

# New Jersey Semi-Conductor Products, Inc.

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2N458A

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## PNP GERMANIUM POWER TRANSISTOR

### JEDEC TO-3 CASE

2N458A type is a PNP Germanium Alloy Junction Power Transistor manufacture in a hermetically sealed metal case, designed for high voltage amplifier and switching circuits.

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

	SYMBOL		UNITS
Collector-Base Voltage	$V_{CB0}$	80	V
Collector-Emitter Voltage	$V_{CEO}$	45	V
Emitter-Base Voltage	$V_{EBO}$	30	V
Collector Current	$I_C$	7.0	A
Base Current	$I_B$	3.0	A
Power Dissipation	$P_D$	150	W
Operating and Storage			
Junction Temperature	$T_J, T_{stg}$	-55 to +100	$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$	0.5	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB} = 40\text{V}$		0.5	mA
$I_{CBO}$	$V_{CB} = 80\text{V}$		2.0	mA
$BV_{CBO}$	$I_C = 2.0\text{mA}$	80		V
$BV_{CES}$	$I_C = 50\text{mA}$	65		V
$BV_{EBO}$	$I_E = 2.0\text{mA}$	30		V
$BV_{CER}$	$I_C = 50\text{mA}, R_{BE} = 33\Omega$	67		V
$BV_{CEO}$	$I_C = 50\text{mA}$	45		V
$V_{CE(SAT)}$	$I_C = 5.0\text{A}, I_B = 500\text{mA}$		0.5	V
$V_{BE(ON)}$	$V_{CE} = 1.5\text{V}, I_C = 5.0\text{A}$		1.5	V
$h_{FE}$	$V_{CE} = 1.5\text{V}, I_C = 1.0\text{A}$	40		
$h_{FE}$	$V_{CE} = 1.5\text{V}, I_C = 3.0\text{A}$	35		
$h_{FE}$	$V_{CE} = 1.5\text{V}, I_C = 5.0\text{A}$	30	90	
$h_{FE}$	$V_{CE} = 1.5\text{V}, I_C = 7.0\text{A}$	22		
$f_T$	$V_{CE} = 2.0\text{V}, I_C = 1.0\text{A}$	200		kHz



NJ Semi-Conductors reserves the right to change test conditions, parameters 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.

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