



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089
<http://www.nteinc.com>

MPSA63

Silicon PNP Transistor Darlington Amplifier, Preamp, TO-92 Type Package

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$, Note 1 unless otherwise specified)

Collector-Emitter Voltage, V_{CES}	30V
Collector-Base Voltage, V_{CBO}	30V
Emitter-Base Voltage, V_{EBO}	10V
Continuous Collector Current, I_C	800mA
Total Device Dissipation, P_D	625mW
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	-55° to +150°C

Note 1. These ratings are limiting values above which the serviceability of any semiconductor device may be impaired. These are steady state limits and based on a maximum junction temperature of +150°C.

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}$, $I_E = 0$	30	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C = 100\mu\text{A}$, $V_{BE} = 0$	30	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}$, $I_C = 0$	10	-	-	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 30\text{V}$, $I_E = 0$	-	-	100	nA
	I_{CES}	$V_{CE} = 30\text{V}$, $V_{BE} = 0$	-	-	500	nA
Emitter-Base Cutoff Current	I_{EBO}	$V_{EB} = 10\text{V}$, $I_C = 0$	-	-	100	nA
ON Characteristics (Note 2)						
DC Current Gain	h_{FE}	$I_C = 10\text{mA}$, $V_{CE} = 5\text{V}$	5000	-	-	
		$I_C = 100\text{mA}$, $V_{CE} = 5\text{V}$	10000	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 100\text{mA}$, $I_B = 0.1\text{mA}$	-	-	1.5	V
Base-Emitter ON Voltage	$V_{BE(on)}$	$I_C = 100\text{mA}$, $V_{CE} = 5\text{V}$	-	-	2.0	V
Small Signal Characteristics						
Current Gain - Bandwidth Product	f_T	$I_C = 10\text{mA}$, $V_{CE} = 5\text{V}$, $f = 100\text{MHz}$	125	-	-	MHz

Note 2. Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

