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MPSA64 Silicon PNP Transistor Darlington Amplifier

Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CES}	–30V
Collector–Base Voltage, V_{CBO}	–30V
Emitter–Base Voltage, V_{EBO}	–10V
Continuous Collector Current, I_C	–1.2A
Total Device Dissipation ($T_A = 25^\circ\text{C}$), P_D	625mW
Derate Above 25°C	5mW/ $^\circ\text{C}$
Operating Junction Temperature Range, T_J	–55° to +150°C
Storage Temperature Range, T_{stg}	–55° to +150°C
Thermal Resistance, Junction–to–Case, R_{thJC}	83.3°C/W
Thermal Resistance, Junction–to–Ambient, R_{thJA}	200°C/W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector–Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C = -100\mu\text{A}, I_B = 0$	–30	–	–	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$	–	–	–100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -10\text{V}, I_C = 0$	–	–	–100	nA
ON Characteristics (Note 1)						
DC Current Gain	h_{FE}	$V_{CE} = -5.0\text{V}, I_C = -10\text{mA}$	10,000	–	–	
		$V_{CE} = -5.0\text{V}, I_C = -100\text{mA}$	20,000	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}, I_B = -0.1\text{mA}$	–	–	–1.5	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -100\text{mA}, V_{CE} = -5.0\text{V}$	–	–	–2.0	V
Small Signal Characteristics						
Current Gain Bandwidth Product	f_t	$I_C = -10\text{mA}, V_{CE} = -5.0\text{V}, f = 100\text{MHz}$	125	–	–	MHz

Note 1. Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.

