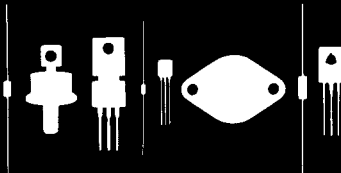


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145 Adams Avenue  
Hauppauge, New York 11788



2N651  
2N651A  
2N652  
2N652A

GERMANIUM PNP TRANSISTOR  
45 VOLTS, 200 mW

JEDEC TO-5 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N651,A 2N652,A Series are Germanium Alloy PNP Milliwatt transistors designed for low power audio amplifier and switching applications.

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

	<u>SYMBOL</u>		<u>UNIT</u>
Collector-Base Voltage	$V_{CB0}$	45	V
Collector-Emitter Voltage ( $R_{BE}=10,000\Omega$ )	$V_{CER}$	30	V
Emitter-Base Voltage	$V_{EB0}$	30	V
Collector Current	$I_C$	500	mA
Power Dissipation	$P_D$	200	mW
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 TO +100	$^{\circ}\text{C}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	2N651 2N651A		2N652 2N652A		<u>UNIT</u>
		<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	
$I_{CB0}$	$V_{CB}=30\text{V}$		10	10		$\mu\text{A}$
$I_{CB0}$	$V_{CB}=45\text{V}$		50	50		$\mu\text{A}$
$I_{CB0}$	$V_{CB}=10\text{V}, T_A=+71^{\circ}\text{C}$		100	100		$\mu\text{A}$
$I_{CER}$	$V_{CE}=30\text{V}, R_{BE}=10,000\Omega$		600	600		$\mu\text{A}$
$I_{EB0}$	$V_{EB}=30\text{V}$		10	10		$\mu\text{A}$
$V_{EBF}$	$V_{CB}=45\text{V}$ , Input resistance $\geq 10$ megohms		1.0	1.0		V
$V_{CE}(\text{sat})$	$I_C=50\text{mA}, I_B=1.67\text{mA}$		0.25			V
$V_{CE}(\text{sat})$	$I_C=50\text{mA}, I_B=1.25\text{mA}$			0.25		V
$V_{CE}(\text{sat})$	$I_C=100\text{mA}, I_B=3.33\text{mA}$		0.5			V
$V_{CE}(\text{sat})$	$I_C=100\text{mA}, I_B=2.5\text{mA}$			0.5		V
$V_{BE}(\text{on})$	$V_{CE}=1.0\text{V}, I_C=10\text{mA}$		0.26		0.25	V
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=10\text{mA}$	45		80		-
$h_{fe}$	$V_{CB}=6.0\text{V}, I_E=1.0\text{mA}, f=1.0\text{kHz}$	50	120	100	225	-
$C_{ob}$	$V_{CB}=6.0\text{V}, f=1.0\text{MHz}$		25		25	pF
NF	$V_{CE}=4.5\text{V}, I_E=0.5\text{mA}, R_S=1000\Omega, f=1.0\text{kHz}, \Delta f=1.0\text{Hz}$		15		15	dB

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