

# New Jersey Semi-Conductor Products, Inc.

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2N4258                      PN4258  
2N4258A                    PN4258A

JEDEC TO-106              JEDEC TO-92

## PNP SILICON SWITCHING TRANSISTOR

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

	SYMBOL	2N/PN4258	2N/PN4258A	UNIT
Collector-Base Voltage	$V_{CB0}$	12	12	V
Collector-Emitter Voltage	$V_{CES}$	12	12	V
Collector-Emitter Voltage	$V_{CEO}$	12	12	V
Emitter-Base Voltage	$V_{EBO}$	4.5	4.5	V
Collector Current	$I_C$	50	50	mA
Power Dissipation	$P_D$	<u>PN4258,A</u> 625	<u>2N4258,A</u> 310	mW
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 TO +150		$^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	2N/PN4258		2N/PN4258A		UNIT
		MIN	MAX	MIN	MAX	
$I_{CES}$	$V_{CE}=6.0\text{V}$		10		10	nA
$I_B$	$V_{CE}=6.0\text{V}, V_{BE}=0$		-		1.0	nA
$BV_{CB0}$	$I_C=100\mu\text{A}$	12		12		V
$BV_{CES}$	$I_C=100\mu\text{A}$	12		12		V
$BV_{CEO}$	$I_C=3.0\text{mA}$	12		12		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	4.5		4.5		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.15		0.15	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.5		0.5	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$	0.75	0.95	0.75	0.95	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		1.5		1.5	V
$h_{FE}$	$V_{CE}=0.5\text{V}, I_C=1.0\text{mA}$	15		15		
$h_{FE}$	$V_{CE}=3.0\text{V}, I_C=10\text{mA}$	30	120	30	120	
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=50\text{mA}$	30		30		
$f_T$	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	700		700		MHz
$C_{ob}$	$V_{CB}=5.0\text{V}, f=140\text{kHz}$		3.0		3.0	pF
$C_{ib}$	$V_{EB}=0.5\text{V}, f=140\text{kHz}$		3.5		3.5	pF
$t_{on}$	$I_C=10\text{mA}, I_{B1}=1.0\text{mA}$		15		15	ns
$t_{off}$	$I_C=10\text{mA}, I_{B1}=I_{B2}=1.0\text{mA}$		20		18	ns
$\tau_s$	$I_C=10\text{mA}, I_{B1}=I_{B2}=10\text{mA}$		20		15	ns



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