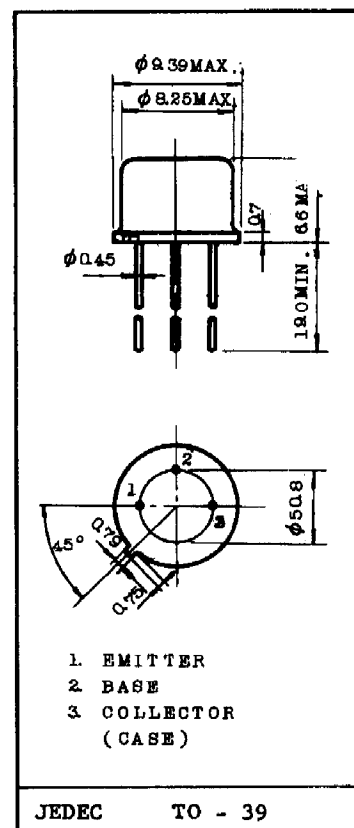
- 2SA510, 2SA512
- Complementary to 2SA510 and 2SA512

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
	2SC510	140	V
	2SC512		
	2SC510	100	V
	2SC512		
	V_{EBO}	5	V
	I_C	1.5	A
	I_E	-1.5	A
	P_C	800	mW
		8	W
	T_j	175	$^\circ C$
	T_{stg}	-65~175	$^\circ C$

INDUSTRIAL APPLICATIONS

Unit in mm



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



2SC510
2SC512

ELECTRICAL CHARACTERISTICS (Ta=25°C)

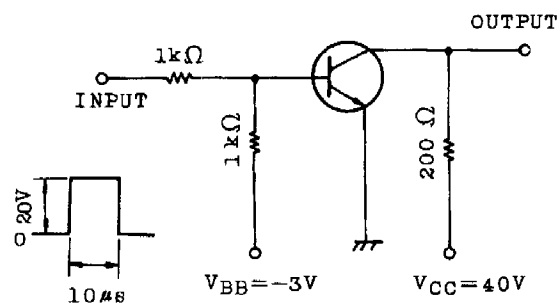
CHARACTERISTIC	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
	I_{CBO}	$V_{CB}=30V, I_E=0$	—	—	1	μA
	I_{EBO}	$V_{EB}=5V, I_C=0$	—	—	5	μA
	$h_{FE(1)}$ (Note)	$V_{CE}=2V, I_C=200mA$	30	—	150	
	$h_{FE(2)}$	$V_{CE}=5V, I_C=1A$	15	—	—	
	$V_{CE(sat)}$	$I_C=200mA, I_B=20mA$	—	0.2	0.6	V
	$V_{BE(sat)}$	$I_C=200mA, I_B=20mA$	—	0.8	1.0	V
	f_T	$V_{CE}=10V, I_E=-30mA$	20	60	—	MHz
	C_{ob}	$V_{CB}=10V, I_E=0$ $f=1MHz$	—	25	40	pF
	t_{on}	Fig. 1	—	0.13	—	μs
	t_{stg}		—	3.0	—	μs
	t_f		—	0.2	—	μs

Note : $h_{FE(1)}$

According to the value of $h_{FE(1)}$, the 2SC510 and 2SC512 are classified as follows.

CLASSIFICATION	MIN.	MAX.
2SC510-R, 2SC512-R	30	90
2SC510-O, 2SC512-O	50	150

SWITCHING TIME TEST CIRCUIT



2SC510

2SC512

