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MPS6518

Silicon PNP Transistor Audio Amplifier, Switch TO-92 Type Package

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

Collector-Emitter Voltage, V_{CEO}	40V
Emitter-Base Voltage, V_{EBO}	4V
Continuous Collector Current, I_C	200mA
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 $+150^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$
Thermal Resistance, Junction to Case, $R_{\theta JC}$	83.3 $^\circ\text{C}/\text{W}$
Thermal Resistance, Junction to Ambient, $R_{\theta JA}$	200 $^\circ\text{C}/\text{W}$

Note 1. These ratings are limiting values above which the serviceability of any semiconductor device may be impaired and are based on a maximum junction temperature of $+150^\circ\text{C}$.

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	$V_{(BR)CEO}$	$I_C = 0.5\text{mA}$, $I_B = 0$, Note 2	40	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}$, $I_C = 0$	4	-	-	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 30\text{V}$, $I_E = 0$	0.5	-	-	μA
		$V_{CB} = 30\text{V}$, $I_E = 0$, $T_A = +60^\circ\text{C}$	1	-	-	μA
ON Characteristics (Note 2)						
DC Current Gain	h_{FE}	$V_{CE} = 10\text{V}$, $I_C = 2\text{mA}$	150	-	300	
		$V_{CE} = 10\text{V}$, $I_C = 100\text{mA}$	90	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}$, $I_B = 5\text{mA}$	-	-	0.5	V
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $f = 100\text{kHz}$	-	-	4	pF

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

